## Workshop on Forecasting Danish Life Expectancy and Age at Retirement Odense, Monday, 10 December 2018

The workshop will focus on making three forecasts:

- 1. Life expectancy at birth for Danish females by calendar years from 2018 through 2068, with a focus on the values for 2038 (20-year-forecast) and 2068 (50-year forecast).
- 2. Life expectancy at birth for Danish males by calendar years from 2018 through 2068, with a focus on the values for 2038 (20-year-forecast) and 2068 (50-year forecast), and
- 3. Official pension age for cohorts ( $X_{14.5}$ , the age when remaining life expectancy is forecast to be 14.5) for the total Danish population for birth cohorts born from 1950 through 1970 and, if the forecasting method is applicable, to 2018, with a focus on the 1950, 1960, 1970 and 2018 cohorts.

In session 1, before lunch, forecasts of these three trajectories will be made by invited experts using a variety of methods. Then in session 2, after lunch, the alternative forecasts will be compared and evaluated using the method of "historical forecasts" ("out-of-sample analysis"); and suggestions will be made about which forecasts should be used and how they could be combined to get a range of possible futures. Finally, in session 3, some further perspectives about mortality forecasting for Denmark will be presented.

Session 1: Various forecasts

9:00-9.20 DREAM forecasts. Marianne Hansen.

9:20-9:40 Forecasts based on the ATP approach, with reflections on cointegration. Søren Jarner

9.40-9:55 Danish Forecasts based on the Dutch approach. Michel Vellekoop

10:55-10:10 My neural network forecasts. Vasily Gorlishchev

10:10-10:25 Our forecasts. Ugofilippo Basellini, Giancarlo Camarda and Søren Kjærgaard 10:25-10:40 Our forecasts. Christina Bohk-Ewald and Roland Rau

10:40-11:10 Coffee break

11:10-11:25 Years of data needed to forecast X years. Marius Pascariu

11:25-11:40 How rapidly should the past be discounted. Jesus Alvarez

11:40-11:55 CoDA forecasts. Marie-Pier Bergeron-Boucher

11:55-12:10 Coherent forecasts. Søren Kjærgaard

12:10-12:30 Forecasts based on the Double-Gap, the Linear-Link, and the Maximum-Entropy models. Marius Pascariu

12:30-12:45 Forecasts of  $X_{14.5}$  for cohorts born up through 2018. Silvia Rizzi and Francisco Villavicencio

12:45-13:30 Lunch

Session 2: Comparison of forecasts

13:30-13:50 Overview of the alternative forecasts of Danish male and female life expectancy at birth from calendar year 2020 through 2070, with evaluation of the performance of the models (and perhaps a couple of other models) using historical data for Denmark and various measures of accuracy. Marius Pascariu

13:50-14:00 Discussion of the alternative life expectancy forecasts for Denmark. Daria Kachakhidze (invited but not yet confirmed).

14:00-14:10 Further discussion of the alternative life expectancy forecasts for Denmark. David Blake (invited but not yet confirmed).

14:10-14:30. Overview of the alternative forecasts of official Danish pension age for cohorts born 1950 through 2020, with evaluation of the performance of the models (and perhaps a couple of other models) using historical data for Denmark and various measures of accuracy. Marie-Pier Bergeron-Boucher and Jose Manuel Aburto

14:30-14:40 Discussion of the alternative pension age forecasts. Researcher from DREAM. 14:40-14:50 Further discussion of the alternative pension age forecasts. Søren Jarner.

14:50-15:20 Coffee break

## Session 3a: Other perspectives

15:20-15:35 Danish Forecasts by SES. Søren Kjærgaard

15:35-15:50 Alternative Ways of Defining SES in Denmark. Malene Kallestrup-Lamb and David Blake.

15:50-16:05 Could Covariates Be Used to Anticipate Discontinuities in the Gap between Danish Life Expectancy and Best Practice? Jim Oeppen

16:05-16:20 Unprecedented Mortality Breakthroughs and Life Expectancy at Age 100: Two Elephants in the Room. James Vaupel and Jesus Alvarez

<u>Session 3b: Future Directions and Priorities</u> 16:20-16:40 Discussion. Christian Møller Dahl 16:40.16:50 Discussion. Juha Alho. 16:50-17:20. Open discussion chaired by James Vaupel

18:30-20:30 Dinner

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