

Measuring the average retirement age

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A simple definition

The average age of retirement at year t
= the average age of those people who
actually start to receive a pension in the
pension scheme in question during year t

Median age can be used instead of arithmetic
mean

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Problems with the simple definition 1

In the long run the average age of new pensions may rise because the mean age of the working population is increasing

In this case the changing average does not reflect any real change in the retirement behaviour of individual people

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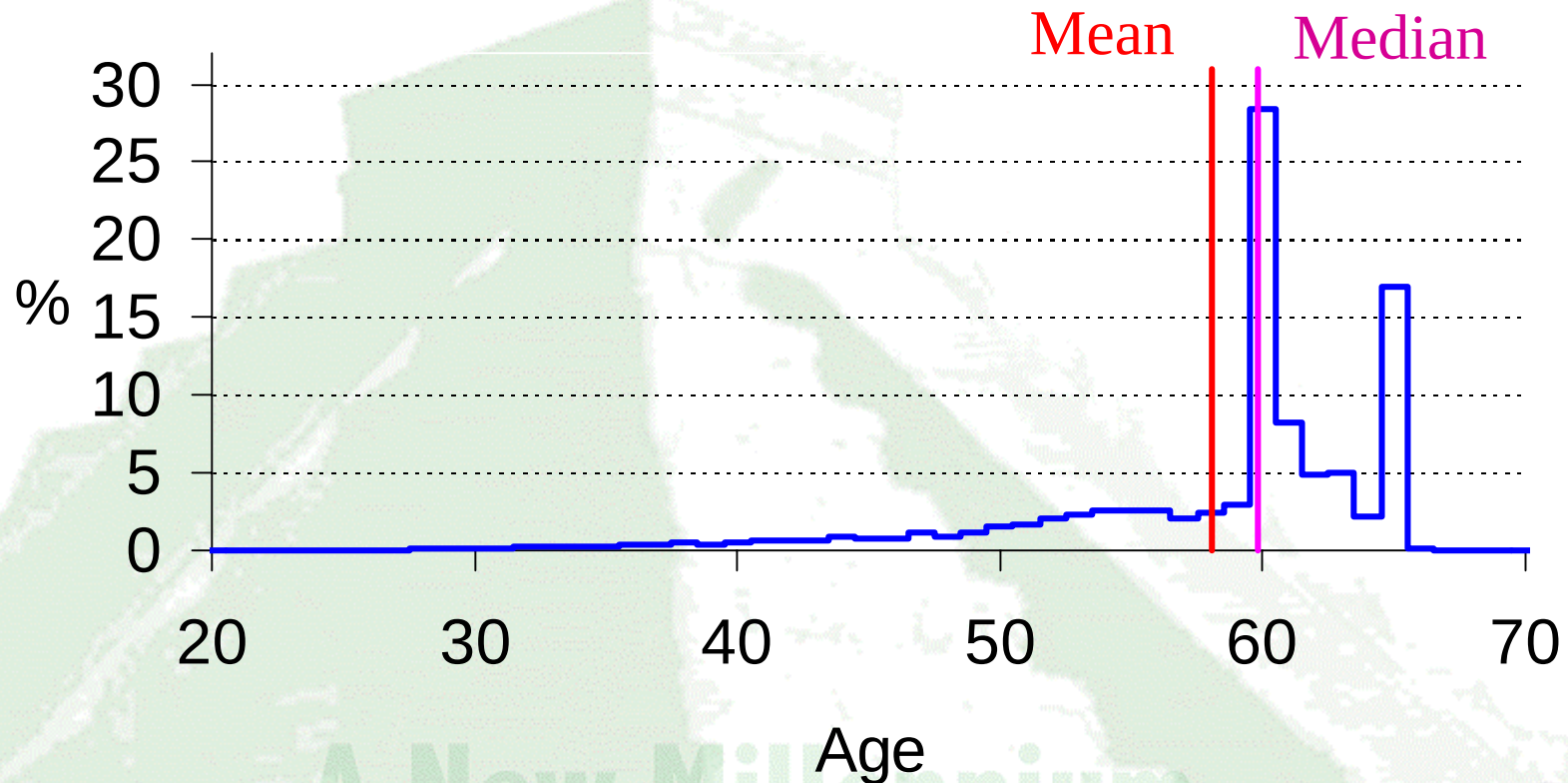
Problems with the simple definition 2

In the short term the result may be misleading:
For example, in 1992 the average age rose in Finland by about one year when early retirement increased because of rising unemployment.

The long term effect should be in the opposite direction.

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Age distribution of new pensions in a Finnish pension scheme



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Aims of the new calculation method

The aim was to develop a method to calculate the average retirement age which

- reflects only the changes of the retirement behaviour of individuals and not the changes in the population structure
- reacts to changes immediately and in the correct direction

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The expected retirement age

The expected retirement age X is

$$X = \frac{\sum_{j=1}^{100} j A_j}{\sum_{j=1}^{100} A_j}$$

where

j = age, and

A_j = expected number of new pensions at age j

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The expected retirement age 2

The expected number of new pensioners

$$A_j = e_j \times U_j \times \prod_{k=0}^{j-1} (1 - e_k - q_k)$$

q_j = mortality rate at age j

e_j = probability of retirement at age j

U_j = proportion of the cohort covered by the pension scheme by age j

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An interpretation

The expected retirement age

= the average age of new pensioners in a stable population where the parameters (q_j, e_j, U_j) are assumed to stay at the level of the year in question

cf. the formula of life expectancy



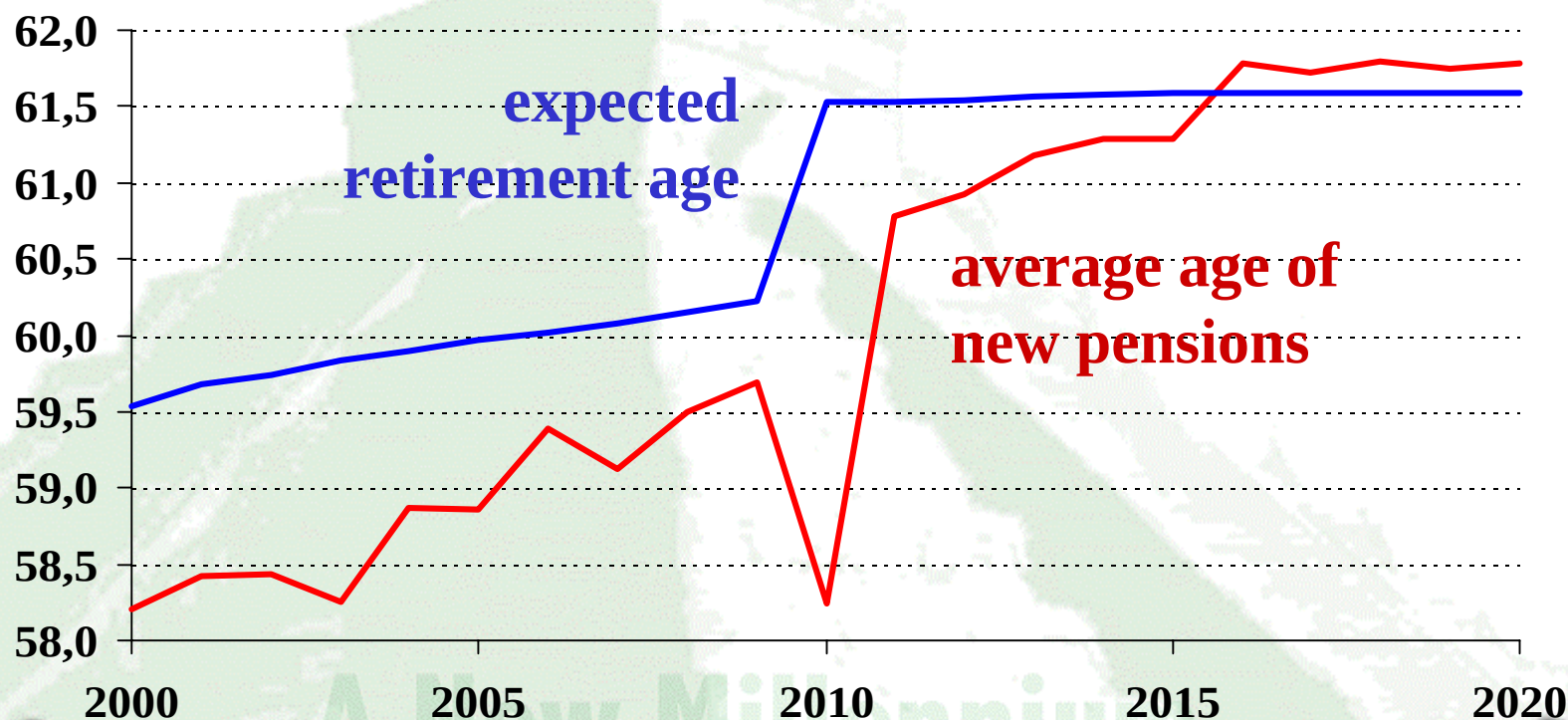
Requirements for calculation

Sufficiently detailed statistical data is needed to calculate the required parameters

The pension scheme should be large enough for estimating the parameters reliably

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A theoretical experiment: all age limits
are raised by one year in 2010;
calculated using a forecast model



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