

# Contingencies other than mortality: a deep dive

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Speakers:



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# Agenda

- ▶ What are COTM?
- ▶ Ogden 8: what's changed
- ▶ Where did the COTM RFs come from?
- ▶ Disaggregating RFs: what they mean
- ▶ Why are disabled RFs so different?
- ▶ The future of RFs in litigation

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- ▶ **What are COTM?**

- ▶ Ogden 8: what's changed

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# COTM in the Ogden Tables

- ▶ Adjust multiplier, for e.g.
  - ▶ Sickness
  - ▶ Redundancy
  - ▶ Caring responsibilities
  - ▶ Strikes/stoppages
  - ▶ “vicissitudes of life”
- ▶ Avoid over-compensation

# COTM in the Ogden Tables

**Table A Loss of earnings to pension age 65: Males – Not disabled**

| Age at trial | Employed |         |         | Non-employed |         |         |
|--------------|----------|---------|---------|--------------|---------|---------|
|              | Level 3  | Level 2 | Level 1 | Level 3      | Level 2 | Level 1 |
| 16-19        |          | 0.89    | 0.86    |              | 0.87    | 0.83    |
| 20-24        | 0.91     | 0.91    | 0.87    | 0.88         | 0.88    | 0.84    |
| 25-29        | 0.91     | 0.91    | 0.88    | 0.88         | 0.87    | 0.83    |
| 30-34        | 0.90     | 0.90    | 0.88    | 0.87         | 0.86    | 0.82    |
| 35-39        | 0.88     | 0.89    | 0.87    | 0.85         | 0.84    | 0.81    |
| 40-44        | 0.86     | 0.87    | 0.86    | 0.82         | 0.81    | 0.79    |
| 45-49        | 0.83     | 0.85    | 0.85    | 0.77         | 0.77    | 0.75    |
| 50           | 0.81     | 0.83    | 0.84    | 0.72         | 0.73    | 0.71    |
| 51           | 0.80     | 0.82    | 0.83    | 0.69         | 0.70    | 0.69    |
| 52           | 0.78     | 0.81    | 0.83    | 0.67         | 0.67    | 0.67    |
| 53           | 0.77     | 0.80    | 0.82    | 0.64         | 0.64    | 0.64    |
| 54           | 0.76     | 0.79    | 0.81    | 0.60         | 0.60    | 0.60    |

**Table B Loss of earnings to pension age 65: Males – Disabled**

| Age at trial | Employed |         |         | Non-employed |         |         |
|--------------|----------|---------|---------|--------------|---------|---------|
|              | Level 3  | Level 2 | Level 1 | Level 3      | Level 2 | Level 1 |
| 16-19        |          | 0.50    | 0.29    |              | 0.47    | 0.25    |
| 20-24        | 0.54     | 0.50    | 0.34    | 0.50         | 0.45    | 0.24    |
| 25-29        | 0.57     | 0.50    | 0.37    | 0.38         | 0.40    | 0.23    |
| 30-34        | 0.57     | 0.46    | 0.35    | 0.39         | 0.32    | 0.22    |
| 35-39        | 0.55     | 0.43    | 0.35    | 0.40         | 0.25    | 0.19    |
| 40-44        | 0.55     | 0.43    | 0.35    | 0.34         | 0.21    | 0.15    |
| 45-49        | 0.53     | 0.44    | 0.36    | 0.27         | 0.17    | 0.11    |
| 50           | 0.52     | 0.46    | 0.38    | 0.25         | 0.16    | 0.09    |
| 51           | 0.52     | 0.46    | 0.38    | 0.24         | 0.15    | 0.09    |
| 52           | 0.52     | 0.46    | 0.39    | 0.23         | 0.13    | 0.08    |
| 53           | 0.53     | 0.46    | 0.40    | 0.22         | 0.13    | 0.07    |
| 54           | 0.54     | 0.47    | 0.41    | 0.20         | 0.12    | 0.06    |

**Table C Loss of earnings to pension age 60: Females – Not disabled**

| Age at trial | Employed |         |         | Non-employed |         |         |
|--------------|----------|---------|---------|--------------|---------|---------|
|              | Level 3  | Level 2 | Level 1 | Level 3      | Level 2 | Level 1 |
| 16-19        |          | 0.81    | 0.66    |              | 0.78    | 0.63    |
| 20-24        | 0.88     | 0.82    | 0.69    | 0.86         | 0.78    | 0.63    |
| 25-29        | 0.88     | 0.83    | 0.72    | 0.84         | 0.77    | 0.64    |
| 30-34        | 0.88     | 0.84    | 0.75    | 0.82         | 0.77    | 0.65    |
| 35-39        | 0.88     | 0.86    | 0.77    | 0.81         | 0.76    | 0.65    |
| 40-44        | 0.88     | 0.85    | 0.79    | 0.79         | 0.73    | 0.62    |
| 45-49        | 0.87     | 0.84    | 0.80    | 0.73         | 0.65    | 0.53    |
| 50           | 0.85     | 0.83    | 0.80    | 0.65         | 0.55    | 0.44    |
| 51           | 0.84     | 0.83    | 0.80    | 0.62         | 0.51    | 0.40    |
| 52           | 0.83     | 0.83    | 0.80    | 0.57         | 0.46    | 0.36    |
| 53           | 0.82     | 0.83    | 0.81    | 0.51         | 0.40    | 0.32    |
| 54           | 0.82     | 0.83    | 0.81    | 0.45         | 0.34    | 0.28    |

**Table D Loss of earnings to pension age 60: Females – Disabled**

| Age at trial | Employed |         |         | Non-employed |         |         |
|--------------|----------|---------|---------|--------------|---------|---------|
|              | Level 3  | Level 2 | Level 1 | Level 3      | Level 2 | Level 1 |
| 16-19        |          | 0.39    | 0.22    |              | 0.34    | 0.18    |
| 20-24        | 0.60     | 0.40    | 0.22    | 0.55         | 0.31    | 0.16    |
| 25-29        | 0.59     | 0.42    | 0.23    | 0.49         | 0.31    | 0.16    |
| 30-34        | 0.59     | 0.42    | 0.27    | 0.44         | 0.31    | 0.15    |
| 35-39        | 0.59     | 0.44    | 0.31    | 0.41         | 0.28    | 0.14    |
| 40-44        | 0.58     | 0.48    | 0.34    | 0.35         | 0.24    | 0.13    |
| 45-49        | 0.58     | 0.51    | 0.40    | 0.26         | 0.19    | 0.11    |
| 50           | 0.59     | 0.54    | 0.45    | 0.21         | 0.15    | 0.10    |
| 51           | 0.59     | 0.56    | 0.47    | 0.19         | 0.14    | 0.09    |
| 52           | 0.60     | 0.58    | 0.50    | 0.18         | 0.12    | 0.08    |
| 53           | 0.61     | 0.61    | 0.53    | 0.17         | 0.11    | 0.07    |
| 54           | 0.62     | 0.64    | 0.57    | 0.15         | 0.09    | 0.06    |

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- ▶ **Ogden 8: what's changed**
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- ▶ Why are disabled RFs so different?
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# Ogden 8: what's new?

- ▶ New discount rate (0% not 2.5%)
- ▶ DDA1995, not EqA2010
- ▶ New educational categories
- ▶ Significantly altered guidance
- ▶ ...but not “new RFs” – no new study, no new data

# Ogden 8: what's new?

## Ogden 6-7

*The methodology proposed... describes one method for dealing with contingencies other than mortality. If this methodology is followed, in many cases it will be appropriate to increase or reduce the discount in the tables to take account of the nature of a particular claimant's disabilities.*

## Ogden 8

*The methodology of applying the Table A to D reduction factors described below is the suggested method for dealing with contingencies other than mortality and is applicable in most circumstances. [...] This will in the majority of cases enable a more accurate assessment to be made of the mitigation of loss.*



# Ogden 8: what's new?

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## Ogden 8

*The methodology of applying the Table A to D reduction factors described below is the suggested method for dealing with contingencies other than mortality and is applicable in most circumstances. [...] This will in the majority of cases enable a more accurate assessment to be made of the mitigation of loss.*

# Ogden 8: what's new?

- ▶ New commentary: “departures from a strict application” (¶¶83-92)
- ▶ When to depart from the RFs, and either:
  - ▶ Use Ogden, but with an adjusted RF; or
  - ▶ Use a *Smith v Manchester* instead
- ▶ Mid-point between disabled and non-disabled RF “not advised” (contra *Conner v Bradman*)
- ▶ Also: doubts *Billett v MOD*, says C was not disabled (¶69)

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# Where did the RFs come from?

Journal of the  
Royal Statistical Society

SERIES A  
Statistics  
in Society



*J. R. Statist. Soc. A* (2008)  
171, Part 4, pp. 763–805

## **Calculating compensation for loss of future earnings: estimating and using work life expectancy**

Zoltan Butt, Steven Haberman and Richard Verrall

*City University, London, UK*

and Victoria Wass

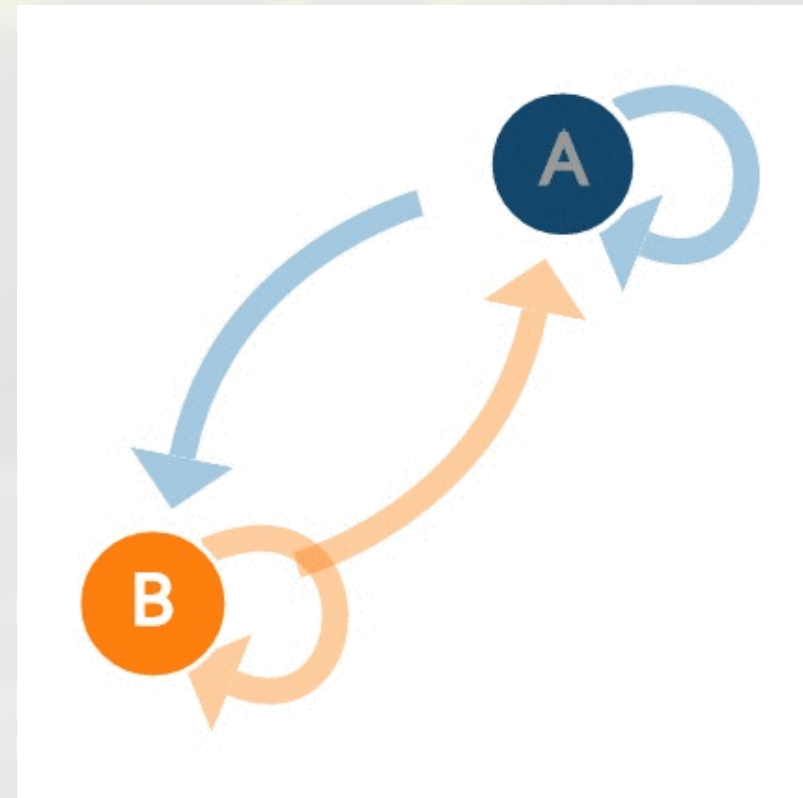
*Cardiff Business School, UK*

# Where did the RFs come from?

- ▶ Replaced an earlier (rough) version from Ogden 2
- ▶ Estimate “Working Life Expectancy” (WLE) from:
  - ▶ Statistical model of career;
  - ▶ Longitudinal data from Labour Force Survey (LFS)
- ▶ Determine effects of:
  - ▶ Sex
  - ▶ Age
  - ▶ Education level
  - ▶ Starting employment status
  - ▶ Disability status

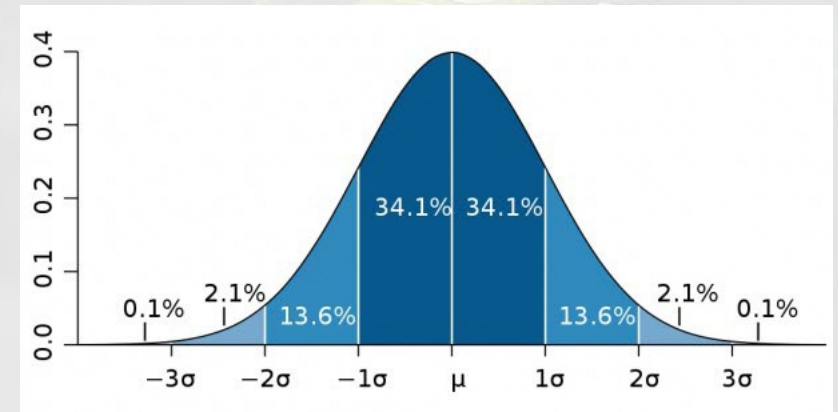
# Where did the RFs come from?

- ▶ Model: a “Markov chain”
- ▶ Being employed at  $N$ , depends on probability of being employed at  $N-1$
- ▶ Then: use data to say what determines these probabilities



# Where did the RFs come from?

- ▶ Gives averages (RFs) around a normal distribution (a bell curve), with standard errors
- ▶ Disability is a “striking feature”: has a negative impact even for the employed
- ▶ Education mitigates negative effects of disability (strongly, but not completely)



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# Disaggregating the RFs

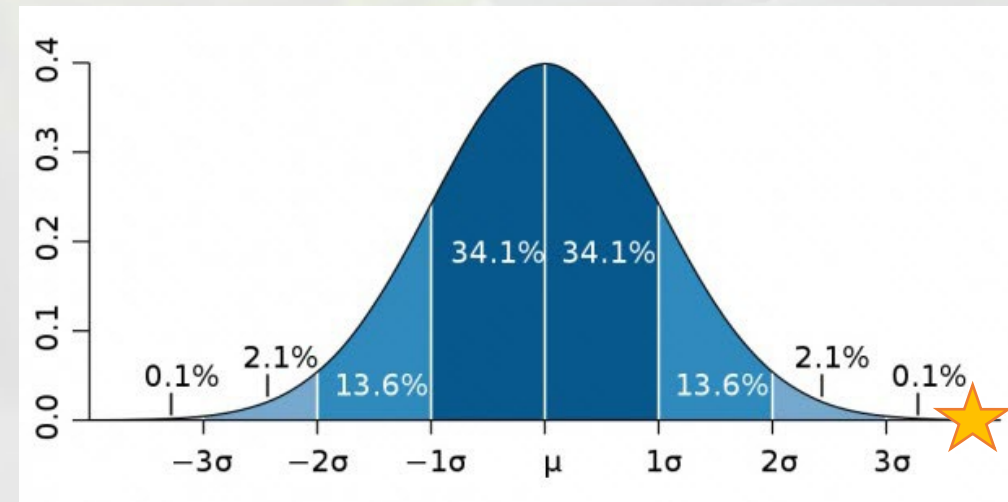
- ▶ Standard Errors (SE): measure of dispersion around the average (i.e. the RF)
- ▶ In a “normal distribution” (i.e. standard bell curve):
  - ▶ 68% within 1 SE of the mean
  - ▶ 95% within 2 SEs of the mean
  - ▶ 99.7% within 3 SEs of the mean

# Disaggregating the RFs

- ▶ 36 year old man, employed, not disabled:
  - ▶ RF: 0.904
  - ▶ SE: 0.0043
- ▶ i.e. 95% chance of a *given* such man having a *personal* RF of between 0.895 and 0.913
- ▶ 36 year old man, employed, disabled:
  - ▶ RF: 0.448
  - ▶ SE: 0.0111
- ▶ i.e. 95% chance of a *given* such man having a *personal* RF of between 0.426 and 0.47

# Disaggregating the RFs

- ▶ Compare with *Conner v Bradman*:
  - ▶ 51-year-old man, employed, education level 2
  - ▶ Non-disabled RF (Table A): 0.82 (SE = 0.0077)
  - ▶ Disabled RF (Table B): 0.49 (SE = 0.0132)
  - ▶ Adjustment to midpoint (0.655)
  - ▶ Disabled RF plus 3 SEs = 0.53
- ▶ Puts C in <0.3% of best-performing workers!



# Disaggregating the RFs

- ▶ Mental check: compounding
- ▶ Probability of being in work each year: 99%
- ▶ Probability of work in Y1 and Y2:  $0.99 \times 0.99 = 0.98$
- ▶ Probability of continuous work for  $y$  years:  $0.99^y$
- ▶ Can “reverse engineer” RF to give annual chance of keeping/losing employment

# Disaggregating the RFs

▶ RF-A =  $P_{(nd)}^y$

▶ 0.88 =  $P_{(nd)}^{28}$

▶  $P_{(nd)} = {}^{28}\sqrt{0.88}$

▶  $P_{(nd)} = 0.9954$

▶ 99.54% annual chance of keeping employment

▶ 1 in 217 annual chance of losing work

▶ RF-B =  $P_{(d)}^y$

▶ 0.55 =  $P_{(d)}^{28}$

▶  $P_{(d)} = {}^{28}\sqrt{0.55}$

▶  $P_{(nd)} = 0.9789$

▶ 97.89% annual chance of keeping employment

▶ 1 in 47 annual chance of losing work

# Disaggregating the RFs

- ▶ Difference in annual chance is small (less than 2%)
- ▶ Compounding effect over 28 years accounts for large difference in RFs
- ▶ “Intuitive” idea of what “feels right” can lead astray

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# Disaggregating the RFs

- ▶ Two effects:
  - ▶ "drop out"
  - ▶ "stay out"
- ▶ Drop out:
  - ▶ Direct effects – symptoms, discrimination
  - ▶ Indirect e.g. family dynamics and care
- ▶ Stay out
  - ▶ Bigger effect
  - ▶ Losing good employer or job match
  - ▶ Fewer suitable vacancies



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# RFs: the future

- ▶ New guidance: how effective?
- ▶ Midpoint adoption likely to stay
- ▶ *Billett* may be a wrong turn (see you in the SC)
- ▶ Increased use of experts for “bespoke RFs”
- ▶ Greater robustness increases certainty, saves costs