THE PROBLEM
O

THE MODEL
OOOO

PRELIMINARY RESULTS
OOOOO

FUTURE WORK
O

Monthly mortality estimates for Aotearoa New Zealand

John Bryant, *Bayesian Demography Limited*
Kim Dunstan, *Stats NZ*
Pubudu Senanayake, *Stats NZ*
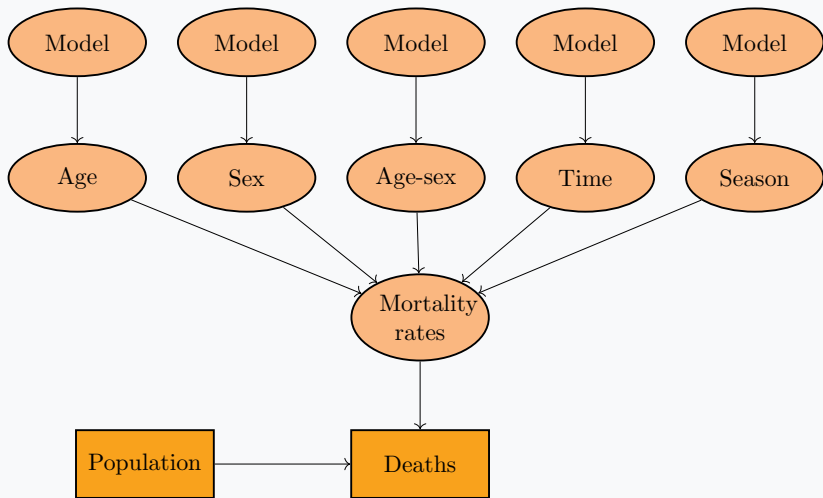Lucianne Varn, *Stats NZ*
Junni Zhang, *Peking University*

The problem
○

The model
○○○○

Preliminary results
○○○○○

Future work
○

THE PROBLEM
○

THE MODEL
○ ○ ○ ○

PRELIMINARY RESULTS
○ ○ ○ ○ ○

FUTURE WORK
○

The problem

The model

Data

THE PROBLEM
○

THE MODEL
○○●○

PRELIMINARY RESULTS
○○○○○

FUTURE WORK
○

Specification

THE PROBLEM
○

THE MODEL
○○○●

PRELIMINARY RESULTS
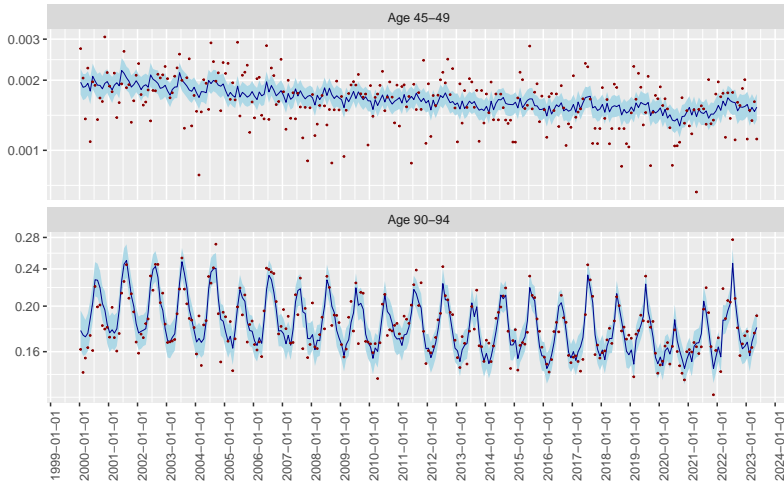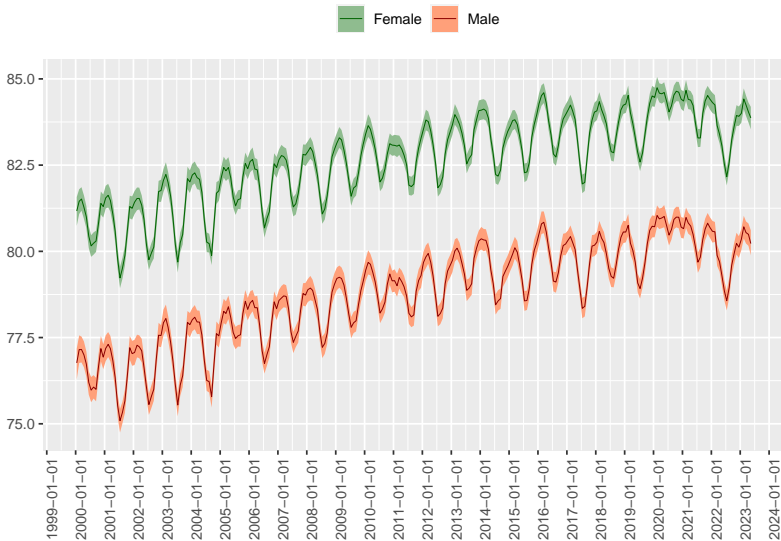○○○○○

FUTURE WORK
○

Computation

- Bayesian
- Open source R package
  - github.com/bayesiandemography/bage
- Fast approximation
  - Template Model Builder (TMB)
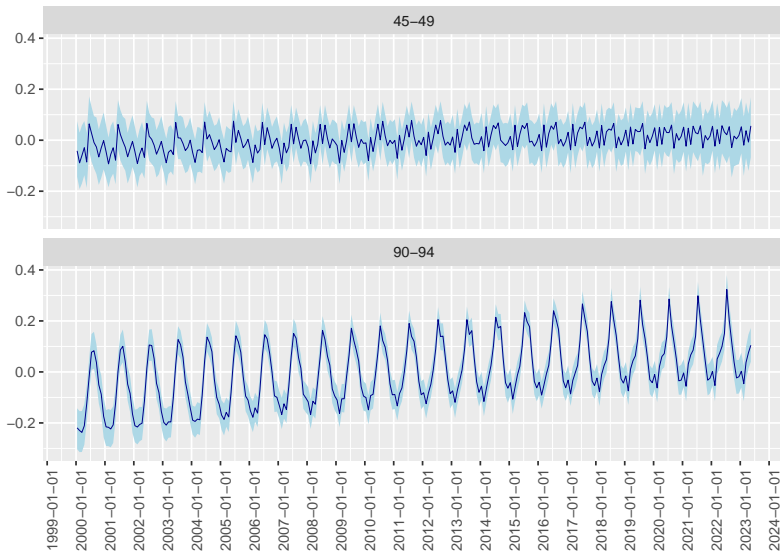
Preliminary results

THE PROBLEM
○

THE MODEL
○○○○

PRELIMINARY RESULTS
○●○○○

FUTURE WORK
○

Mortality rates, females aged 45-49 and 90-94

THE PROBLEM
○

THE MODEL
○○○○

PRELIMINARY RESULTS
○○●○○

FUTURE WORK
○

Life expectancy

The problem
○

The model
○○○○

Preliminary results
○○○●○

Future work
○

Seasonal effect

THE PROBLEM
○

THE MODEL
○○○○

PRELIMINARY RESULTS
○○○○●

FUTURE WORK
○

Time effect

THE PROBLEM
○

THE MODEL
○○○○

PRELIMINARY RESULTS
○○○○○

FUTURE WORK
●

Future work