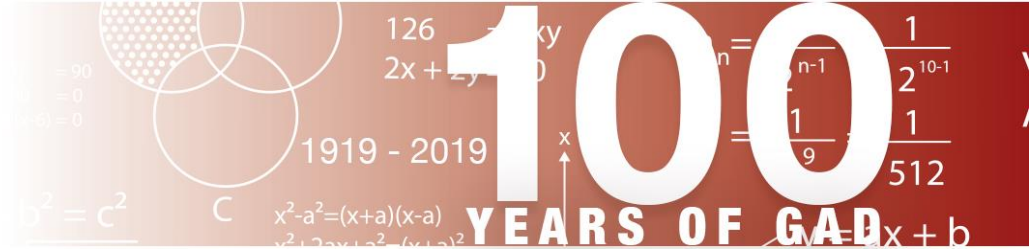




Government  
Actuary's  
Department



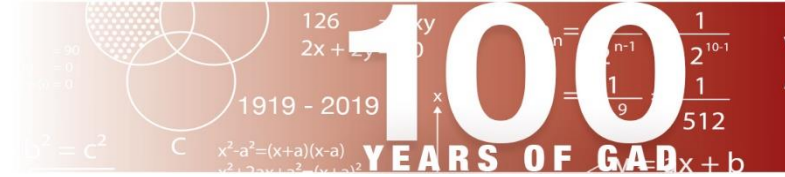
## Firefighters' Pension Scheme 2016 Valuation Data

Chris Mulholland, Actuary  
3 April 2019



## Agenda

- Overview
- Membership data as at 31 March 2016
- Movement data between 31 March 2012 and 31 March 2016
- Feedback to FRAs



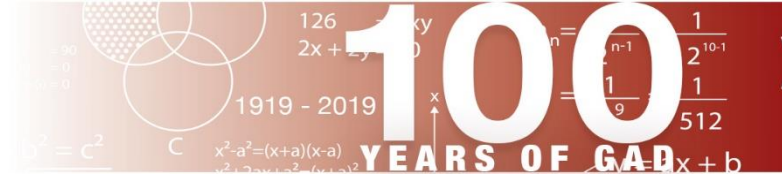
## Importance of accurate valuation data

Membership data as at 31 March 2016:

- Directly impacts the results of the valuation
- ...and therefore how much employers pay.

Movement data between 31 March 2012 and 31 March 2016:

- Informs assumption setting at the valuation
- ...which also impacts results/employer contributions



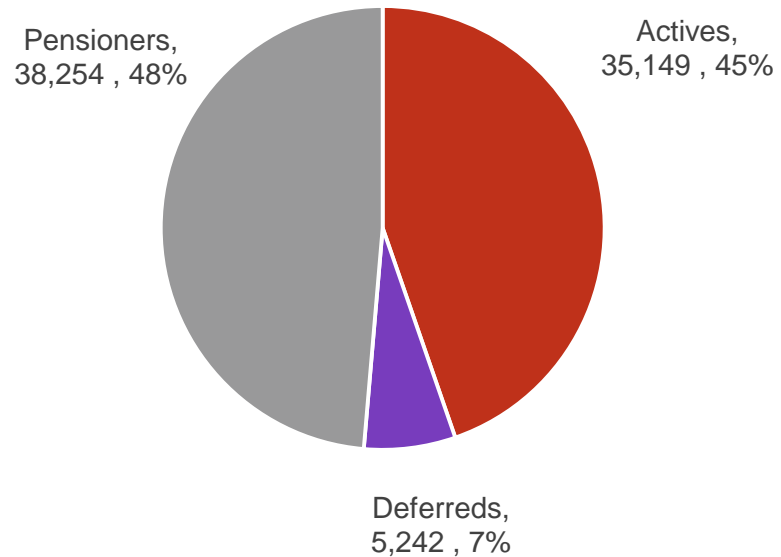
## Membership data as at 31 March 2016

- A line of data for each individual showing their membership data (Date of Birth, Date Joined Scheme etc) and accrued pension.
- For active members with 1992/2006 scheme service, salary and service in that scheme is provided, rather than accrued pension.
- This data is used by GAD to calculate:
  - the past service liabilities of the scheme as at 31 March 2016; and
  - the expected cost of pensions being accrued in the future.

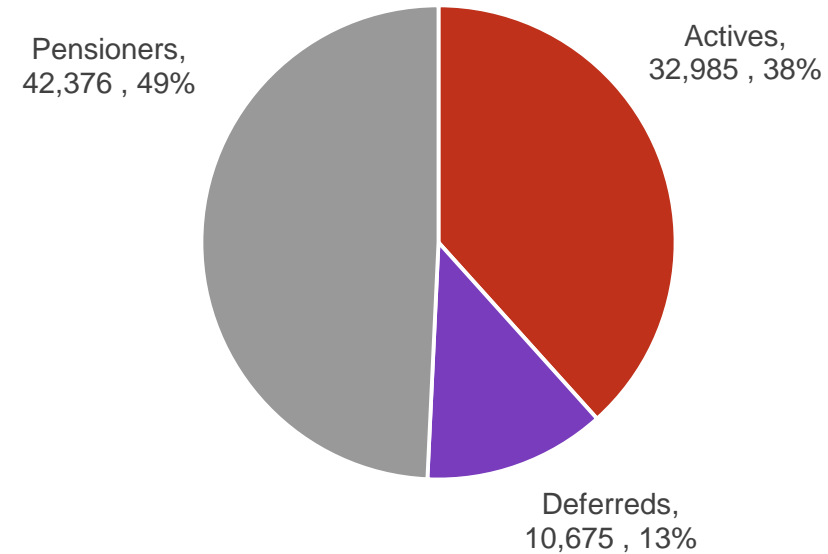


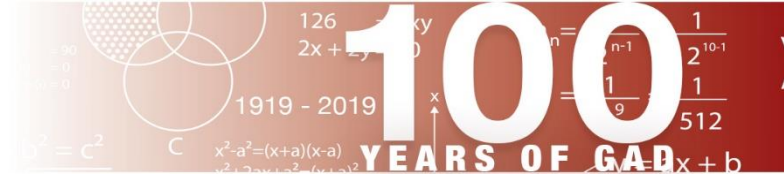
## Membership by category at 2012 and 2016 valuations

2012 Valuation

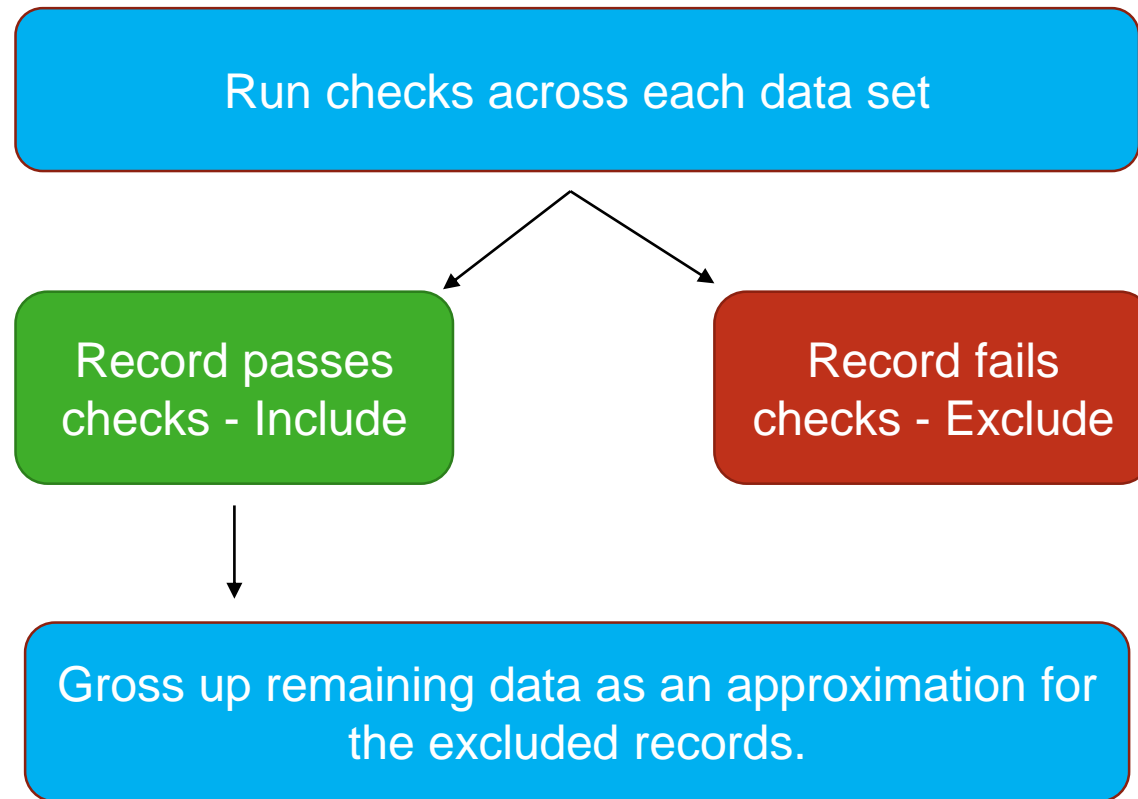


2016 Valuation





## Processing of membership data at 2016 Valuation





## 2016 Valuation – Excluded/approximated records

Membership group	Proportion of members being approximated	Approximate number of records being approximated
Pensioners (including dependants)	0.2%	100
Deferred members	1%	100
Active members	5%	1,700
All members	2%	1,900



## Pensioners<sup>1</sup> as at 31 March 2016 – Excluded records

Reason for exclusion	Number of exclusions
Invalid scheme section	4
Age outside appropriate range or missing	2
Member pension missing or outside reasonable range	56
Dependant pension (in payment) missing or outside reasonable range	12
Pension type missing	1
<b>Total number of exclusions<sup>2</sup></b>	<b>74</b>

1. Includes dependants.
2. May not be the sum of earlier rows as exclusion could be for more than one reason.





## Deferred members as at 31 March 2016 – Excluded records

Reason for exclusion	Number of exclusions
Duplicate records removed	3
Member pension missing or outside reasonable range	105
<b>Total number of exclusions</b>	<b>108</b>



## Active members as at 31 March 2016 – Excluded records

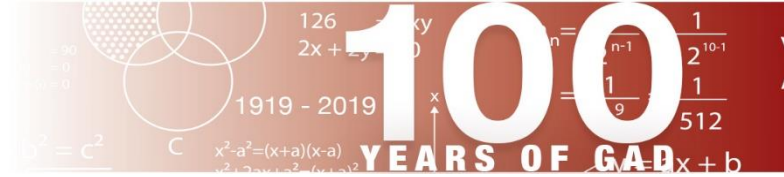
Reason for exclusion	Number of exclusions
Duplicate records removed	13
Age outside appropriate range or missing	15
FTE pay missing or outside reasonable range	786
Actual pay outside reasonable range	820
Transfer-in service outside reasonable range	18
Service missing or outside reasonable range	807
2015 Scheme pension outside reasonable range or missing	20
<b>Total number of exclusions<sup>1</sup></b>	<b>1,670</b>

1. May not be the sum of earlier rows as exclusion could be for more than one reason.



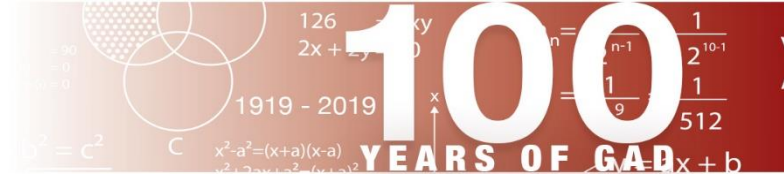
## Split of excluded active members – Regular and Retained

Membership group	Proportion of members being approximated	Approximate number of records being approximated
All active members	5%	1,700
Special retained active members	11%	150
Standard retained active members	10%	800
Regular active members	3%	800

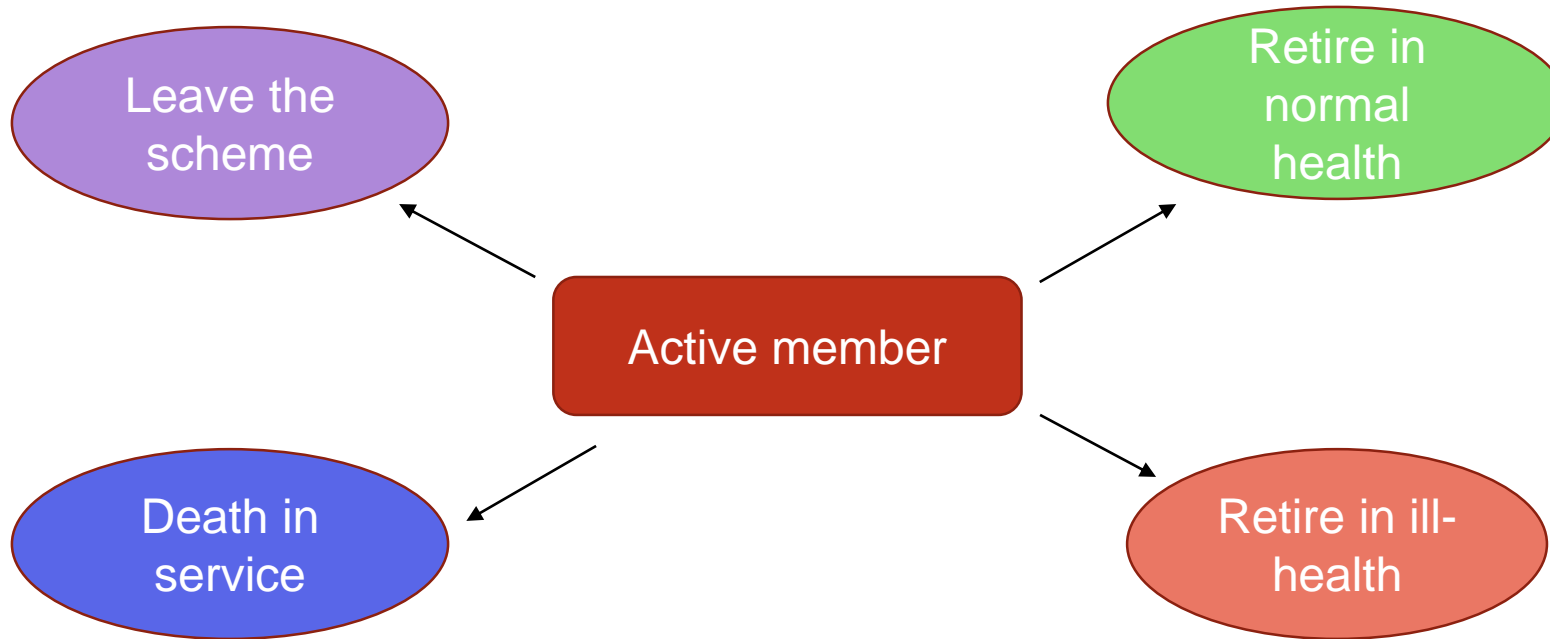


## Movement data – 31 March 2012 to 31 March 2016

- A line of data for each individual who has changed membership status during the inter-valuation period.
- This data is used by GAD to analyse the rates at which members are retiring, leaving, dying, etc.
- We compare this scheme experience against the assumptions made at the previous valuation and advise Home Office whether the assumptions should be updated.



## Movement data – Active membership movements



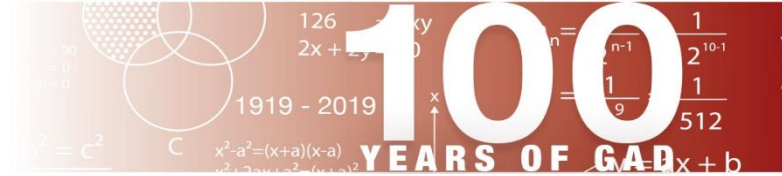


## Movement data – Exclusions of data records

Actives - Reason for exclusion	Number of exclusions
Removed duplicates	5
Movement date outside inter-valuation period or missing	88
Inter-authority transfers	82
Total number of members removed <sup>1</sup>	174

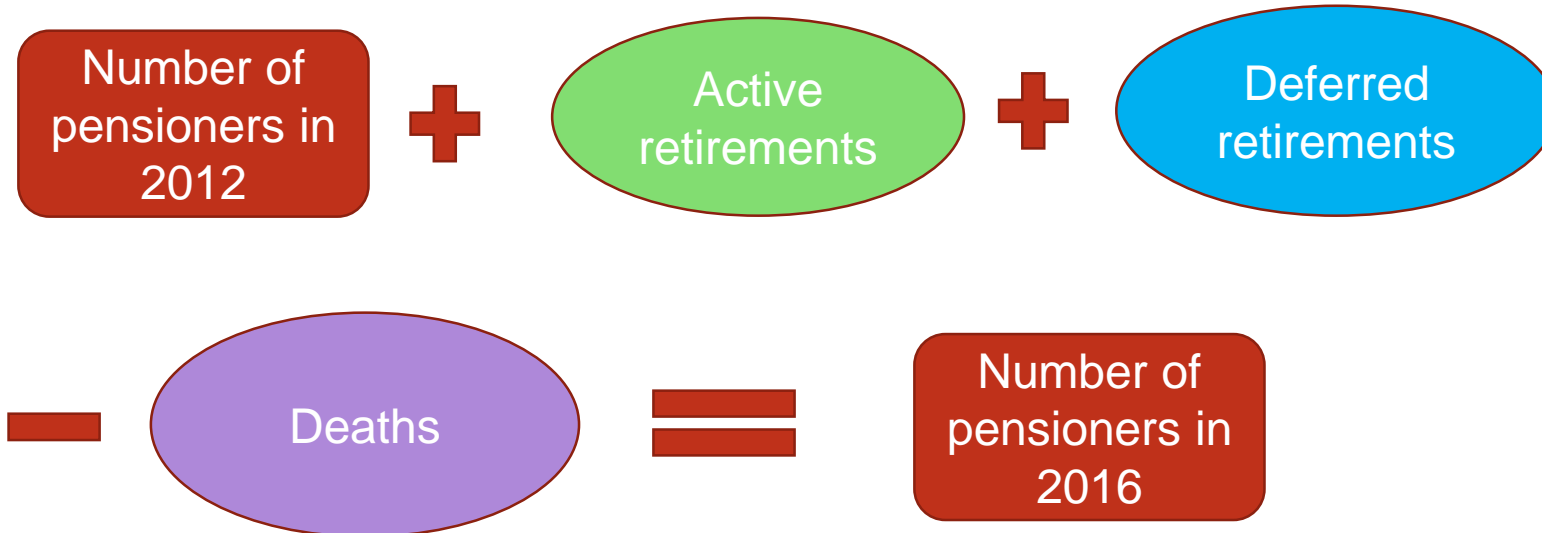
Pensioners - Reason for Exclusion	Number of exclusions
Movements dates outside inter-valuation period or missing	19
Total number of members removed	19

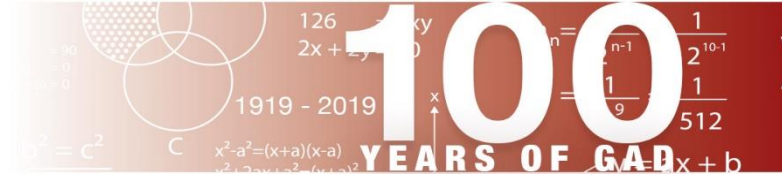
1. May not be the sum of earlier rows as exclusion could be for more than one reason.



## Movement data – Exclusion of all movement data for an FRA

- We need to be confident that the movement data being used is reasonable overall.
- For each FRA we check the reconciliation of each member group, eg:





## Movement data – Exclusion of all data for an FRA

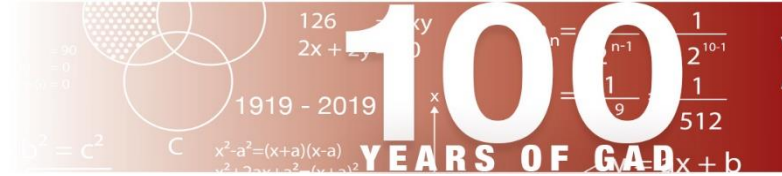
- This test is carried out separately for each main analysis:
  - Active movements
  - Pensioner movements
  - Dependant movements
- If data does not reconcile closely then all movement data for that FRA is removed from the analysis that is used for assumption setting.
- The membership data for those FRAs is still used for the main valuation calculations.





## Movement data – Number of excluded FRAs

Movement data item	FRAs excluded
<b>Active movements</b> Deaths before retirement, Ill-health retirement and withdrawals	15 FRAs (25% of the active membership)
<b>Active movements</b> Normal health retirement	18 FRAs (30% of the active membership)
<b>Pensioner movements - member deaths</b>	17 FRAs (25% of the pensioner membership)
<b>Pensioner movements - dependant deaths</b>	28 FRAs (50% of the pensioner membership)



## Feedback to FRAs on 2016 Valuation Data

- For movement data, the LGA has already provided some information to relevant FRAs regarding analyses for which their data was not used.
- Some FRAs have contacted GAD for more information.
- GAD and Home Office discussing how to provide some more feedback to FRAs, eg considering developing a note for each FRA showing:
  - main reasons why membership data records failed checks; and
  - feedback on which movement data was used.
- FRAs can also refer to the data submission spreadsheet that was used to submit data to GAD which had some self-checking features.



## Discussion

- Feedback to FRAs
- Feedback for GAD