



# Gender neutral insurance rates?

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## EU DIRECTIVE 2004/113/EC Article 5



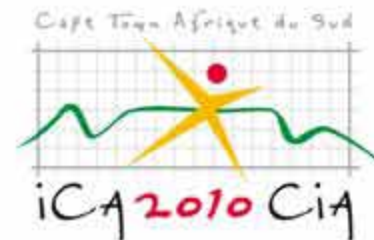
- The use of gender as an actuarial factor in the calculation of premiums and benefits shall not result in differences in individuals' premiums and benefits
- This rules should apply only for new contracts, in order not to avoid a sudden readjustment of the market
- Member states may permit proportionate differences based on accurate actuarial data
- Data should be
  - Compiled
  - Published
  - Regularly updated
- Costs related to pregnancy and maternity may not result in differences

## EU DIRECTIVE Implementation



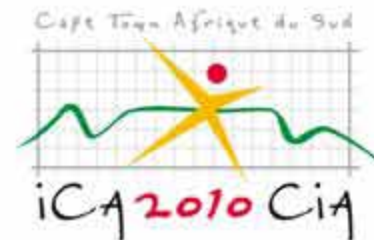
- Article 5 is valid from 21 December 2007
- Decision to allow differences should have been made before that
- The article should otherwise be implemented by 21 December 2009
- Member states should inform the Commission of their decisions
- A report should be sent to the Commission by 21 December 2010
- Member states permitting differences shall review their decisions by 21 December 2012

## EU DIRECTIVE Swedish action



- Agreement between Finance Department, the Federation of Swedish Insurers and the Consumers Insurance Bureau.
- The Federation will organise statistics
- It will be certified by the Swedish Research Council for Actuarial Science
- The Bureau will publicise it in a correct and understandable form

## EU DIRECTIVE Swedish action



- Insurance mortality study
  - Published 2007
  - Showed differences in mortality and longevity
  - Differentiation is allowed
  - Does not have to follow the statistics
- Insurance motor claims statistical study
  - Published 2008
  - Showed differences in number of claims
  - Studied only gender, no cross-study of other factors
- Insurance disability study
  - To be published 2010
  - Shows large difference in number of claims
  - Shows minor difference in length of claims
- Medical expenses will follow later

## EU DIRECTIVE Implementation



- Different lines of business in different countries
  - Life
  - Disability
  - Annuities
  - Motor
  - Personal Accident
  - Medical Expenses
  - Critical Illness
  - Long Term Care

# EU DIRECTIVE Implementation



- Applies to whom?
  - Local insurance
  - Local insurers
  - Reinsurance???



# EU DIRECTIVE Alternatives



- Type of statistics
  - Population
  - Insurance industry
  - Own portfolio
  - Foreign experience

## EU DIRECTIVE Alternatives



- Responsible for collecting statistics
  - Government department
  - Regulator
  - Insurance industry
  - National Statistical Agency
  - Actuarial association
  - Individual company

# EU DIRECTIVE Alternatives



- Differentiation

- Has to follow the statistical difference
- Any differentiation is allowed, as long as the statistics show differences
  - But note the wording in the directive on proportionate differences

# GENDER NEUTRAL RATES

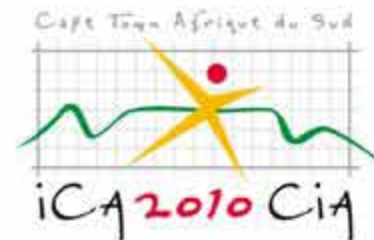
## Facts



- Gender is not a social construction
- Biological gender exists
- There are biological differences between males and females
- And males and females behave differently

# GENDER NEUTRAL RATES

## Facts



- Gender is not a social construction
- Biological gender exists
- There are biological differences between males and females
- And males and females behave differently
- Males and females have different expected claims for the same insurance policy

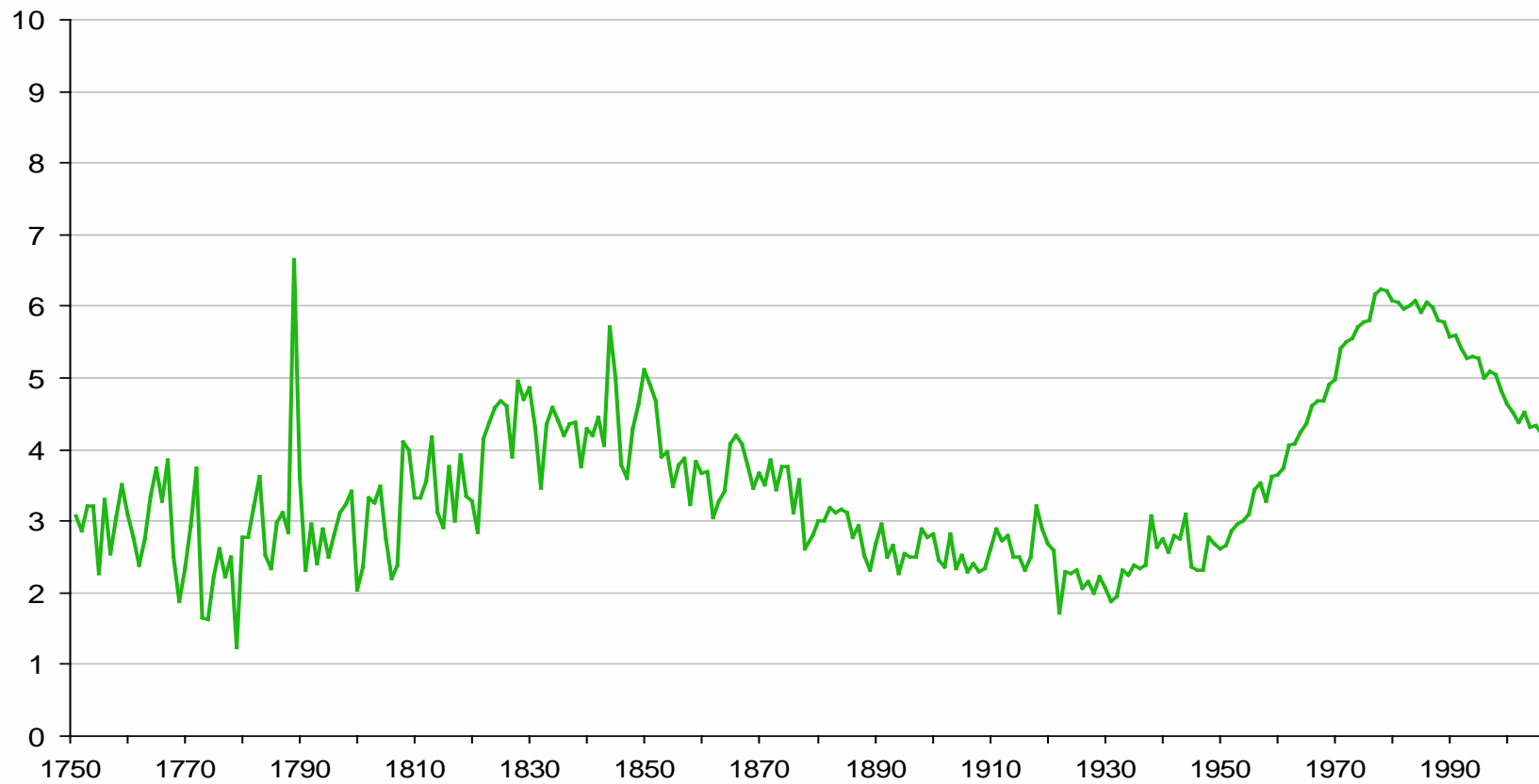
# GENDER NEUTRAL RATES

## Reality



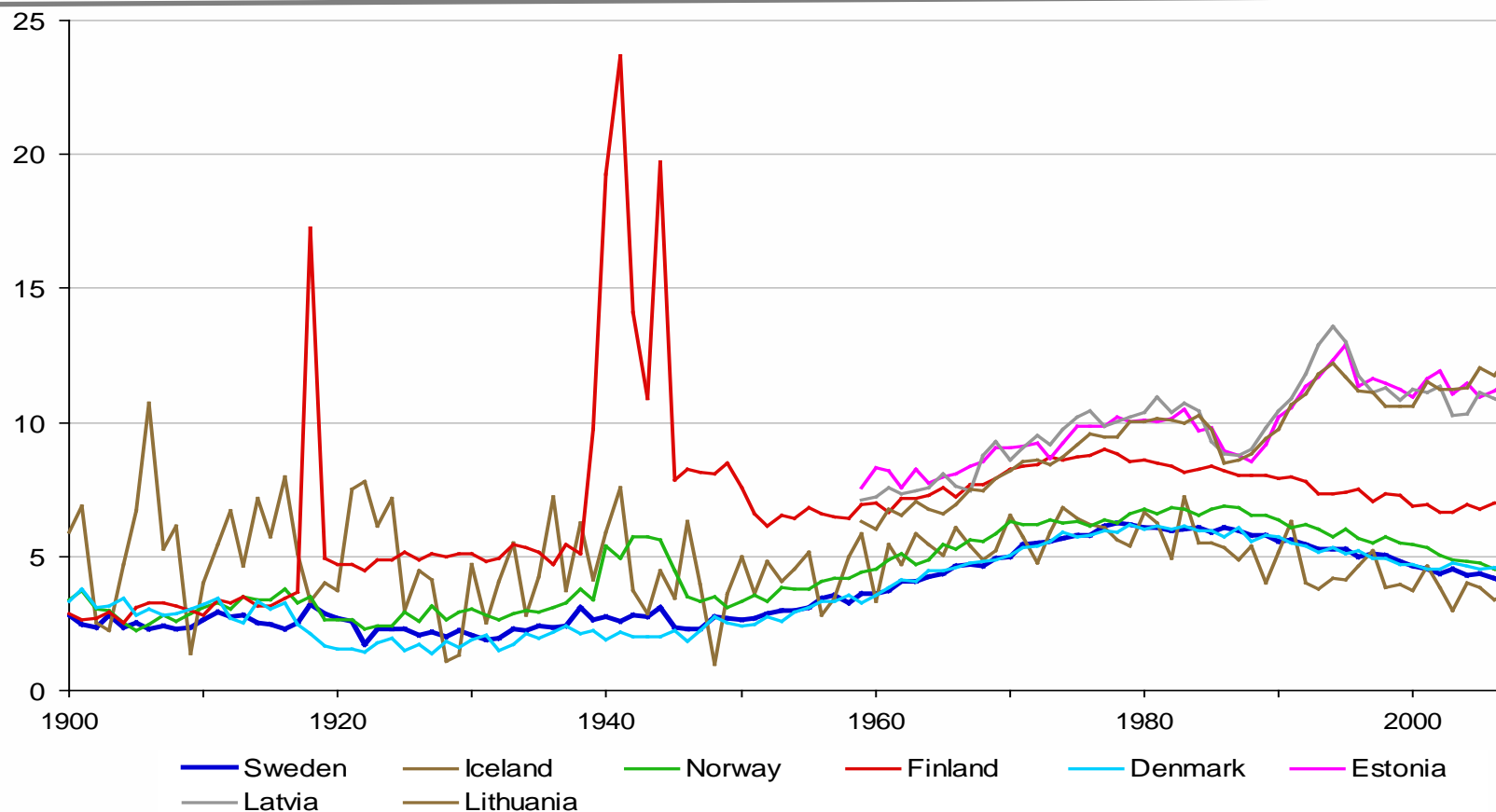
- Males have higher mortality than females
- Females live longer than males

# Gender differences LONGEVITY Females-males, Sweden



Source: Human Mortality Data Base

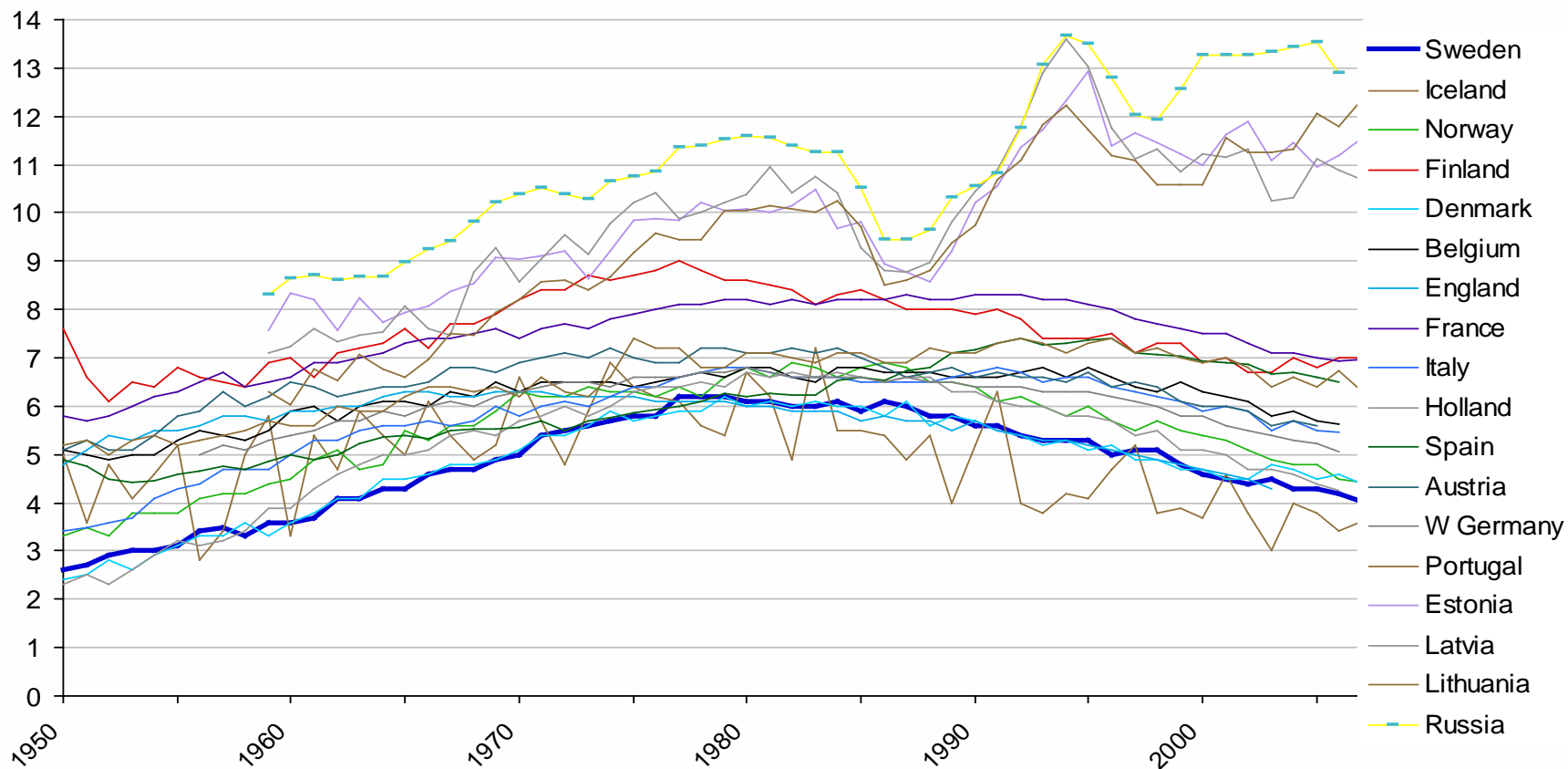
# Gender differences LONGEVITY Females-males, Nordic and Baltic countries



Source: Human Mortality Data Base

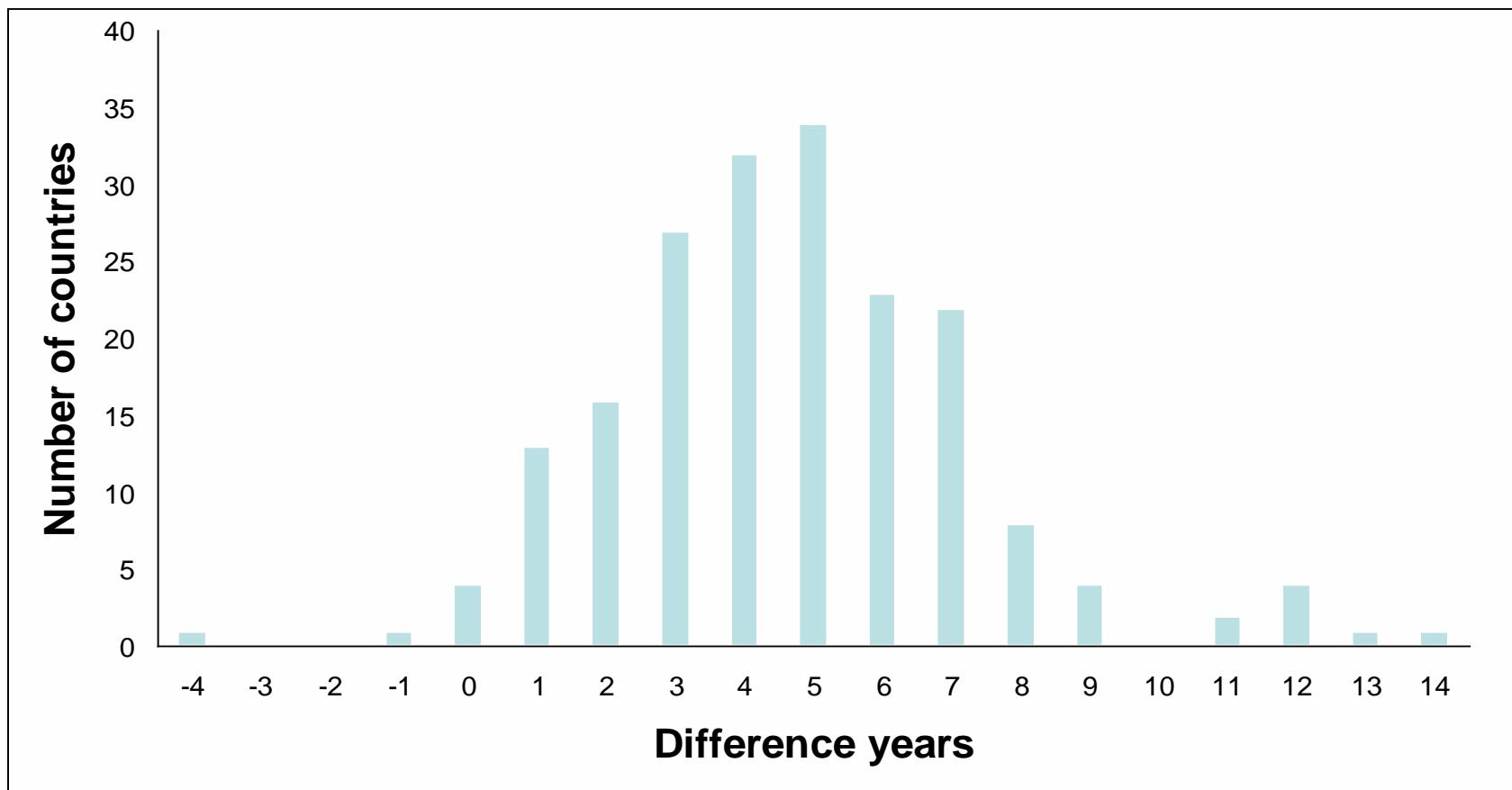
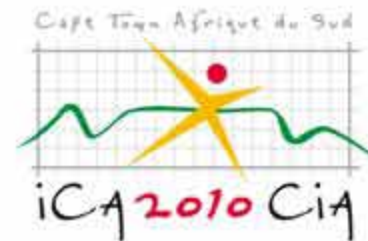


# Gender differences LONGEVITY Females-males, Europe



Source: Human Mortality Data Base

# Differences LIFE EXPECTANCY Females – Males, the world



Source: WHO

# Animals

## DIFFERENCES IN MORTALITY

### Males/Females



Animal category	Females mortality/male mortality
Apes	66%
Small primates	109%
Carnivores	95%
Hoofstock	62%
Kangaroos	67%
Crocodiles	61%
Ratites (Emu, Rhea)	125%
Raptors (Eagle etc)	95%

Source: Demographic Research

## GENDER NEUTRAL RATES

### Facts

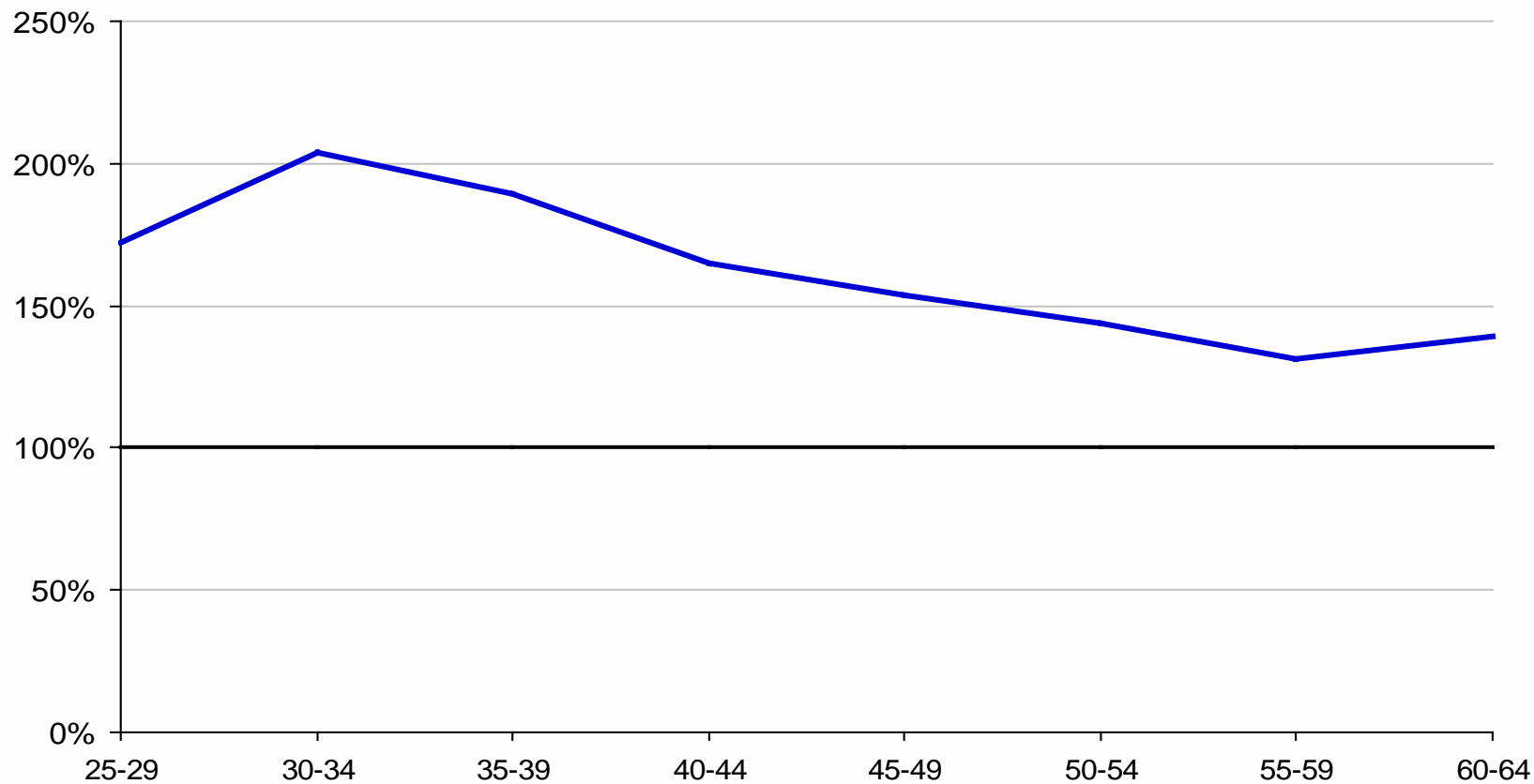


- Females are sick more than males are
- Males are more prone to accidents
  - Which also influences motor insurance

# Sweden

## DISABILITY INCIDENCE

### Females/Males

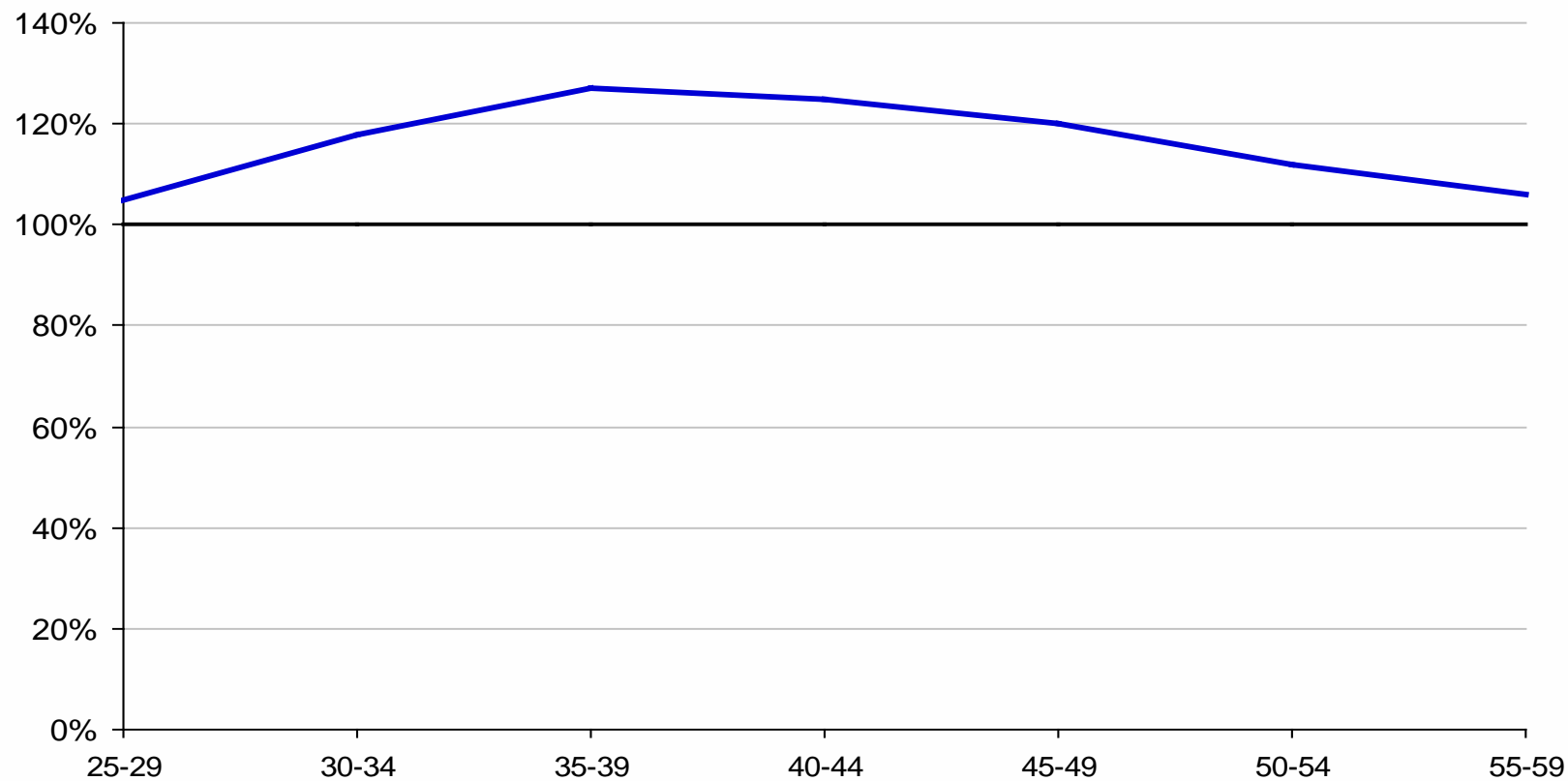


Source: SUS

# Sweden

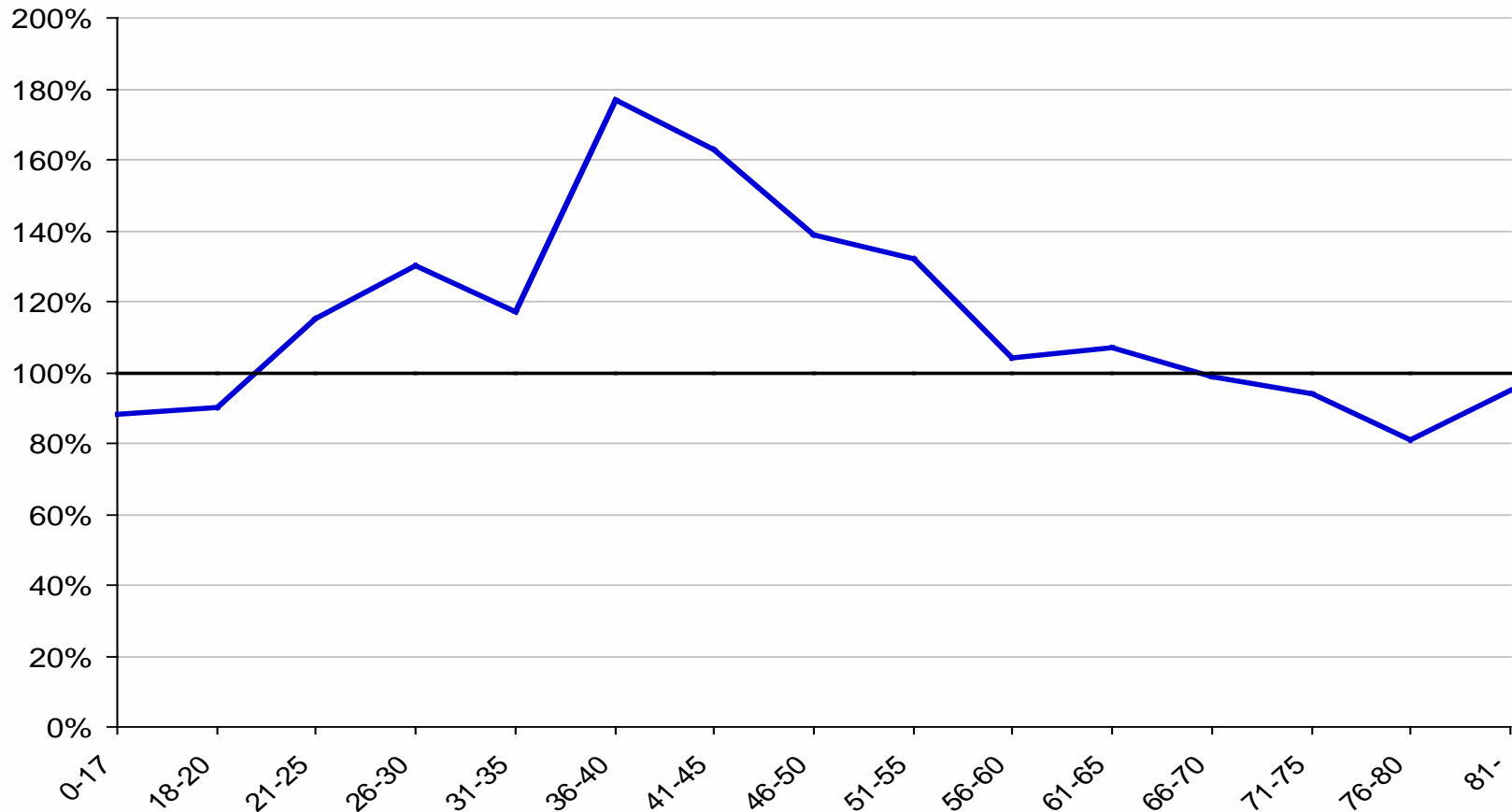
## LENGTHS OF DISABILITY

### Females/Males



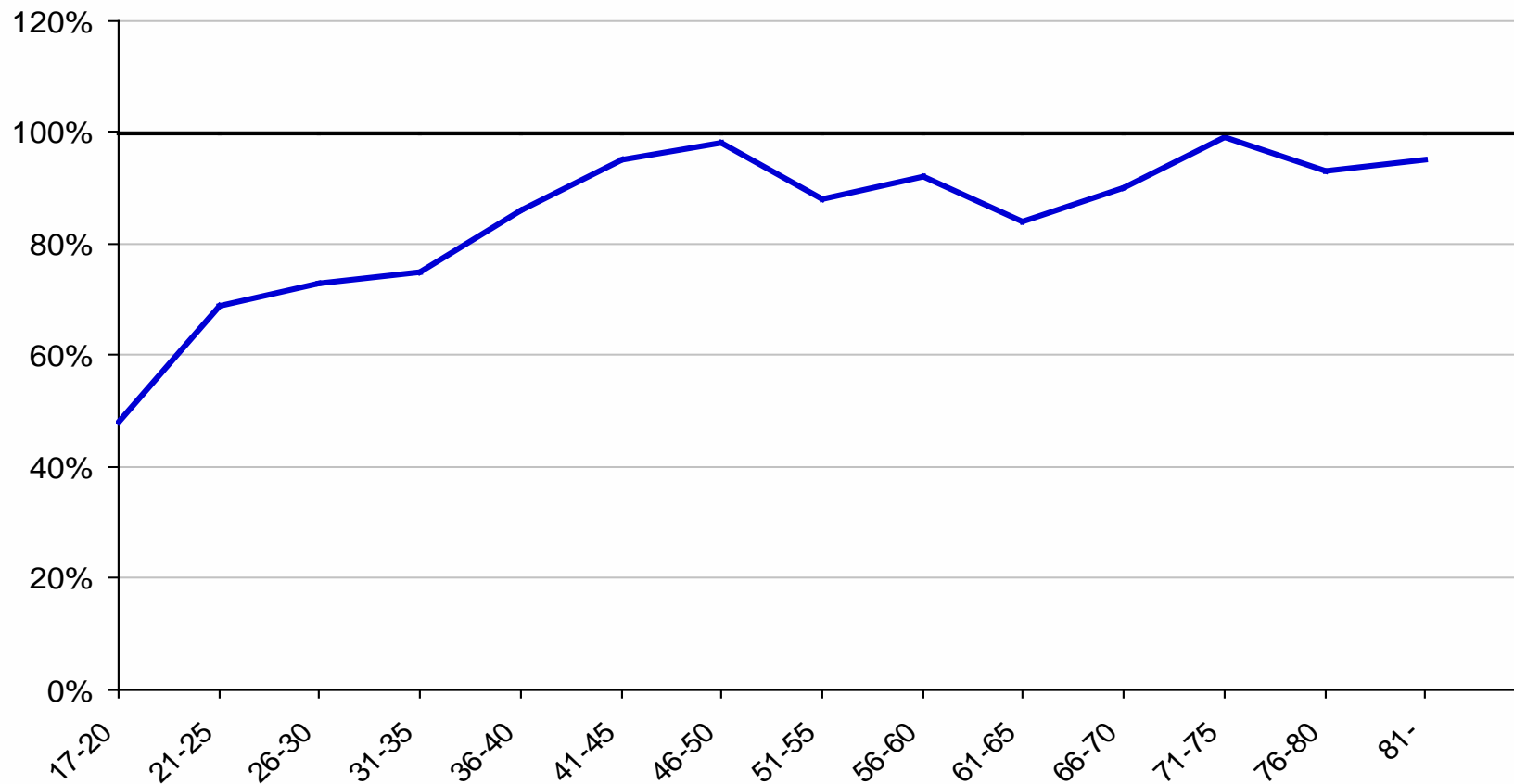
Source: SUS, preliminary information

# Medical expenses CLAIMS COST PER POLICY UK, Females/Males



Source:

# Motor insurance CLAIMS COST PER POLICY UK Females/Males



Source: ABI



# GENDER NEUTRAL RATES??

## Other policy types



- Critical Illness
- Accident
- Long Term Care
- Children's
- etc

# Theories

## GENDER DIFFERENCES

### Reasons



- Level of testosterone
  - Risky behaviour
  - Immune system

# Theories

## GENDER DIFFERENCES

### Reasons



- Risky behaviour
  - Accidents
  - Violence
  - Alcohol
  - Smoking
  - Drugs
  - Diet
  - Does not go to the doctor when ill

Theories  
**GENDER DIFFERENCES**  
Reasons

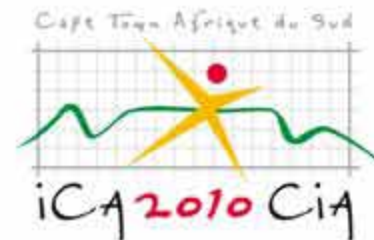


- Men have only one X-chromosome
  - Y is much smaller than X
    - Females have reserve capacity in the extra X chromosome

# Theories

## GENDER DIFFERENCES

### Reasons



- Men have only one X-chromosome
  - Y is much smaller than X
    - Females have reserve capacity in the extra X chromosome
  - Male birds have two chromosomes of the same type (Z-chromosomes)
    - Female birds have two different chromosomes (WZ)
    - Compares the Ratites

Theories  
**GENDER DIFFERENCES**  
Reasons

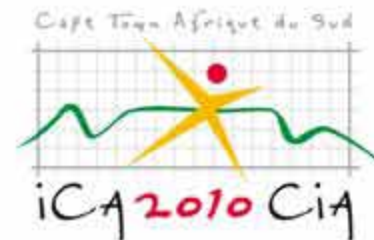


- Men are larger
  - Eat more
  - Use up the metabolic system quicker

# Be neutral

## GENDER NEUTRAL RATES

### Problems



- Gender neutral tariffs
- Group life pricing
  - May you ask for the gender composition of a group?
  - May you use it in pricing if you know it?
  - May you use knowledge of occupation?
  - May you use claims experience?
- How do you prove that gender is not used in pricing of a group
- How do you prove that gender is not used in individual risk pricing
  - Risk assessment is not exact, it uses judgement and soft factors

# GENDER NEUTRAL RATES

## How to avoid it?



- Use shoe size as pricing factor
- Ask for number of Y chromosomes
- Price following testosterone in blood test
- Gender differentiated bonus
- Gender specific marketing
- Gender differentiated agent commission
- Cross border selling from where differentiation is legal



# GENDER NEUTRAL RATES

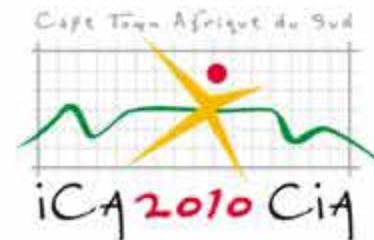
## How to avoid it?



- Use shoe size as pricing factor
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- Gender differentiated bonus
- Gender specific marketing
- Gender differentiated agent commission
- Cross border selling from where differentiation is legal
- All of this is probably illegal!!!
- Or at least considered grossly unethical

# GENDER NEUTRAL RATES

## How to avoid it



- Gender neutral products
  - Joint life policies
    - But joint lives could be of the same gender
  - Widow/widower benefits
- Combination products
  - Breast and prostate cancer

## NEXT STEP



- Age discrimination
- Weight discrimination
- Discrimination of disabled

# Discrimination of disabled?

## EU DIRECTIVE

### New draft text



“In case of private insurance contracts differential treatment due to disability is allowed when it relies on sound principles of risk-equivalent calculation, in particular on actuarial risk assessment that can be based on statistical data, on medical experiences as well as on reinsurers risk assessment tables.”

# Discrimination of disabled?

## EU DIRECTIVE

### New draft text



“In case of private insurance contracts, differential treatment *due to disability* is allowed when it relies on sound principles of risk-equivalent calculation, in particular on *actuarial* risk assessment that can be based on statistical data, on medical experiences as *well as on reinsurers risk assessment tables*.”

### CEA suggestion

"In case of private insurance contracts, differential treatment is allowed when it relies on sound principles of risk-equivalent calculation, in particular on risk assessment that can be based *e.g.* on statistical data, on medical experiences *or on actuarial principles*"



**Thank you for your attention!**

## Contact details



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