

## Society of Actuaries

### CMI SAPS - 2007 update Communicating to Trustees

Nigel Bodie  
June 2007

PRICEWATERHOUSECOOPERS 

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SAPS Investigation

#### CMI Committee – the SAPS Mortality Committee

- Firms of consultants (and possibly others) who contribute financially towards the investigation are **CMI members**
- Firms that supply data but who do not contribute are **not CMI members**
- **CMI members** have some advantages of membership
  - Users Forum
  - Early sight of results of investigations

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SAPS Investigation

#### Draft Working Paper (March 2007)

- Based on data received to end-June 2006
- Significant data problems delayed publication
- Now sorted
- Issued as draft to firms contributing to costs
- Feedback invited
- Subject to confidentiality clause
- To be issued in final September 2007

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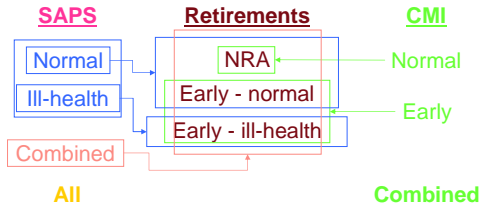
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Terminology – a clarification




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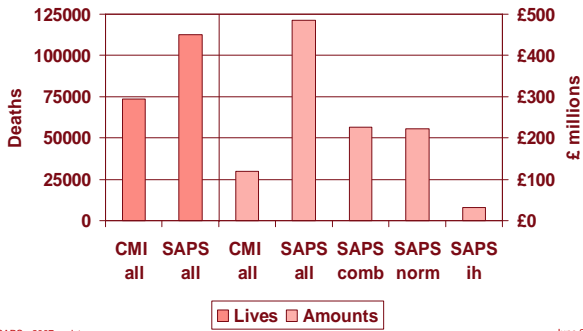
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Data – males – by deaths




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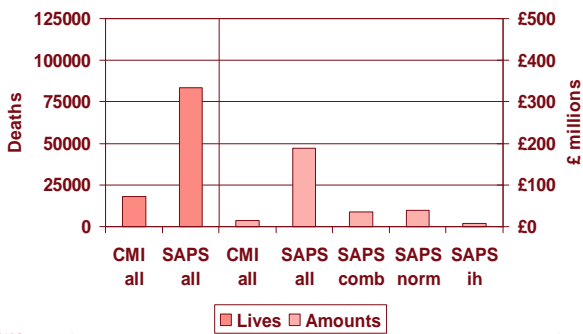
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Data – females – by deaths




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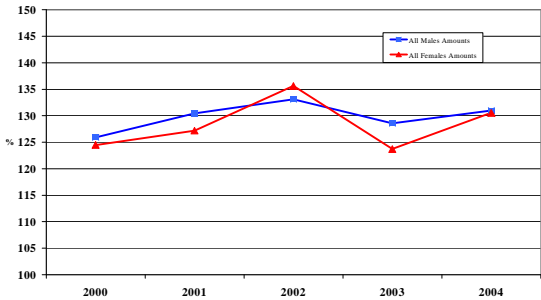
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SAPS Investigation

The Big Picture – 100A/E on PxA92sc  
Projected to Year of Use  
All Males, Females - Amounts



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SAPS Investigation

SAPS - mortality by amounts bands

- Data submitted to the SAPS investigation has been banded by amount of pension – this is currently the only proxy for “social class”, although post code data is now being collected
- The data was originally grouped into 4 blocks, containing the lowest 50% by pension, the next 25% and then two groups with 12½%; the first 50% of males were then further subdivided for analysis

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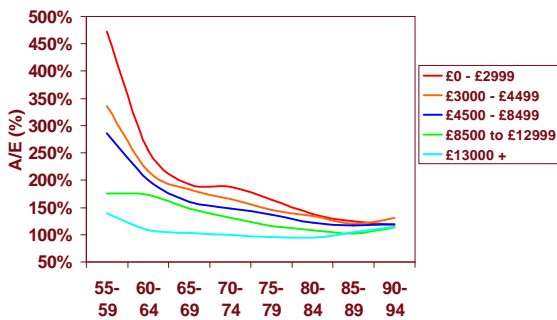
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SAPS Investigation

Males, normal retirements, amounts  
Bands v 92 series sc (y=CY)



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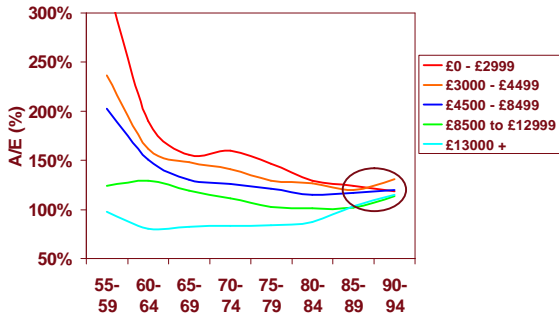
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SAPS Investigation

Males, normal retirements, amounts  
Bands v 00 series normal



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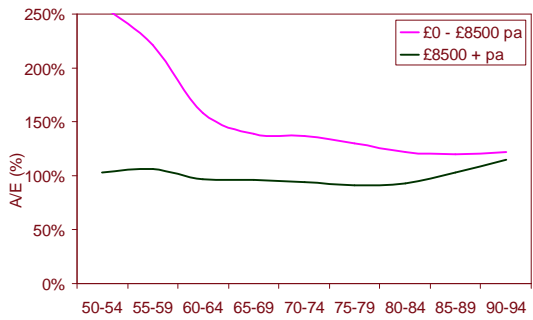
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Males, normal retirements, amounts  
Bands v 00 series normal



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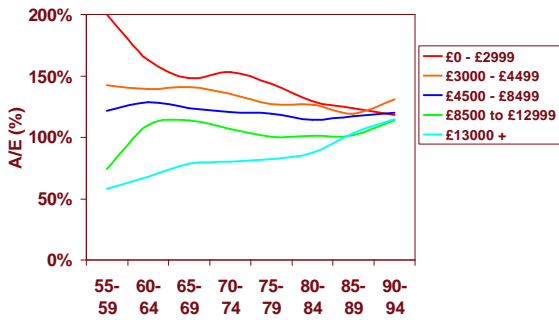
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SAPS Investigation

Males, normal retirements, amounts  
Bands v 00 series combined



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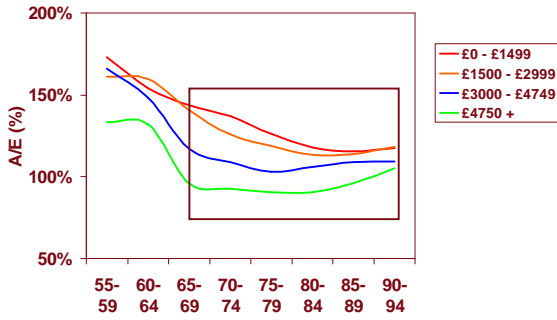
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SAPS Investigation

Females, all retirements, amounts  
Bands v 00 series combined



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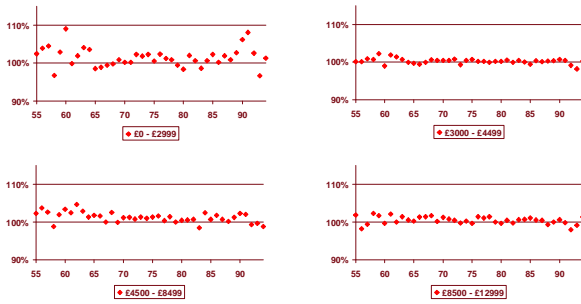
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Lives  $q_x \div$  Amounts  $q_x$  (all lives, males, observed)



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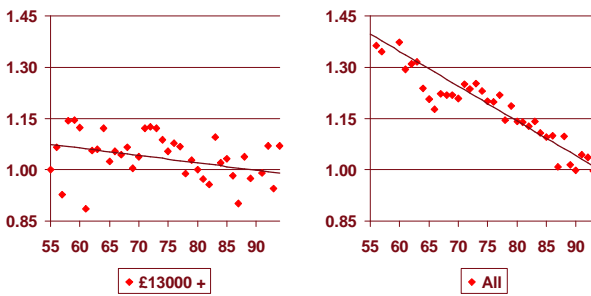
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SAPS Investigation

Lives  $q_x \div$  Amounts  $q_x$  (all lives, males, observed)



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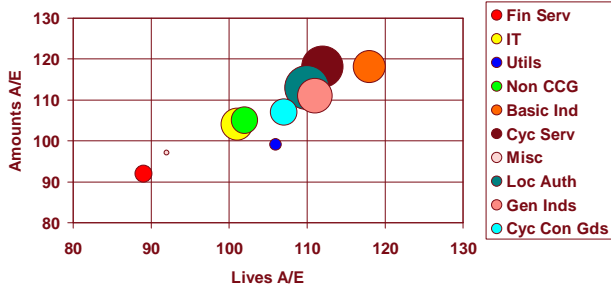
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### Industrial classifications – Males Experience against 00 series Combined table



Bubble size proportional to Lives EtR  
Industries ordered by average pension

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### Communication to Trustees - Agenda

Whether you intend to

- secure your benefits outside the scheme, or
- set your sights on 'self-sufficient' funding

what can you do now to prepare?

1. **Science fact** - What do we know about where we are and how we got here?
  - Less excuse for getting current mortality wrong
  - "What's so difficult about that?"
2. **Science fiction** - Where do we think we are going?
  - Demonstrate the past difficulties

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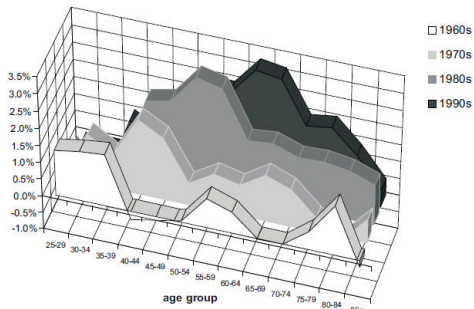
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### What is the "cohort effect"?



Source – Willets et al (2004)

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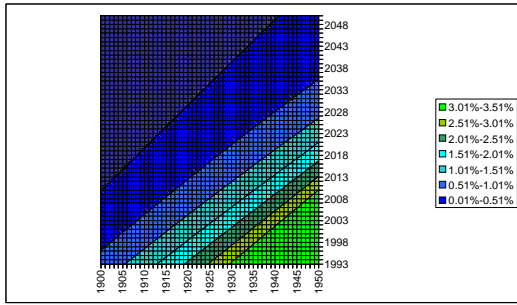
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Communicating to Trustees

Projections - 92 base table – male amounts



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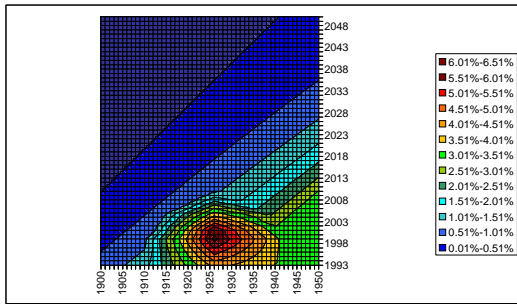
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Communicating to Trustees

92 short cohort – male amounts



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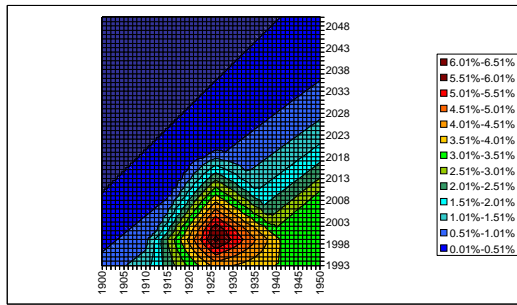
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92 medium cohort – male amounts



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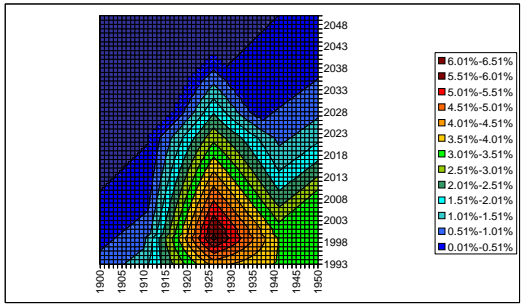
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Communicating to Trustees

92 long cohort – male amounts



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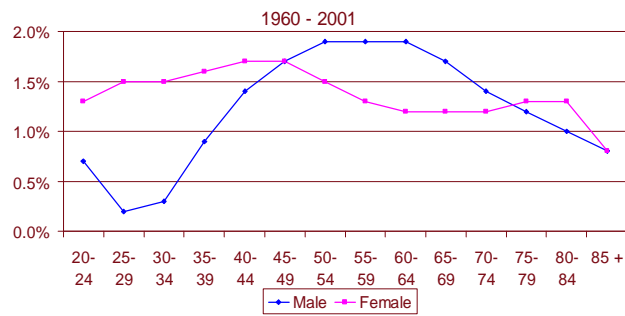
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Communicating to Trustees

Annual rates of mortality improvement



Source – Willets et al (2004)  
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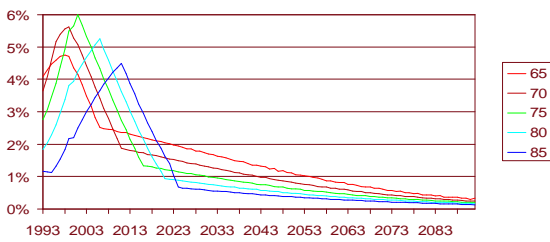
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Communicating to Trustees

92 series Long Cohort improvements



Illustrate effect on costs of floor on improvements –  
varies with starting point.

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