

somewhat  
different

# Gender neutral 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 rule should apply only for new contracts, in order not to avoid a sudden readjustment of the market

## 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 rule 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 be 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

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*"

## EU DIRECTIVE

### Swedish action

- Agreement between Finance Department and 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 2009 or 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

## Facts

**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

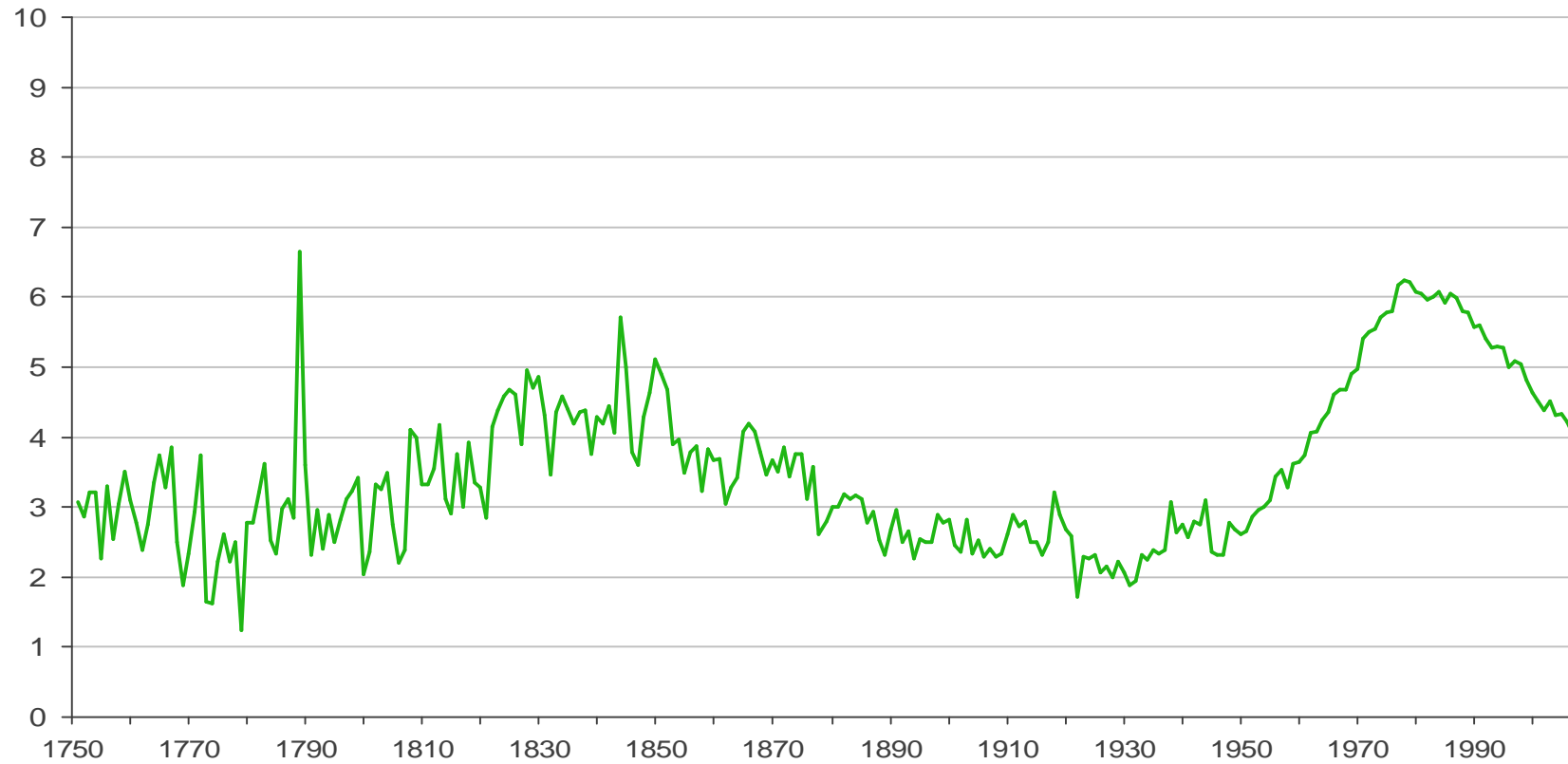
- Males have higher mortality than females
- Females live longer than males



Gender differences

**LONGEVITY**

Females-males, Sweden



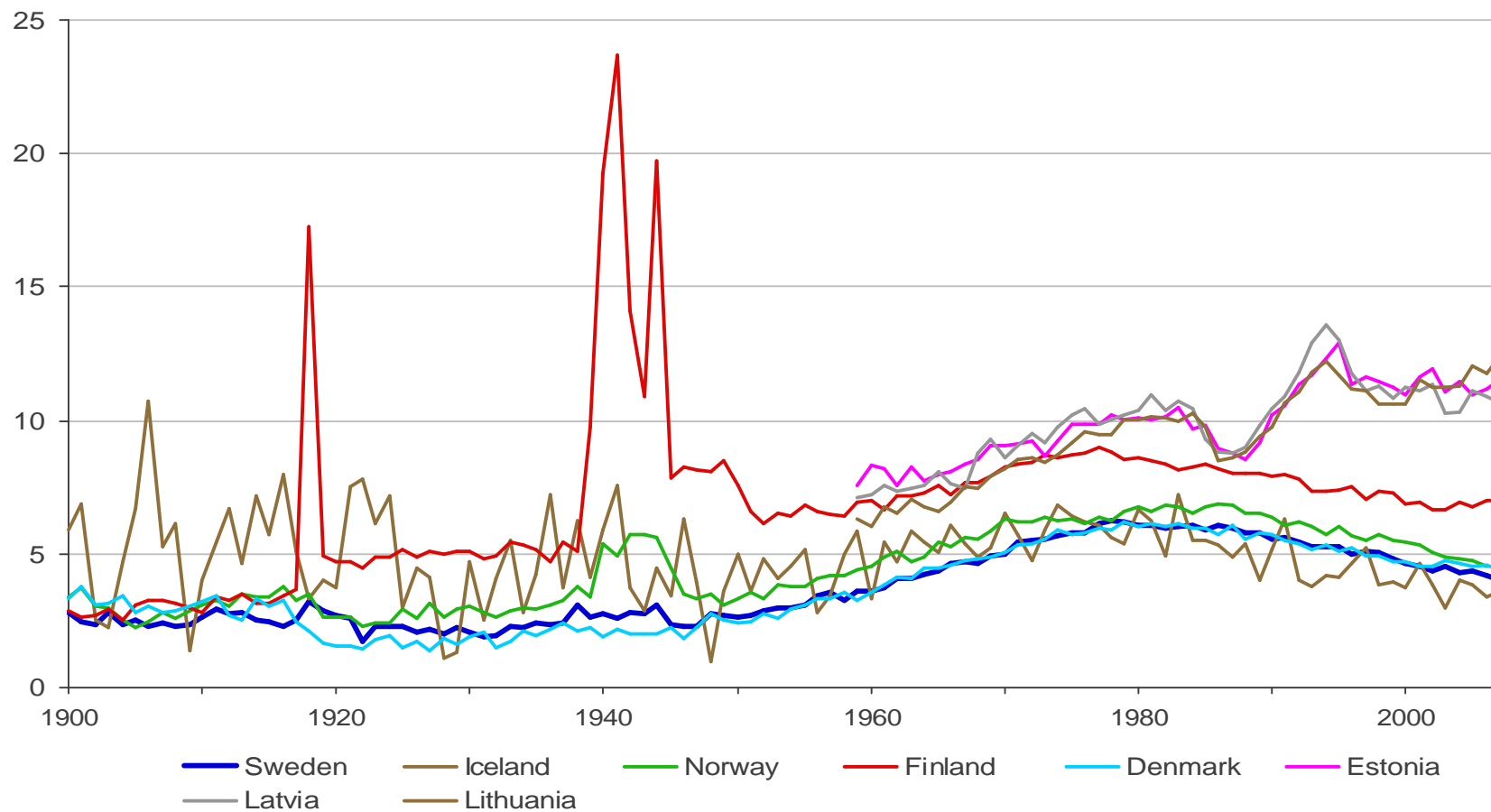
Source: Human Mortality Data Base

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Gender differences

**LONGEVITY**

Females-Males, Nordic and Baltic countries

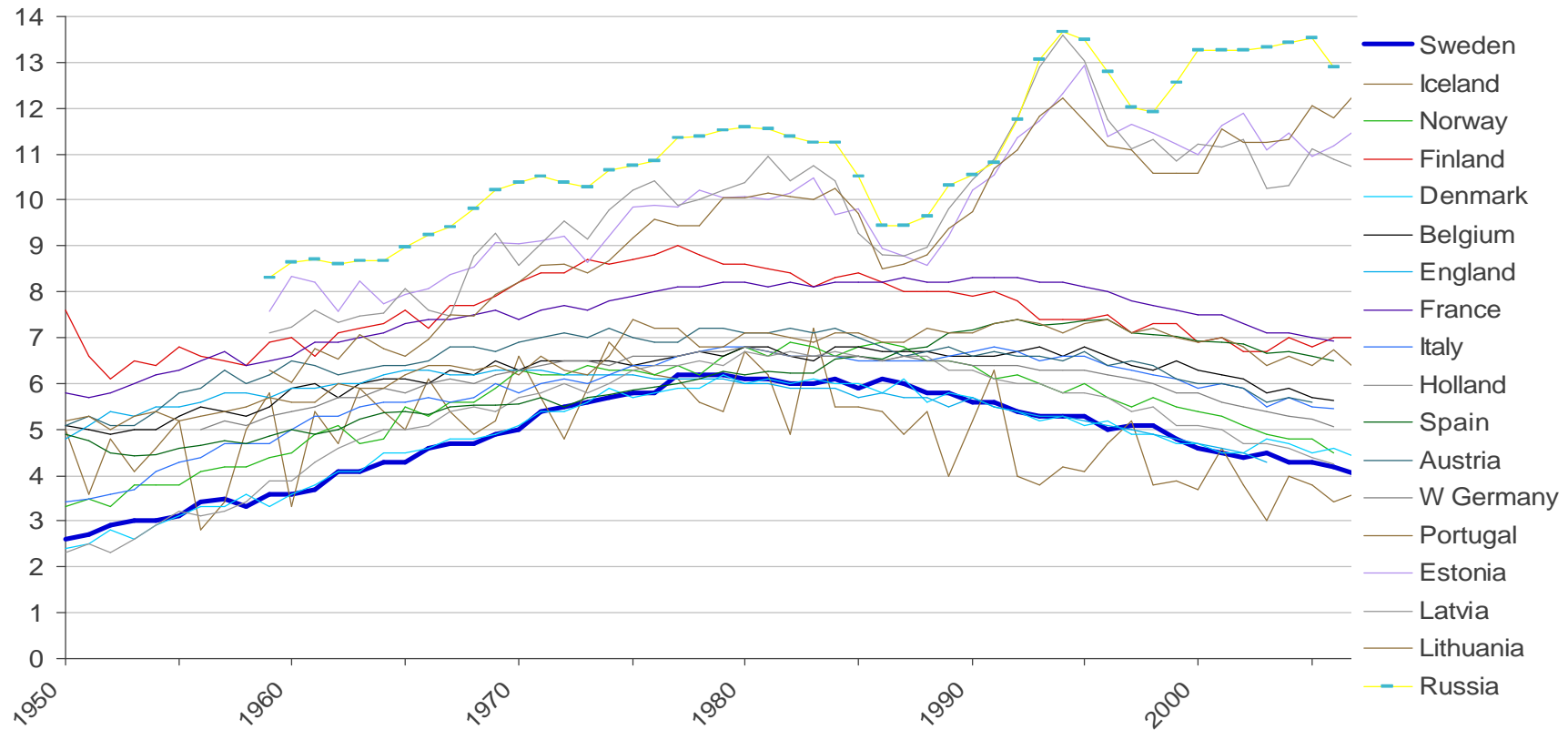


Source: Human Mortality Data Base

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# GENDER NEUTRAL RATES

## Longevity Females-Males



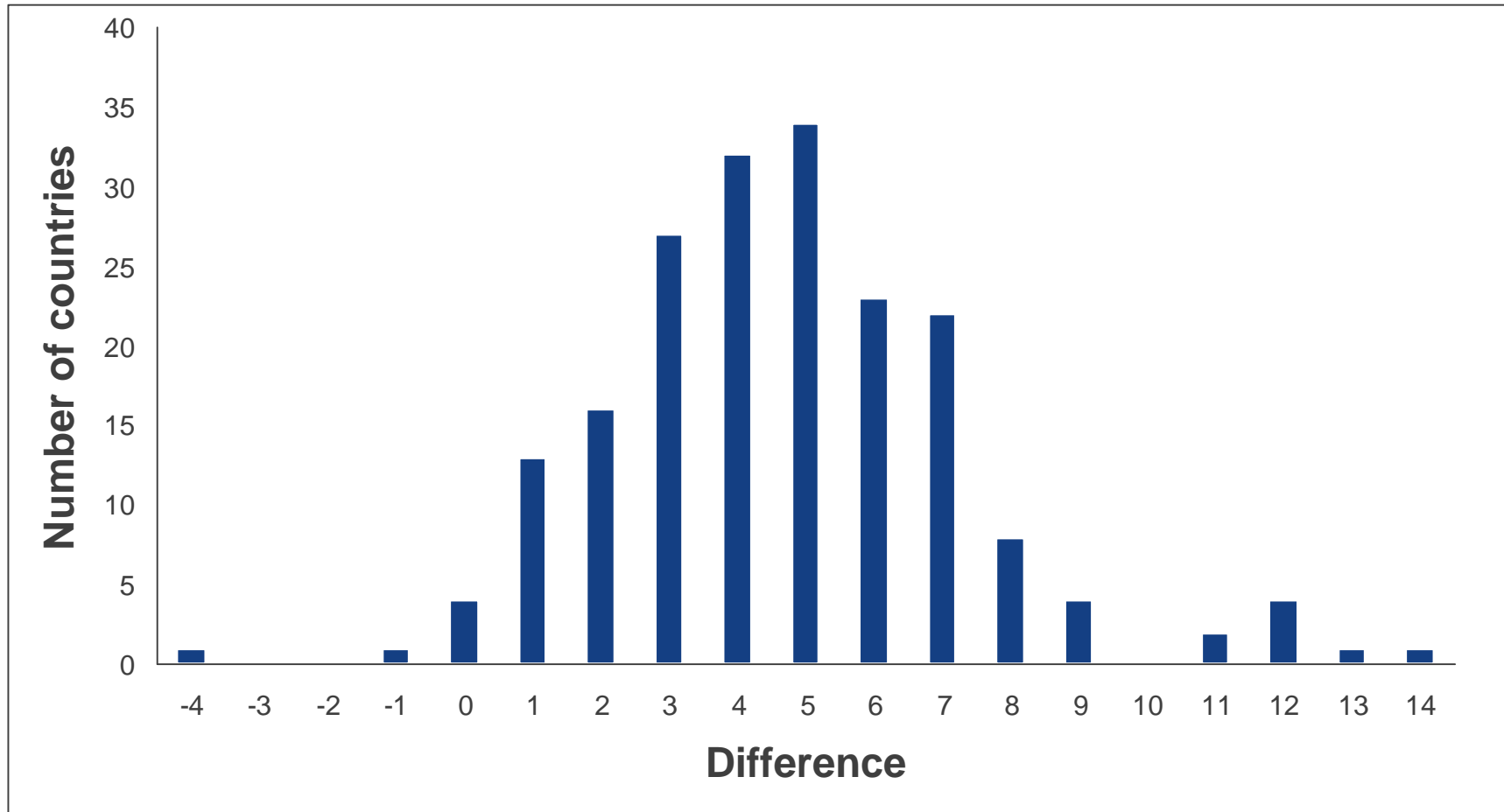
Source: Human Mortality Data Base

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Difference

**LIFE EXPECTANCY FEMALES - MALES**

Number of countries



Source: WHO

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Difference

# LIFE EXPECTANCY

Females - males

- Difference -4
  - Tonga
- Difference -1
  - Zimbabwe
- Difference 0
  - Central African Republic
  - Qatar
  - Bangla Desh
- Difference > 0
  - All other countries

## Animals

**DIFFERENCES IN MORTALITY**

## Males/Females

<b>Animal category</b>	<b>Females mortality/male mortality</b>
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

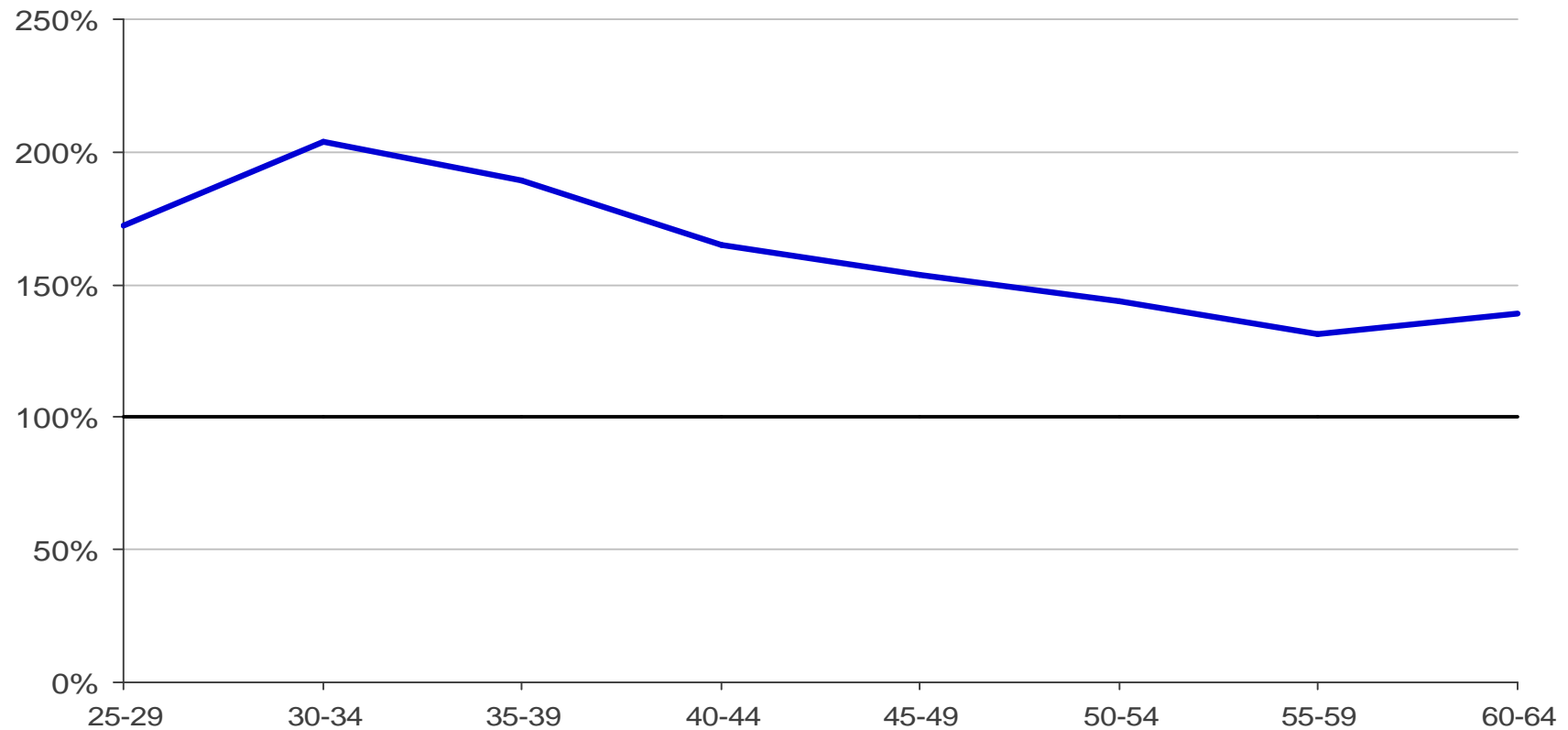
## Facts

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

Sweden

**DISABILITY INCIDENCE**

Females/Males



Källa: SUS

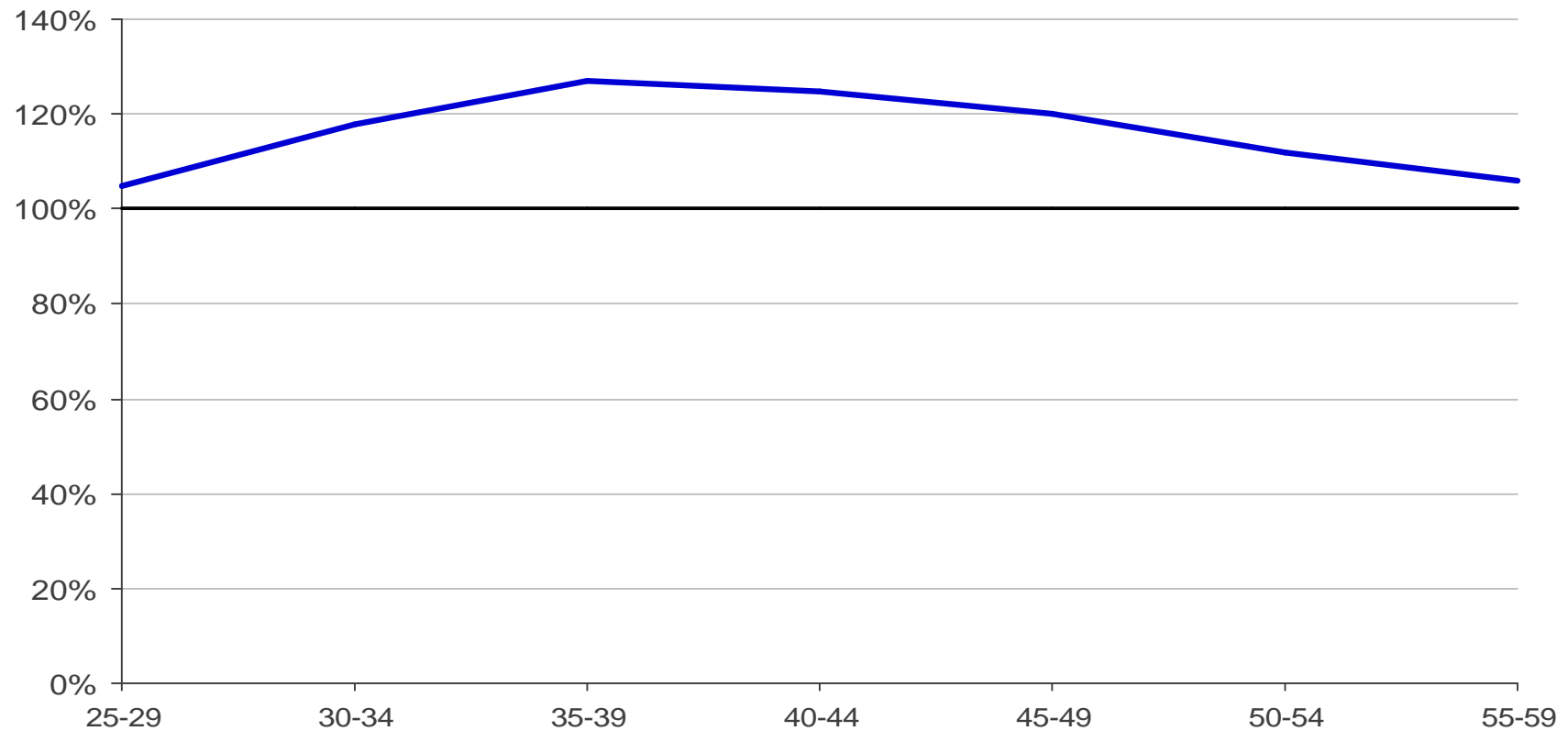
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Sweden

**LENGTHS OF DISABILITY**

Females/Males



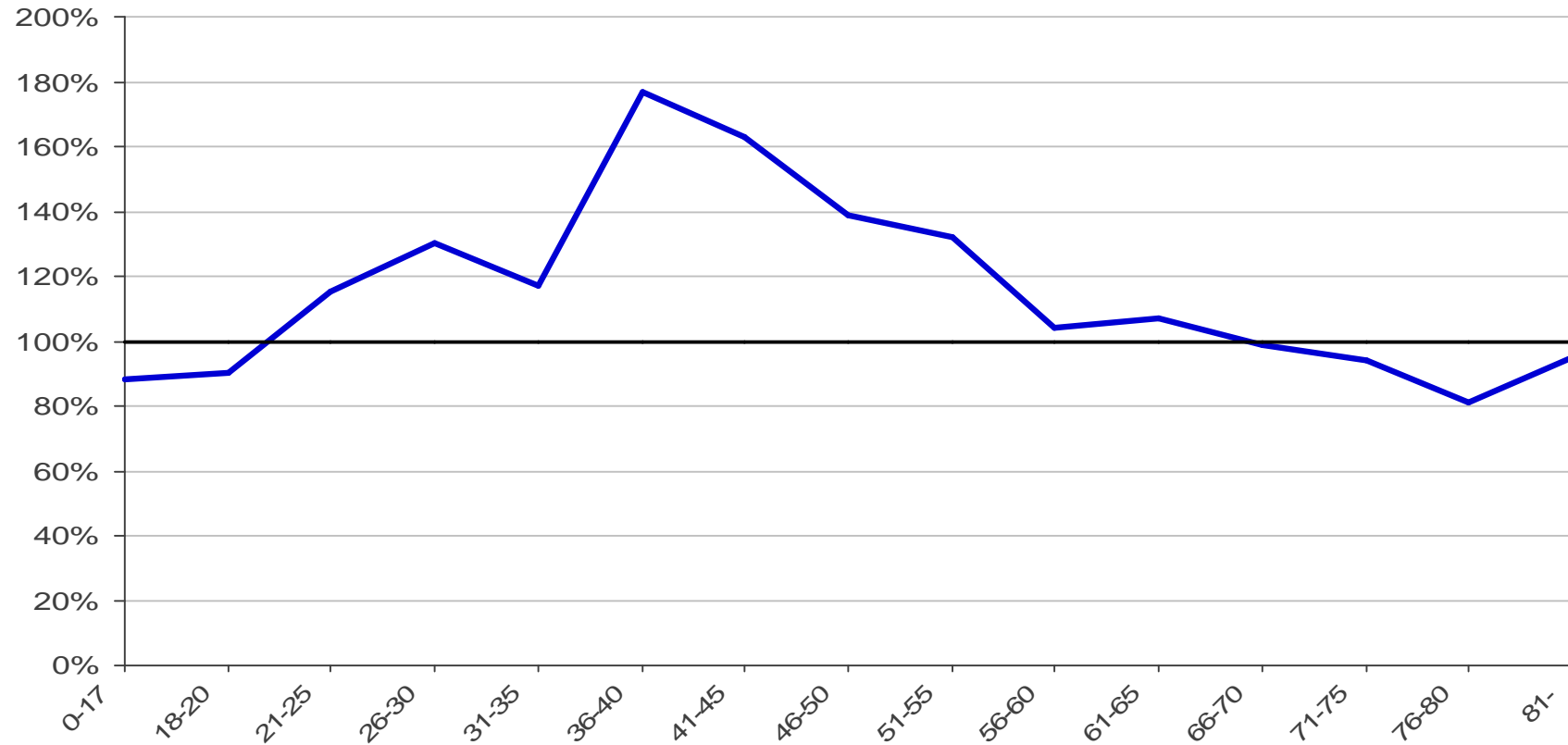
Källa: SUS, preliminära uppgifter

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Medical expenses

**CLAIMS COST PER POLICY**

UK, Females/Males



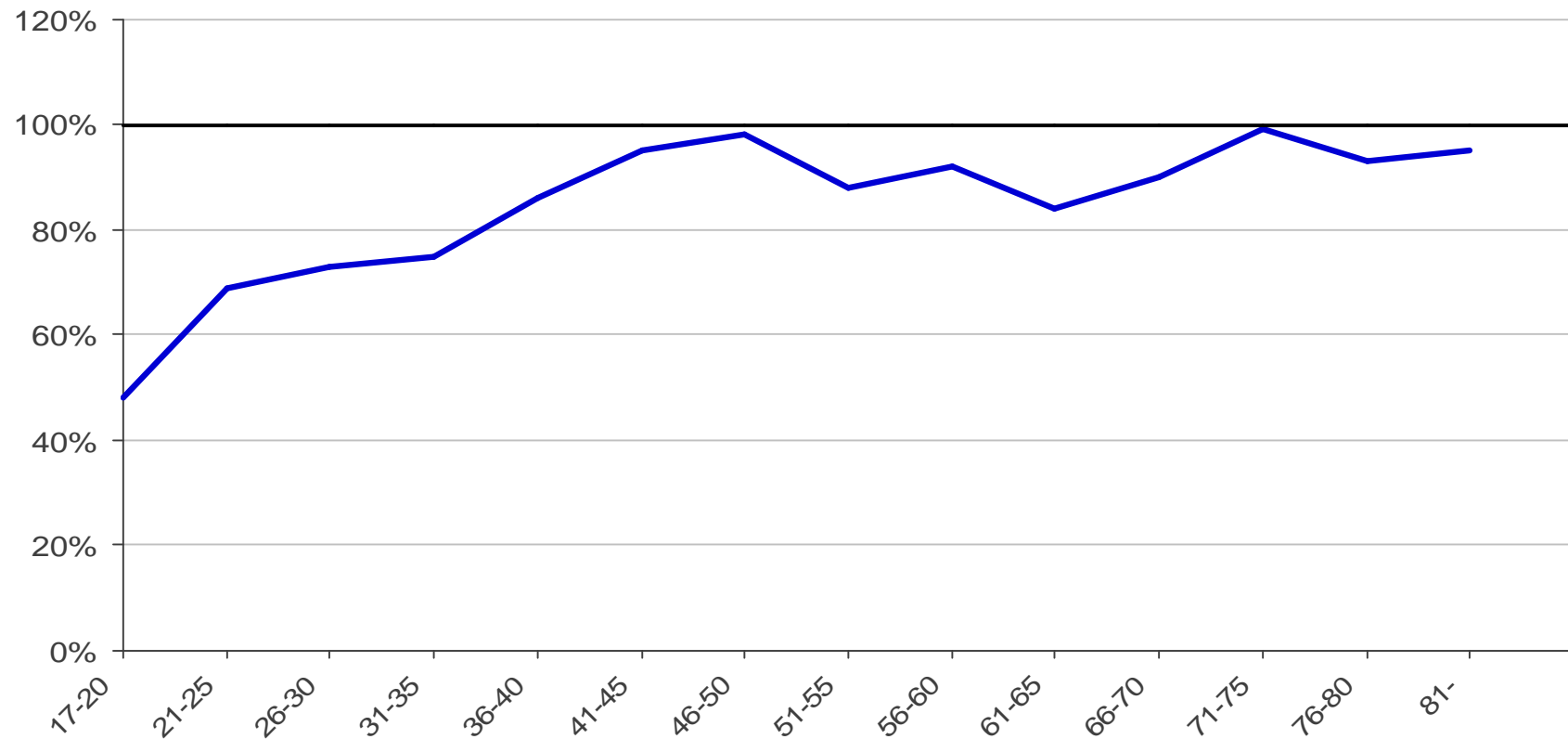
Source: ABI

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Motor insurance

**CLAIMS COST PER POLICY**

UK Females/Males



Source: ABI

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# 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

- Violence
- Accidents
- 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
- 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

- Eats more
- Uses 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 different bonus
- Gender specific marketing
- Gender differentiated agent commission
- Cross border selling from where it 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



somewhat  
different

**Thank you for your attention!**

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