Changing ageing and urbanisation trend in Aotearoa New Zealand

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Te Whare Wānanga o Waikato

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Background

- Urbanisation and population ageing are two of the key global trends of the 21st Century
  - **Urbanisation** refers to the proportion of the population living in urban areas
  - **Structural ageing** refers to changes in the age distribution of the population
  - Structural ageing arises due to a combination of *numerical* ageing (an absolute increase in the number of older people) alongside declining fertility rates, which reduces the size of subsequent age cohorts in the younger age groups
- Urbanisation and structural ageing are features of all developed countries, but play out differently in different countries

Measuring urbanisation

- In this presentation, I will use a relatively crude measure of urbanisation
- I allocated each TALB to one of four categories:
    1. Main urban areas (cities, e.g. Hamilton, Dunedin, all Auckland TALBs except Rodney, Waiheke, Aotea-Great Barrier, Papakura, and Franklin LBs)
    2. Secondary urban areas (districts that have large urban centres, e.g. Rotorua, Hastings, Whanganui, Queenstown-Lakes)
    3. Peri-urban (all districts that border main urban areas, e.g. Waikato, Waipā, Selwyn, Southland, as well as Rodney, Waiheke, Papakura and Franklin LBs)
    4. Rural/Remote (all other districts, e.g. Hauraki, Ōtorohanga, Buller, Gore, as well as Aotea-Great Barrier LB)

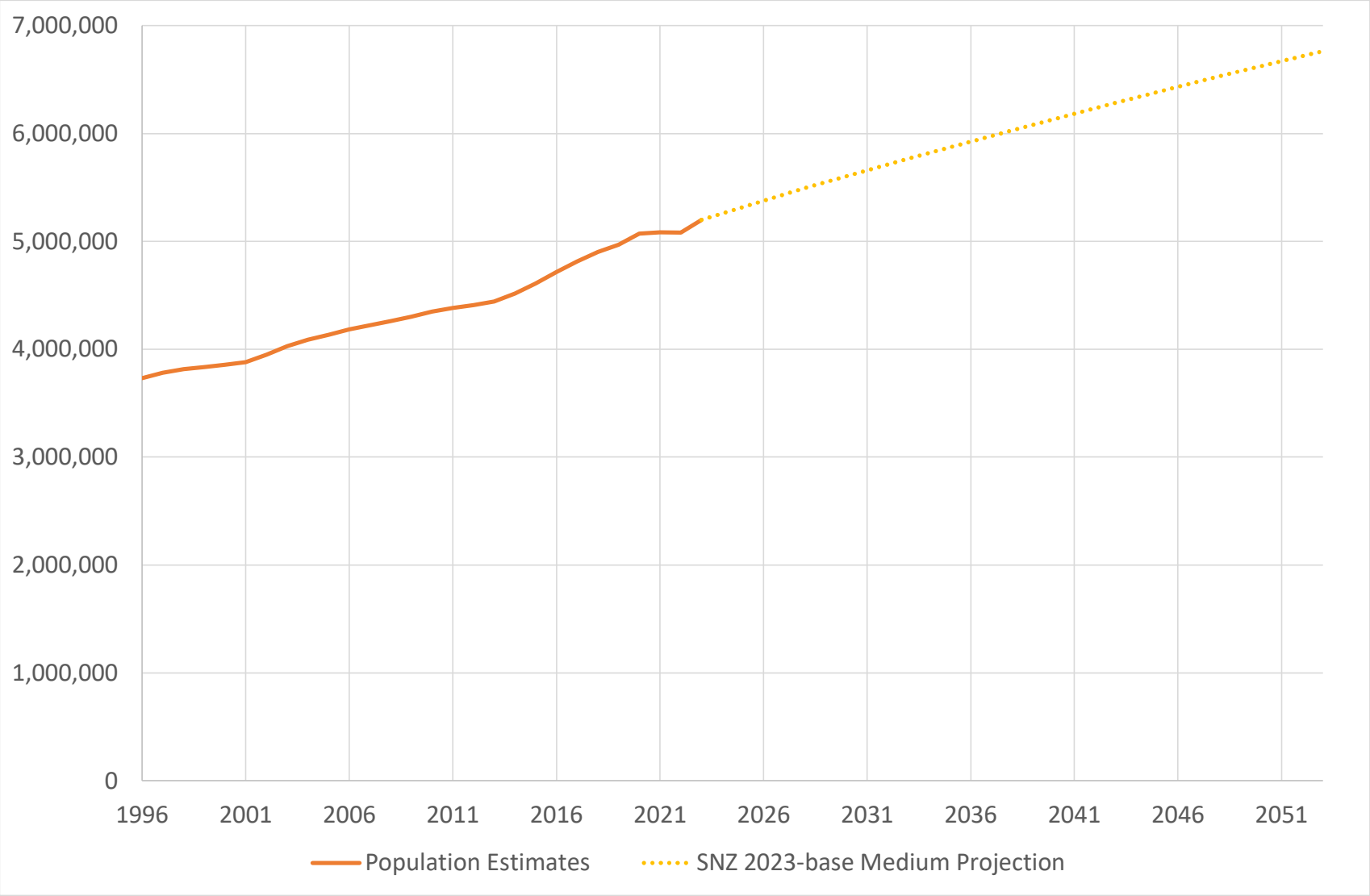
Measuring structural ageing

- The degree of structural ageing within a population or subpopulation is conventionally measured using either
    1. median age;
    2. proportion of the population aged above some threshold (typically but not always 65 years or 85 years); or
    3. a ratio of the population above some threshold to the population (or a subset of the population) below that threshold, e.g. the ratio of the population aged 65 years and over to the population of 'working age' (aged 15 to 64 years)
- However, I use an ageing index (RMSA) that is axiomatically more correct than those measures. It reweights the population to give more weighting to the 'oldest-old', but is otherwise similar in scale to the median age
    - I can discuss the measurement issues further in question time, if you like

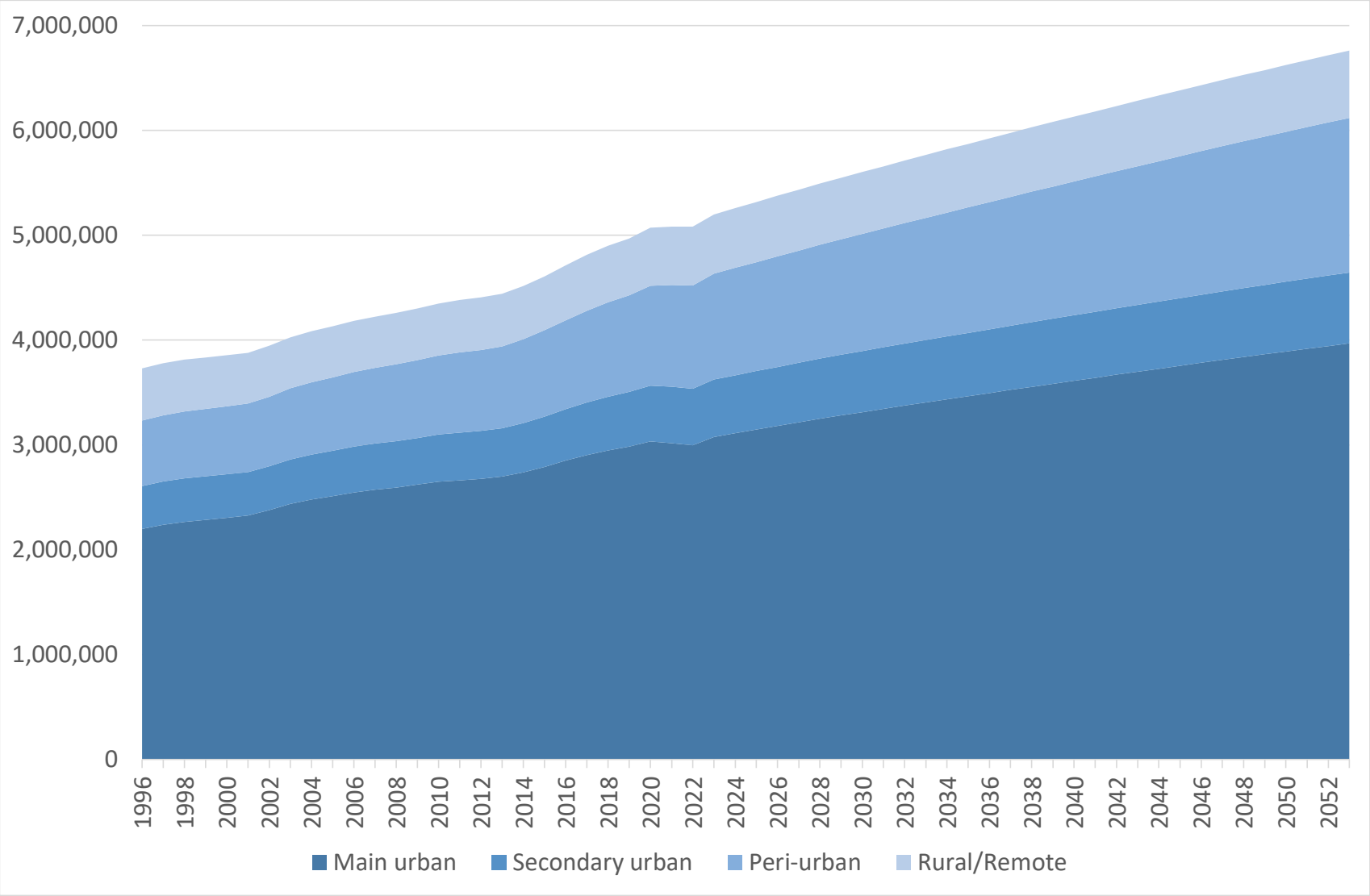
Data and measures

- All data come from Statistics New Zealand:
  - Population estimates by five-year age group, by territorial authority and local board (n=87) covering every five years from 1998 to 2023
  - Population projections (2023-base updated projections, medium variant) by five-year age group, by territorial authority and local board (n=87) covering every five years from 2028 to 2053
- From those data, we calculate the proportion of the population aged 65 years and over, the median age, and the ageing index (RMSA) at five-year intervals from 1998 to 2053
- We look at the results for individual TALBs and by urban-rural category

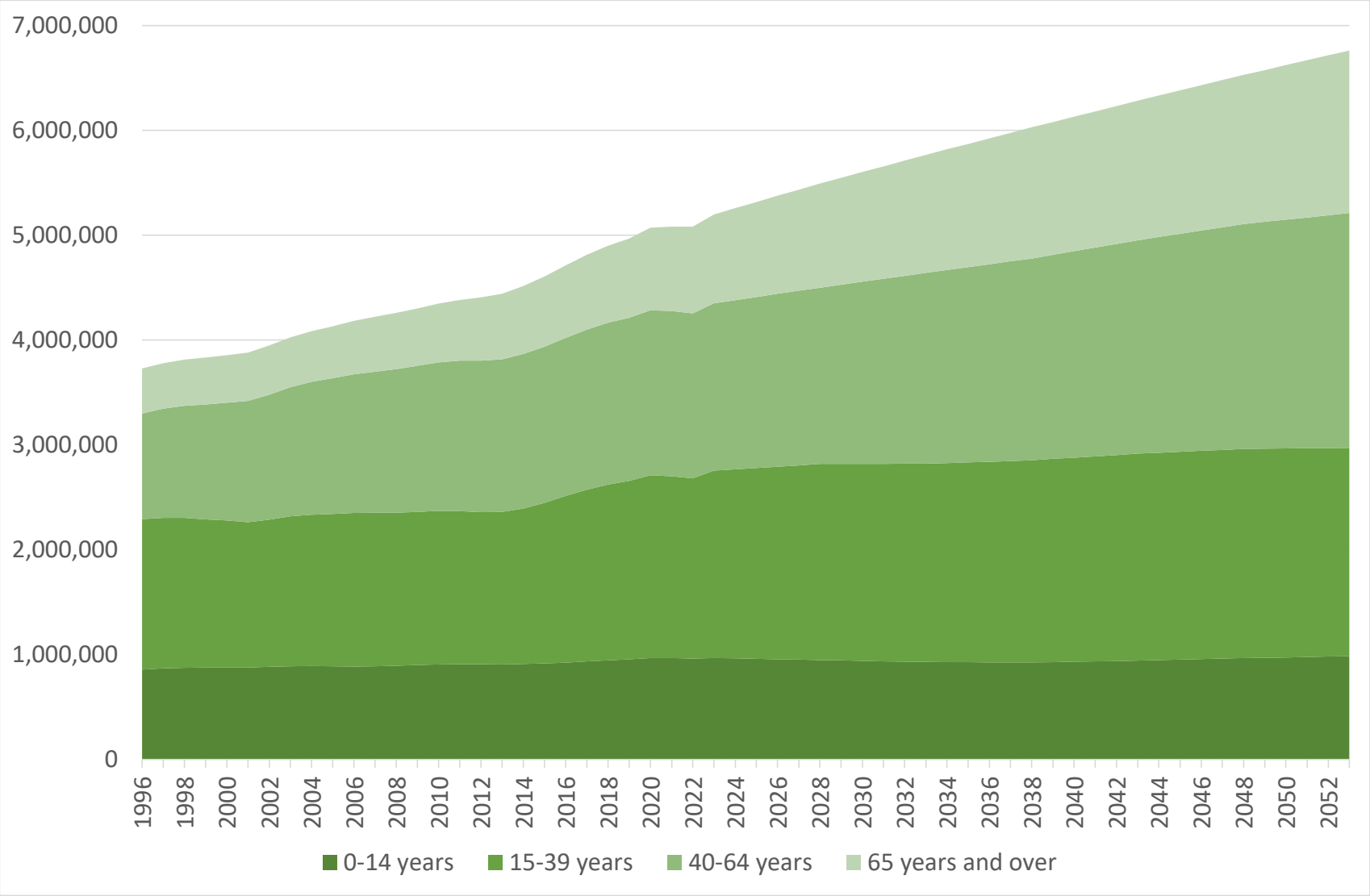
New Zealand's population, past and projected



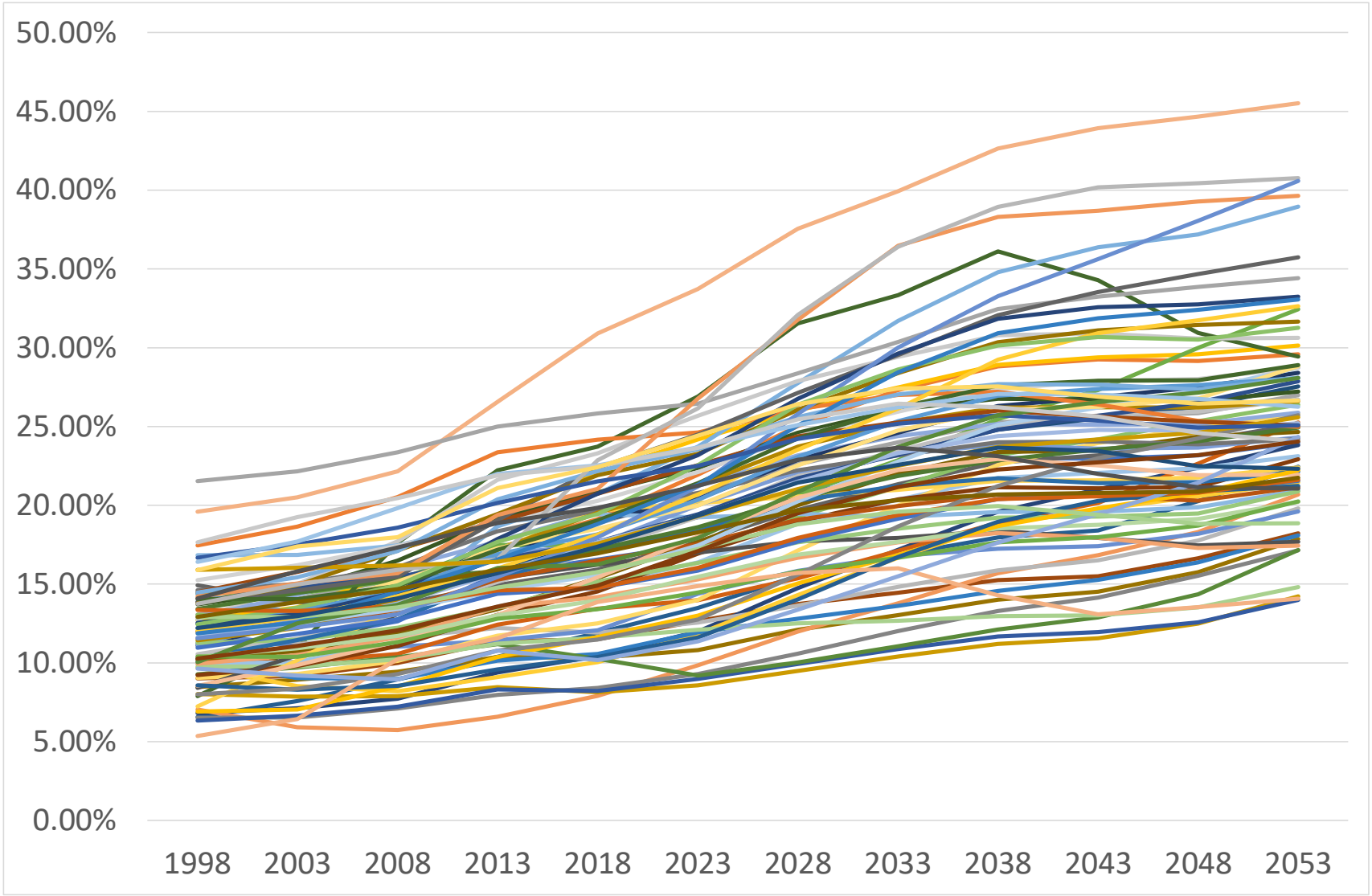
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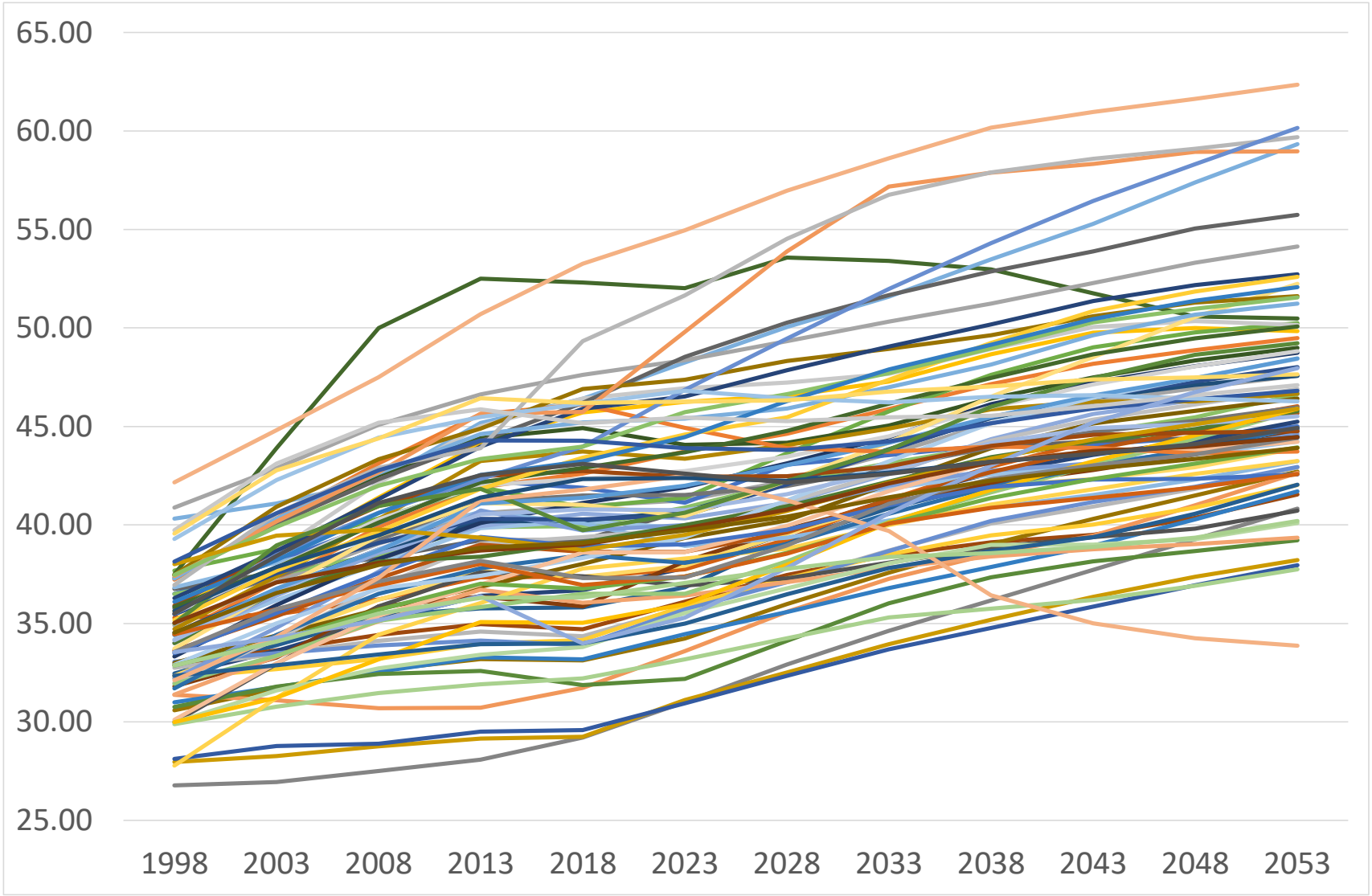
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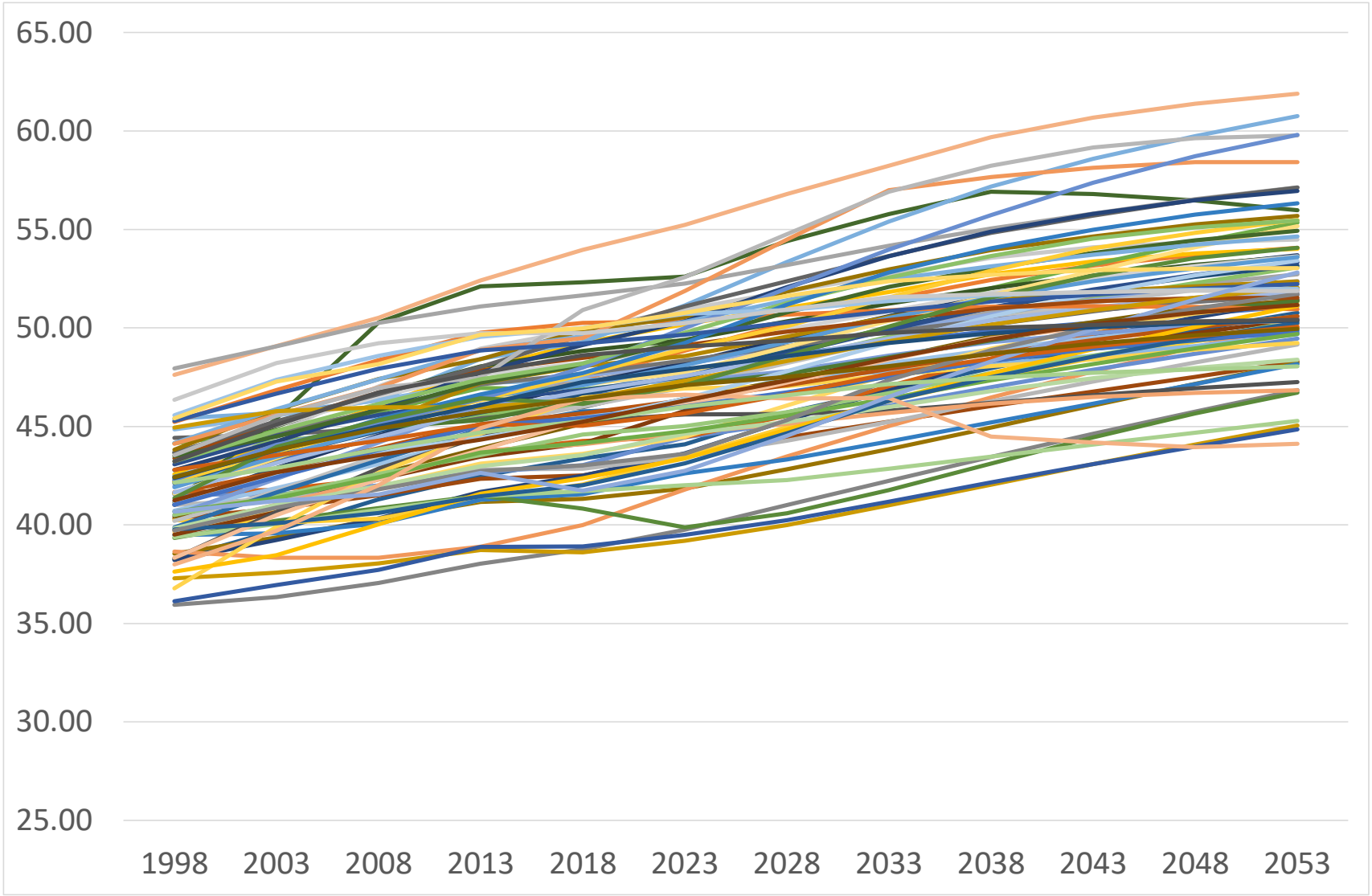
Proportion aged 65 years and over, 1998-2053



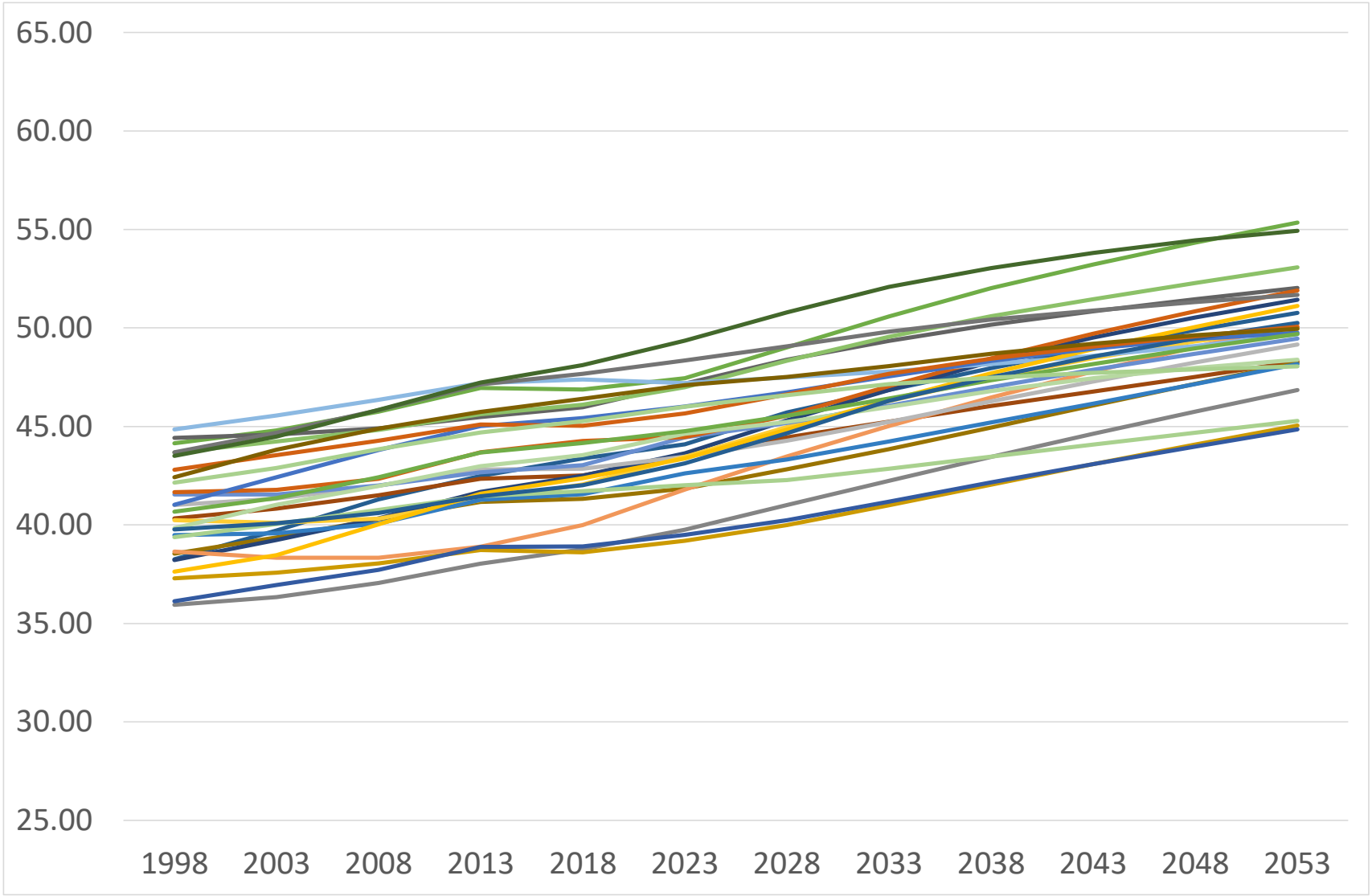
Median age, 1998-2053



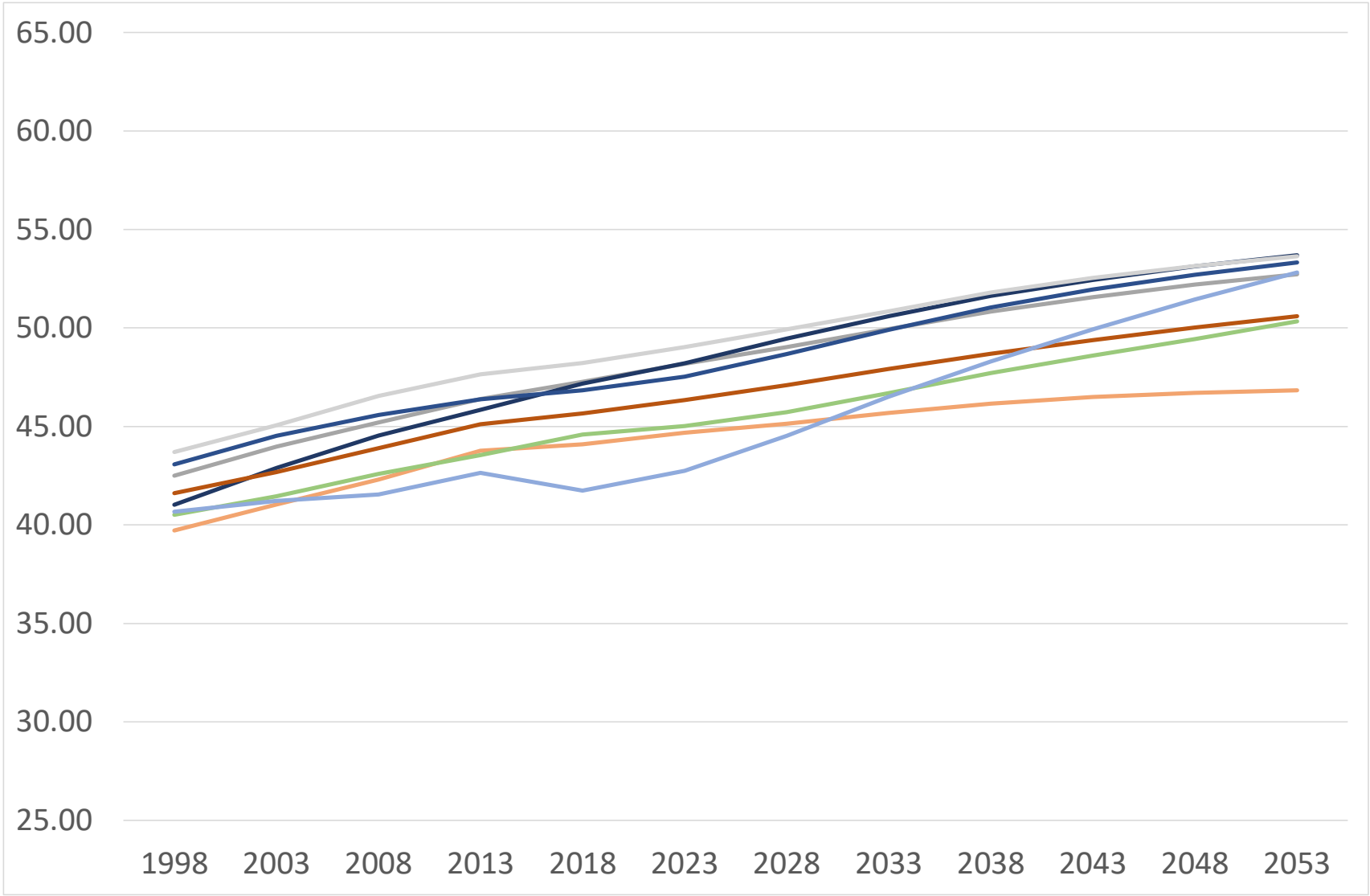
Ageing Index (RMSA), 1998-2053



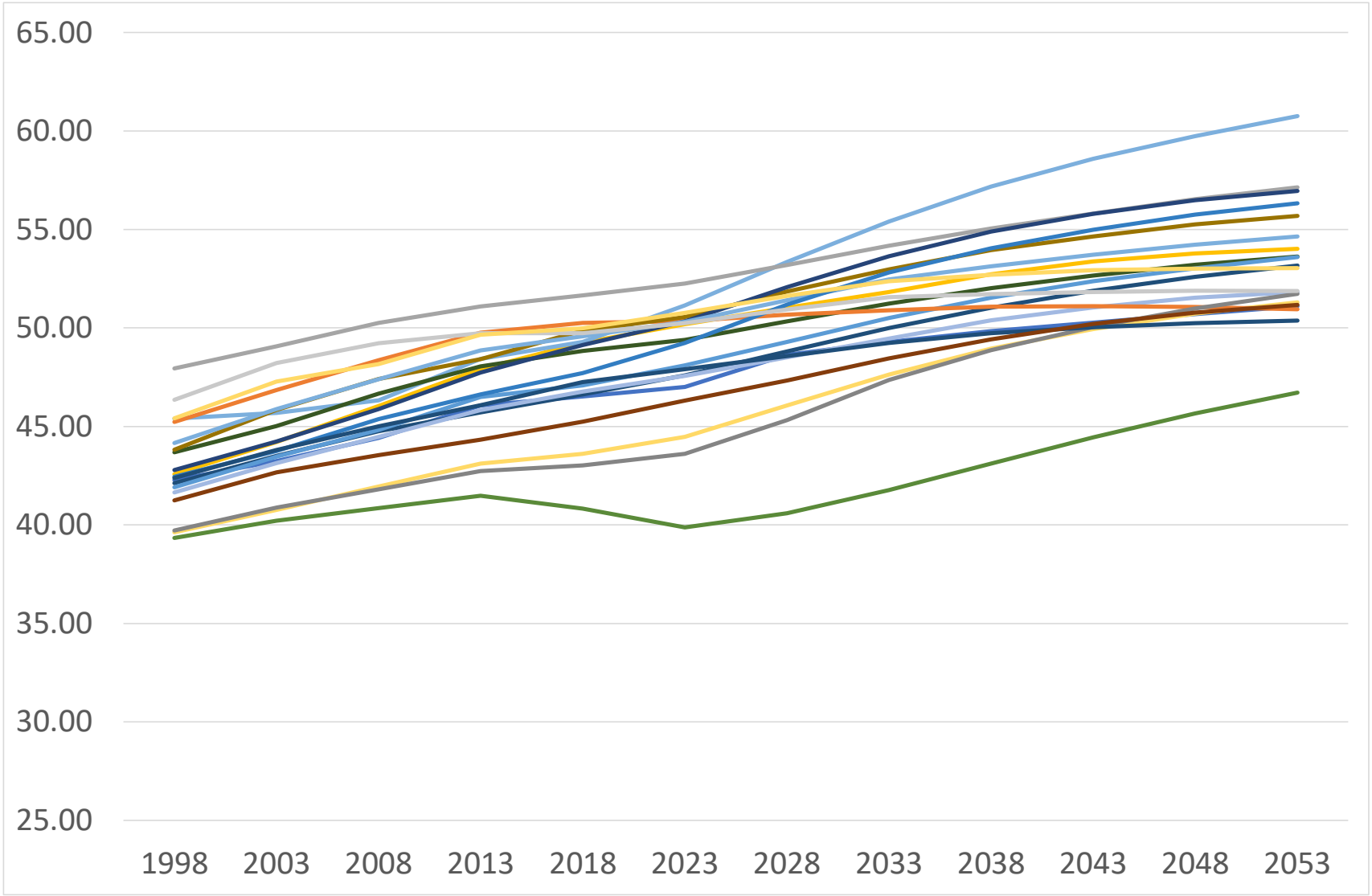
Ageing Index (RMSA) for Main Urban TALBs, 1998-2053



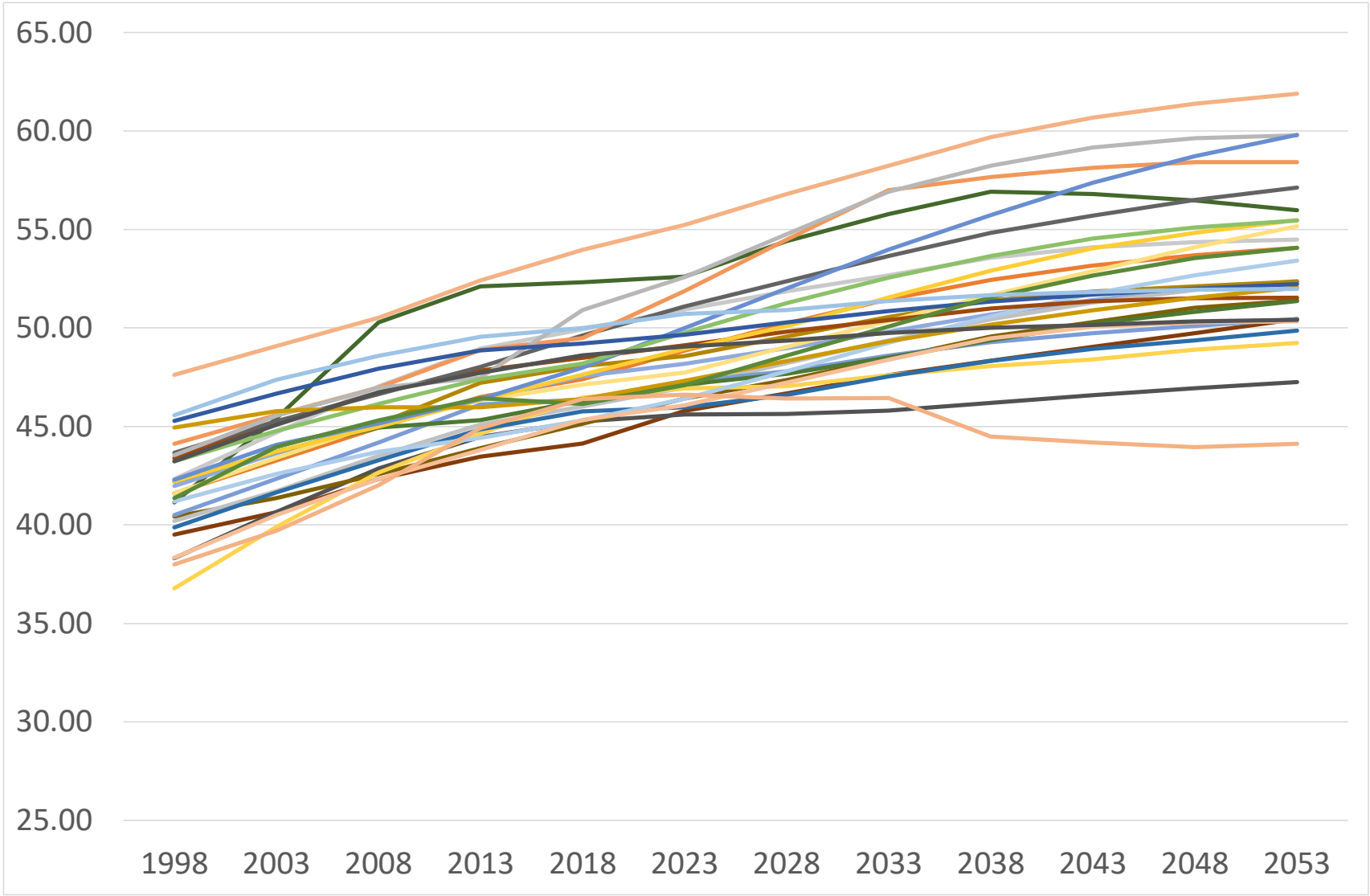
Ageing Index (RMSA) for Secondary Urban TALBs, 1998-2053



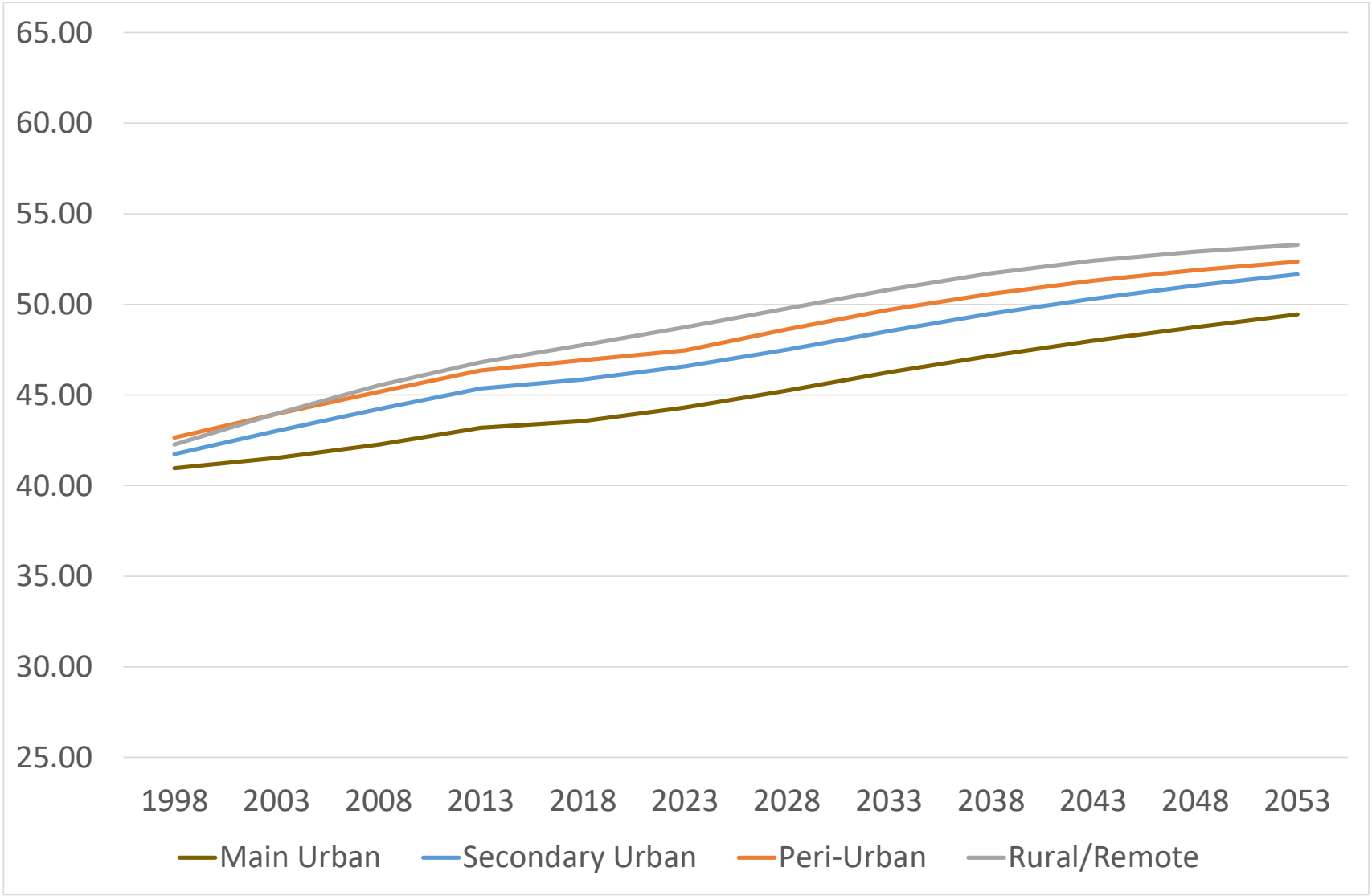
Ageing Index (RMSA) for Peri-Urban TALBs, 1998-2053



Ageing Index (RMSA) for Rural/Remote TALBs, 1998-2053



Ageing Index (RMSA) by Urban-Rural Category, 1998-2053



Conclusion

- Overall, Aotearoa New Zealand is urbanising and structurally ageing. These are long-term trends that have been playing out over decades and will continue to play out for decades to come
- Almost all parts of the country are structurally ageing, but not all from the same starting point, and not all at the same rate
  - Main urban TALBs are structurally the youngest now, and the gap between main urban TALBs and other TALBs will grow over time
  - Remote and rural TALBs are structurally the oldest, and will remain the oldest until at least 2053, although some TALBs in this group are projected to remain relatively young (Chatham Islands, South Waikato)

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Bonus material: Axioms and measures of structural ageing

Measure	Axiom 1 (Population size invariance)	Axiom 2 (Strong dominance)	Axiom 3 (Weak dominance)	Axiom 4 (Age sensitivity)
Mean age	Yes	Yes	Yes	No
Median age	Yes	Yes	Sometimes	No
Proportion of the population aged 65 years and over	Yes	Yes	Sometimes	No
Proportion of the population aged 85 years and over	Yes	Yes	Sometimes	No
Child-elder ratio	Yes	Yes	Sometimes	No
Old-age dependency ratio	Yes	Yes	Sometimes	No
General class of structural ageing indices (including RMSA)	Yes	Yes	Yes	Yes