Treasury's Model of Australian Retirement Income and Assets (MARIA)

Presentation to the Colloquium on Pensions and Retirement Research

2 December 2019

Tax Analysis Division

Overview

- Part 1 – Background on MARIA
- Part 2 – Illustrative results

PART 1 – BACKGROUND ON MARIA

MARIA is Treasury's long-term projection model of retirement incomes

- MARIA is a long-term dynamic microsimulation model of Australia's retirement income system.

- It simulates the characteristics of each individual aged 25 and over in each year of the model to produce lifepaths.

- People retire based on probabilities and once retired, they leave the workforce permanently.

A unique starting database

Records		Imputed information		
Tax data	Wage and salary earners Self employed	**Survey of income and housing**	**H I L D A**	**Other demographic information**
Pension data (social services)	Pension recipients, lower income retirees			
Pension data (veterans' affairs)				
Member Contribution statements	Self funded retirees Not in the labour force			
Survey of income and housing	Students, unemployed, low income part time workers			

A snapshot of Australians
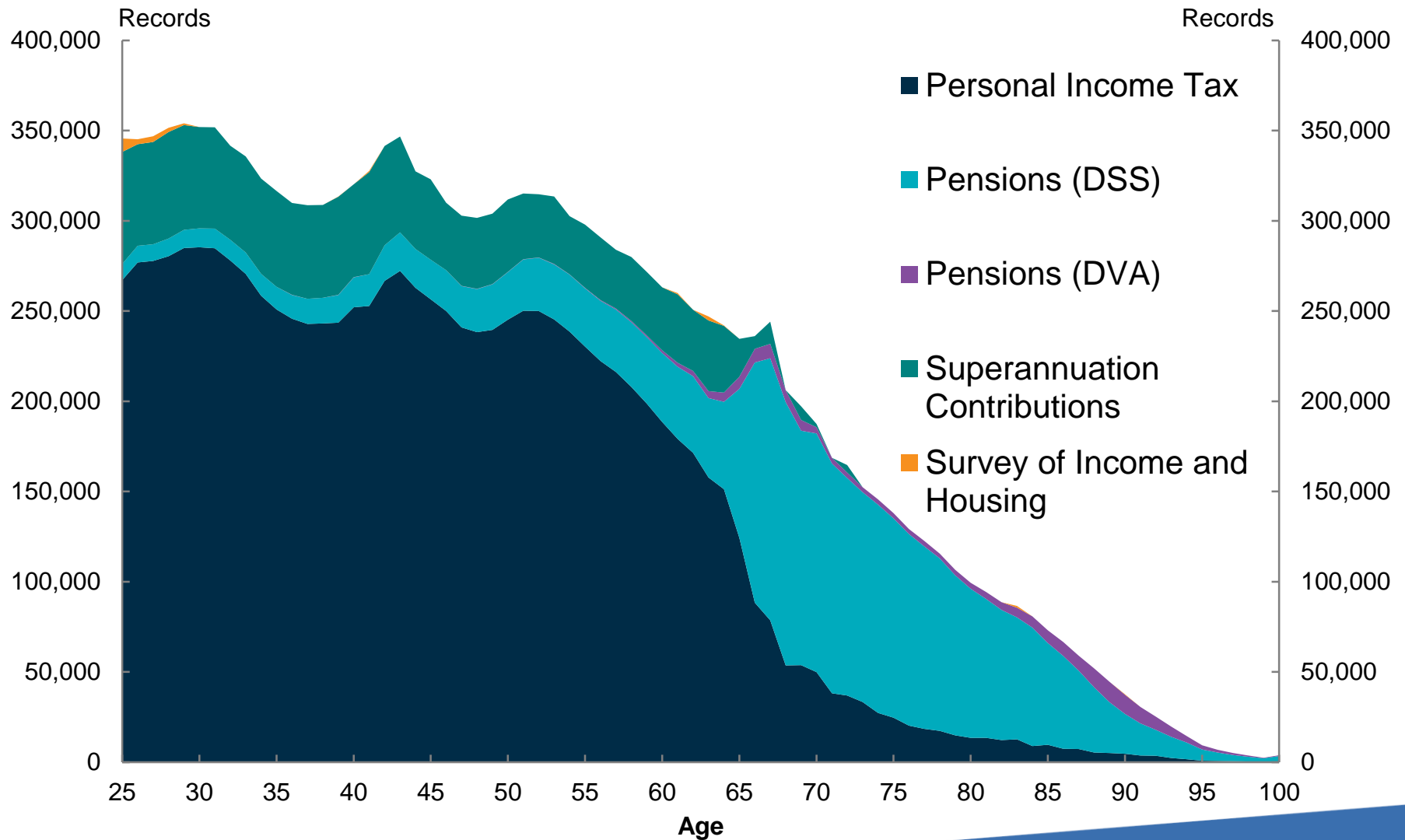
The model loop

MARIA's focus is to examine the effects of demography and retirement income policy

- Fiscal sustainability of the federal Budget

- Retirement income adequacy

- Help identify potential risks in these areas

The model makes a number of simplifications..

- Policy detail is simplified
- Constant rates of return are assumed
- Simplified modelling of non-labour income during working life
- Does not include defined benefit schemes
- Death benefits paid to beneficiaries are not included

Contributions at an individual level

- MARIA projects defined contributions schemes, including voluntary contributions, at an individual level.

- MARIA does not model superannuation funds themselves, such as fund type, or any assets held by funds.

- For these reasons, MARIA results are not comparable to estimates of total superannuation funds under management produced by APRA.

PART 2 – ILLUSTRATIVE RESULTS

HOW THE SUPERANNUATION SYSTEM IS SET TO EVOLVE OVER THE NEXT 40 YEARS, AND HOW THIS WILL AFFECT SUPERANNUATION ACCUMULATION AND BALANCES OF FUTURE RETIREES

Assumptions

- All results presented today are contingent on the modelling assumptions.

- Long-run growth rates:
  - Consumer Price Index (CPI): 2 ½ per cent
  - Nominal Gross Domestic Product (GDP): around 5 ¼ per cent
  - Wages: around 4 per cent

- Investment returns before fees:
  - Accumulation phase: 7 ½ per cent
  - Retirement phase: 6 ½ per cent

- Annual fees and insurance (indexed to AWE):
  - Fees $74 plus 0.85 per cent of the account balance, insurance $214

AGGREGATE OUTCOMES

Superannuation balances are expected to be almost 2.5 times annual GDP by 2060

Chart 1: Total value of superannuation assets
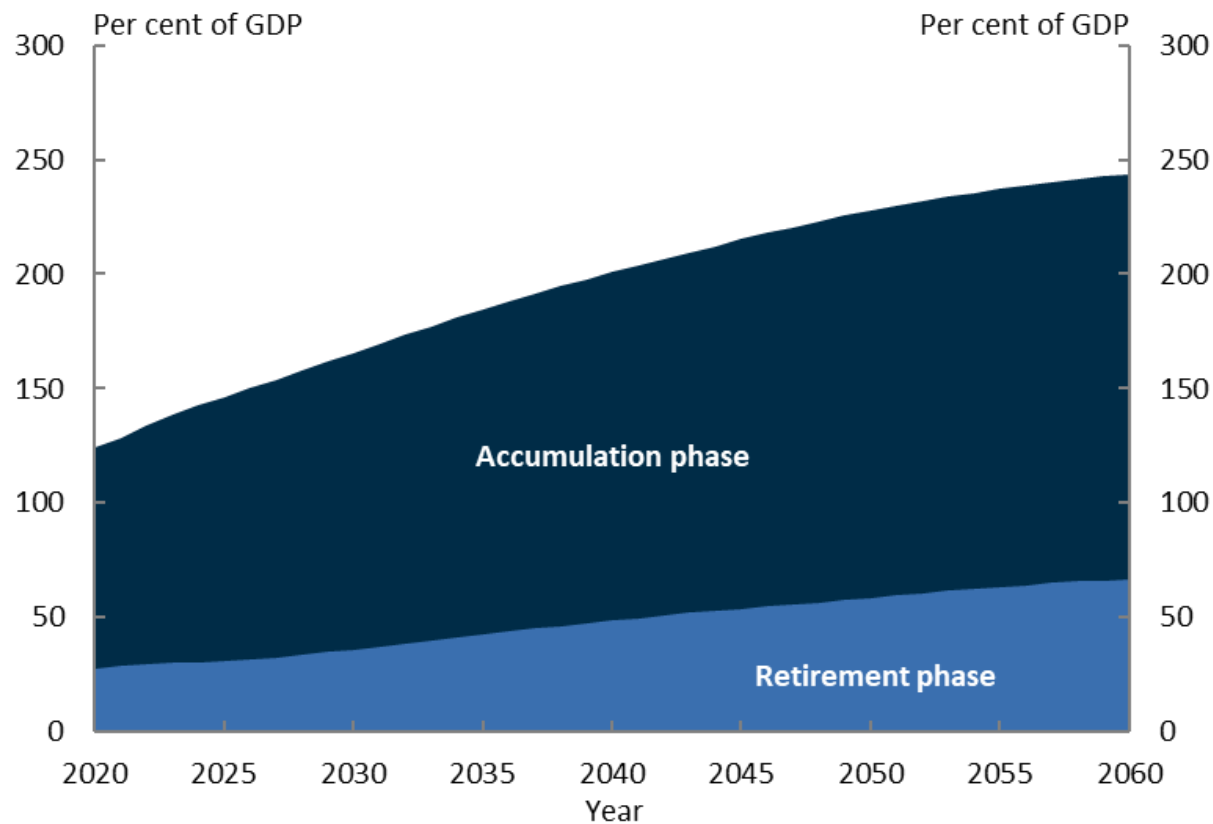
Breaking down the change in balances

Contributions made to accounts (after taxes)

plus

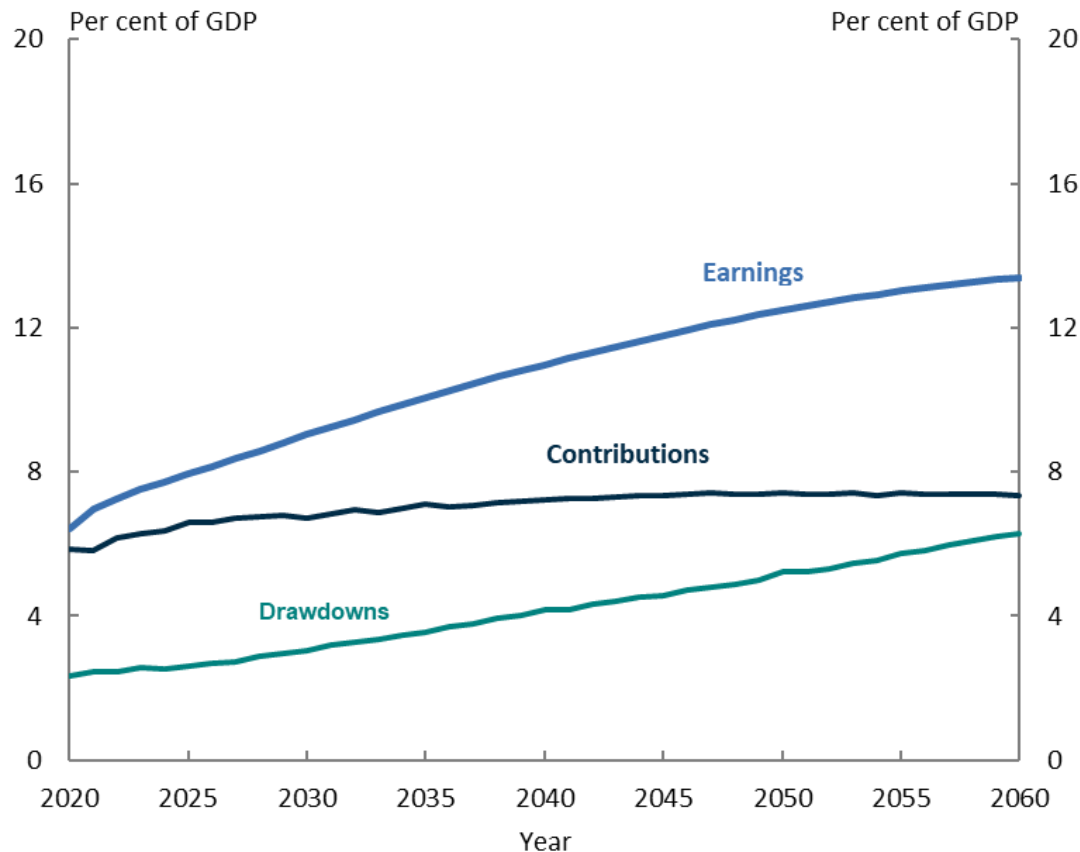*Earnings* from the invested assets (after taxes and fees)

less

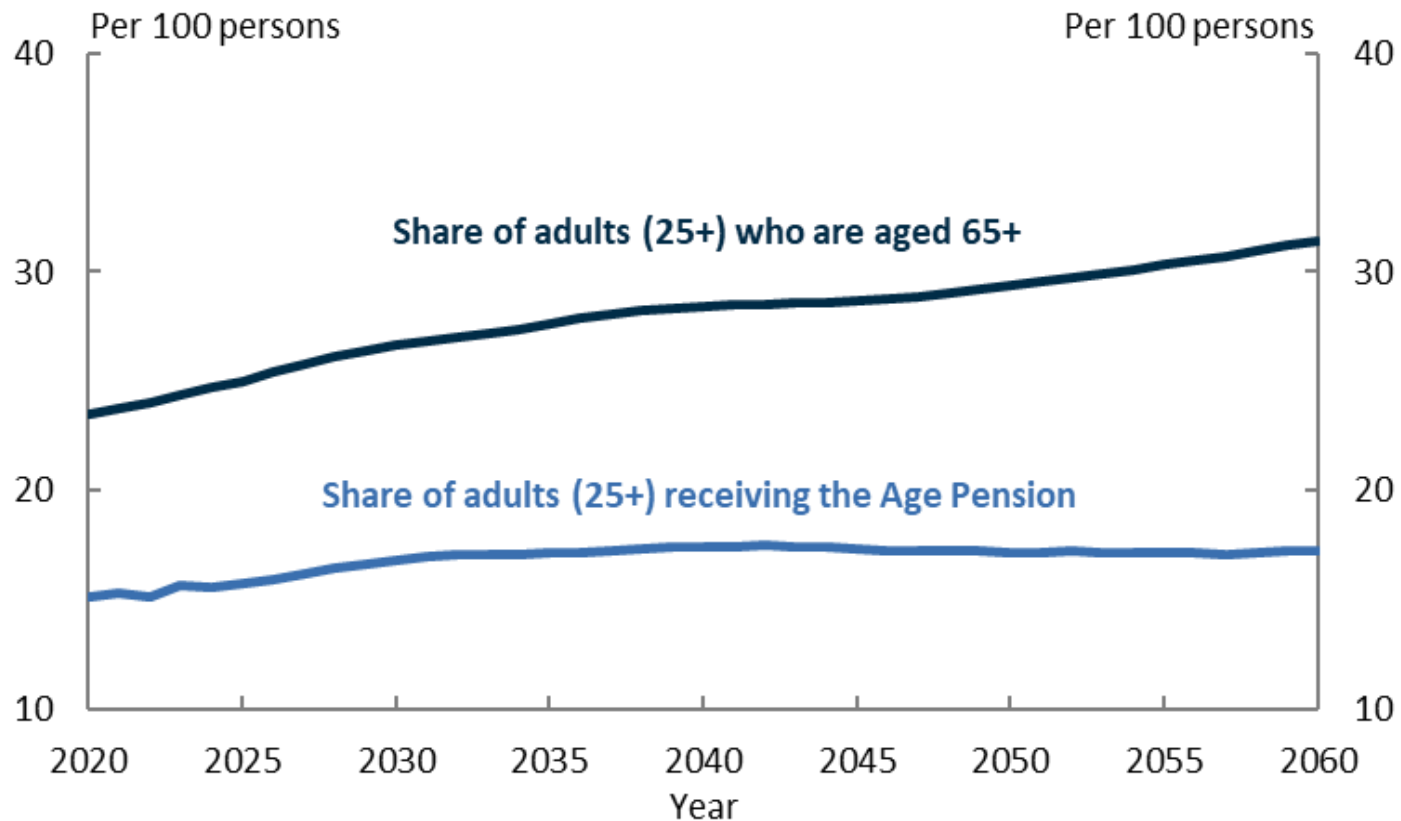*Drawdowns* from accounts

(through either lump sums or income streams)

Earnings are increasingly the key driver of growth in total superannuation balances

Chart 2: Flows into and out of superannuation accounts
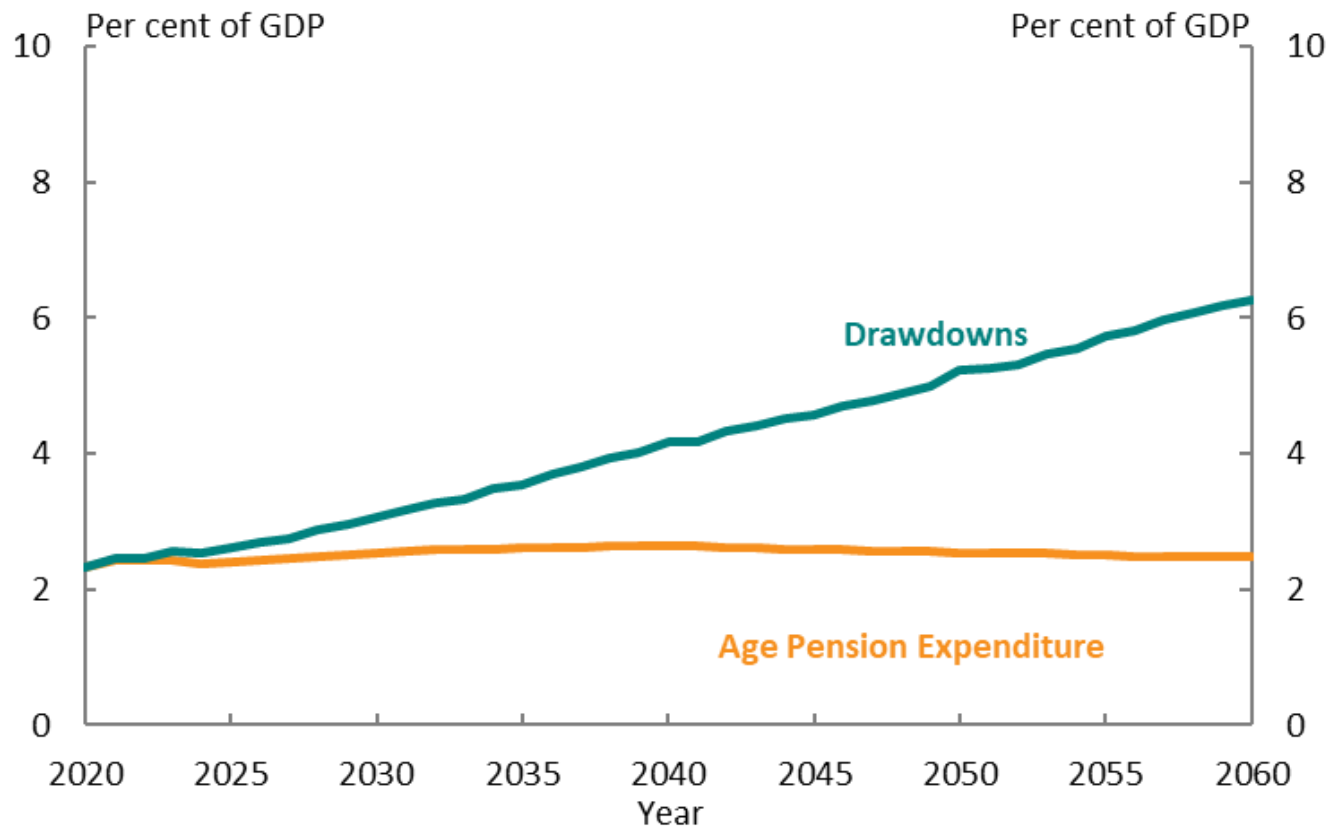
Population is ageing, but the share receiving the Age Pension will stabilise

Chart 3: Population ageing and Age Pension recipients

Superannuation drawdowns will represent a greater share of retirement income
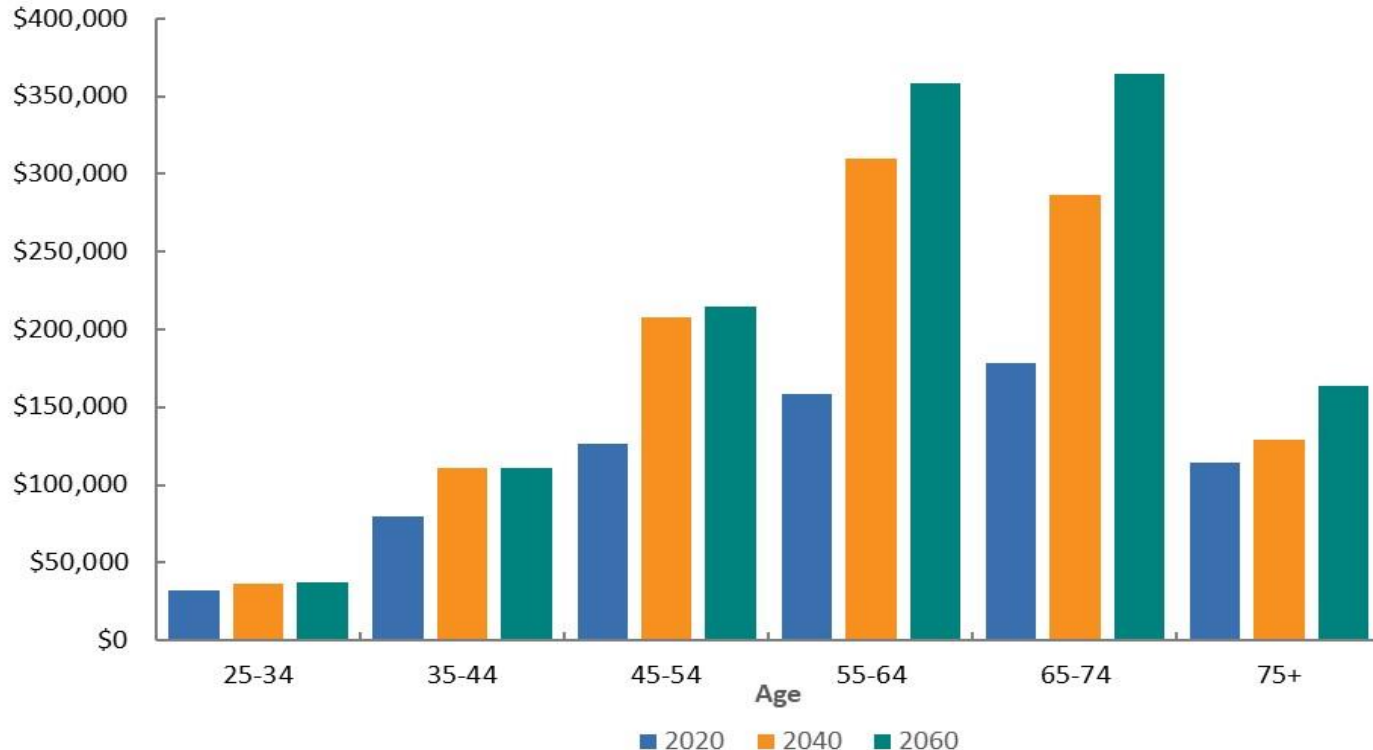
Chart 4: Super drawdowns and Age Pension Expenditure
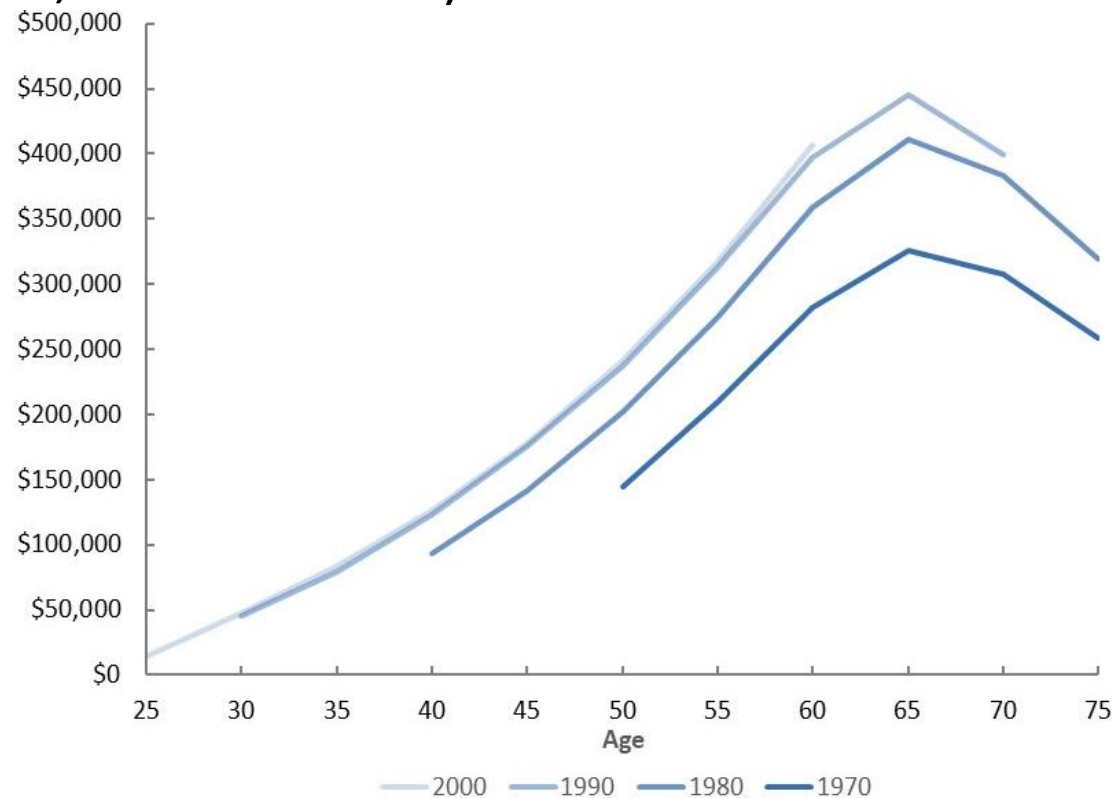
ACCUMULATION ACROSS LIFETIMES

Balances are expected to increase across all age groups

Chart 5: Median superannuation balances from 2020 to 2060, by age group (2019 dollars, AWE deflated)
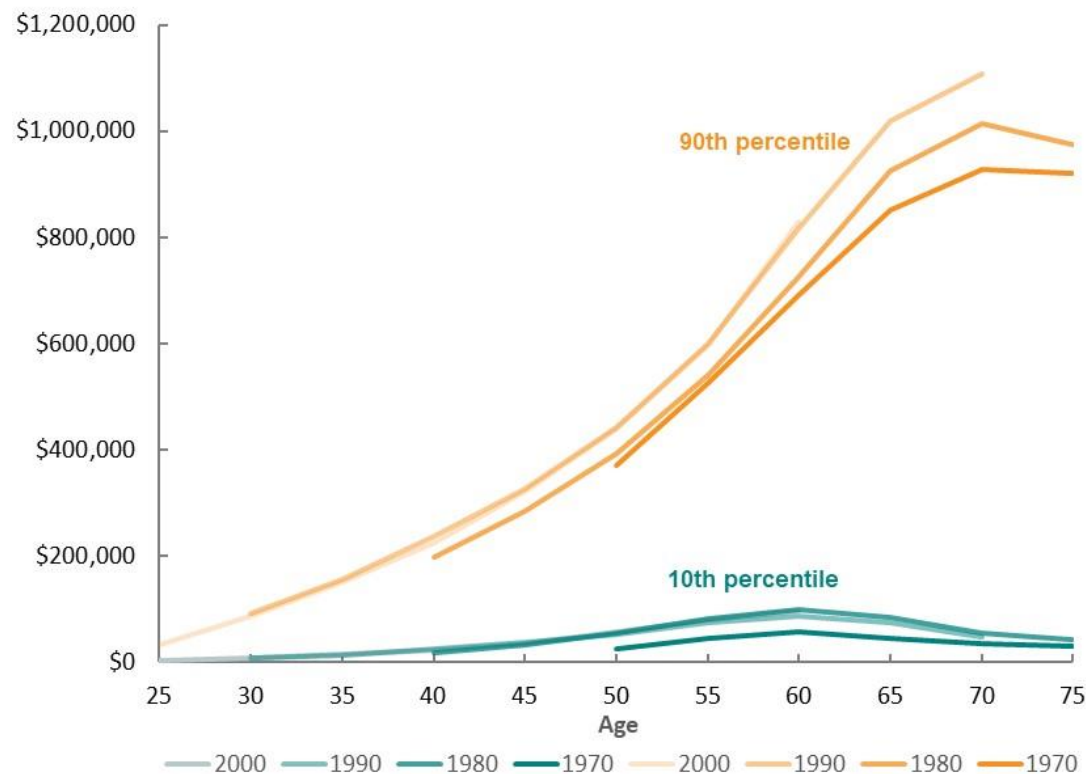
Future generations are projected to have higher balances than current generations

Chart 6: Superannuation balances over lifetime by birth year (2019 dollars, AWE deflated)

# Balances of those with higher income will grow more than lower income

Chart 7: Superannuation balances over lifetime for low and high income individuals (2019 dollars, AWE deflated)
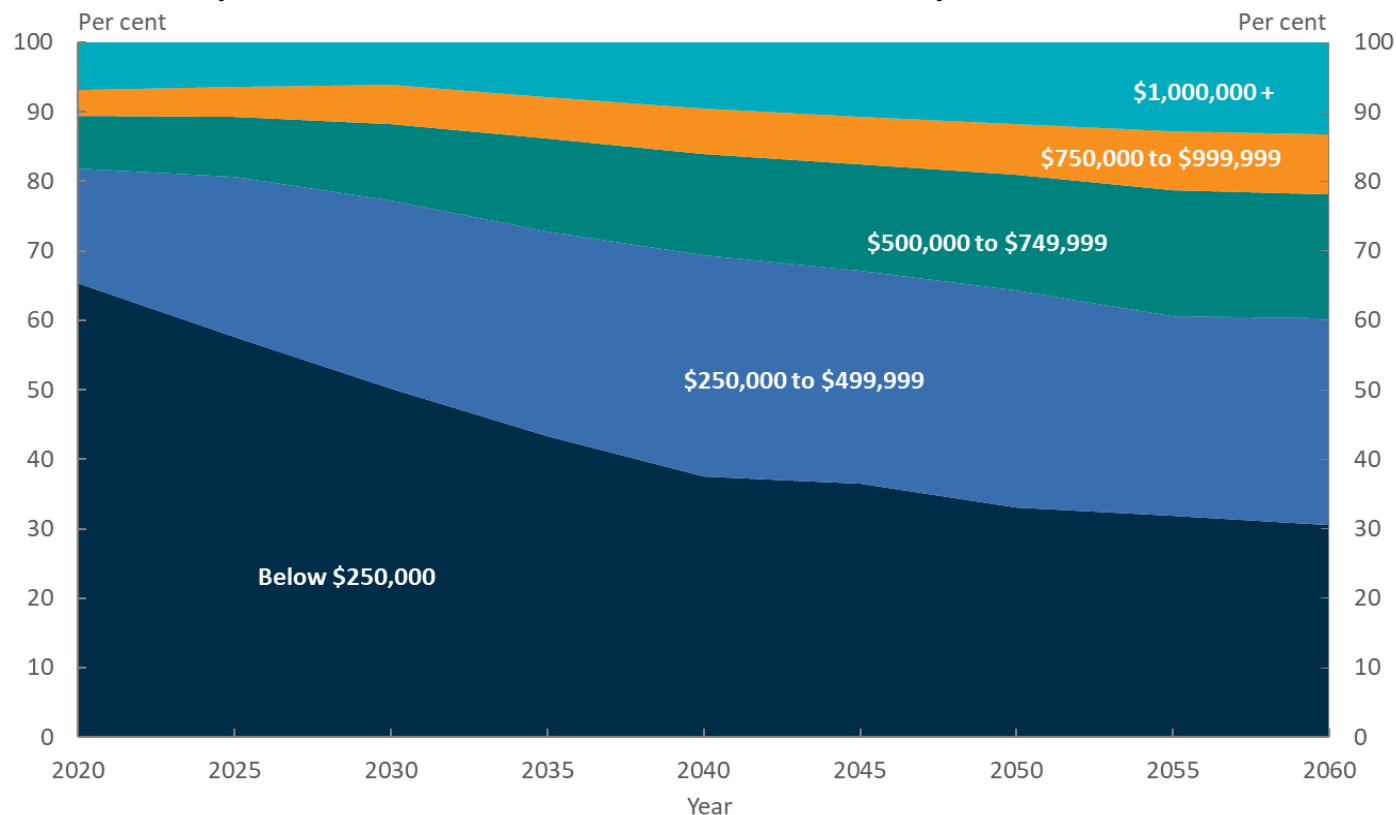
BALANCES AT RETIREMENT

Future retirees will generally have higher balances as the system matures

Chart 8: Projected distribution of superannuation balances at retirement (2019 dollars, AWE deflated)
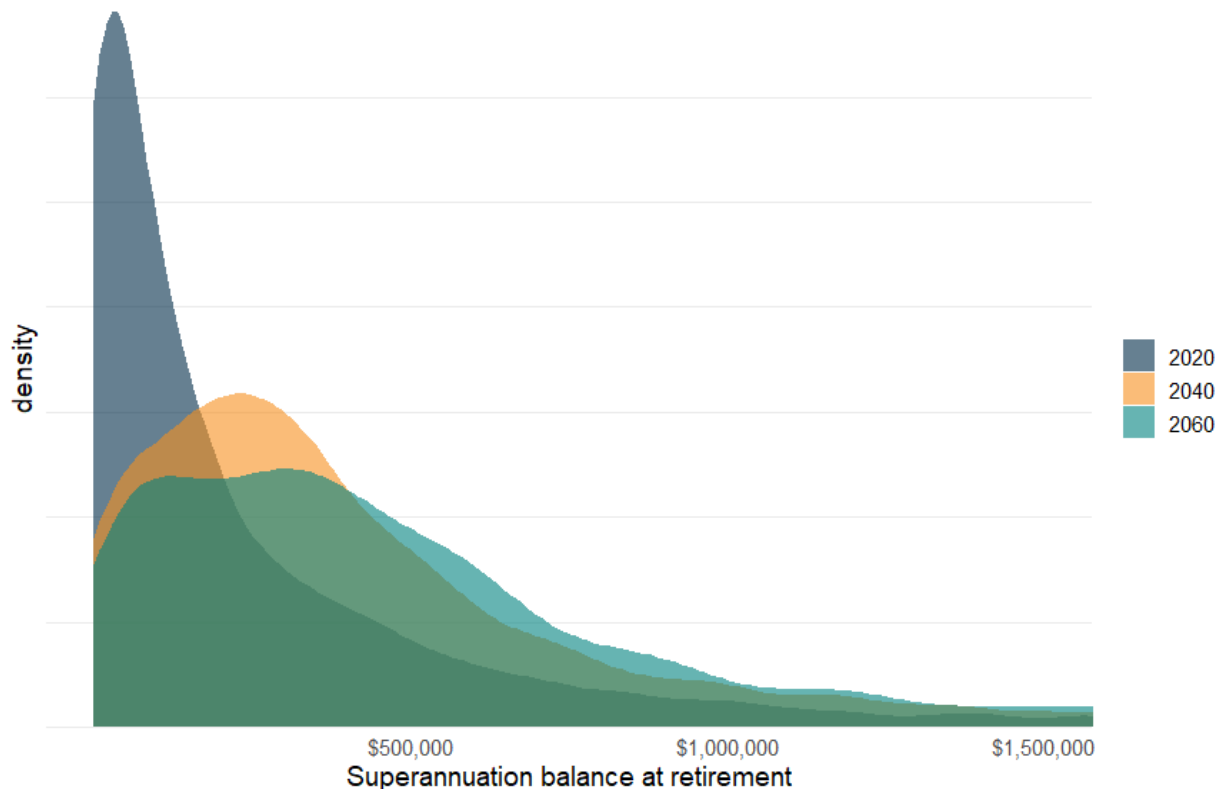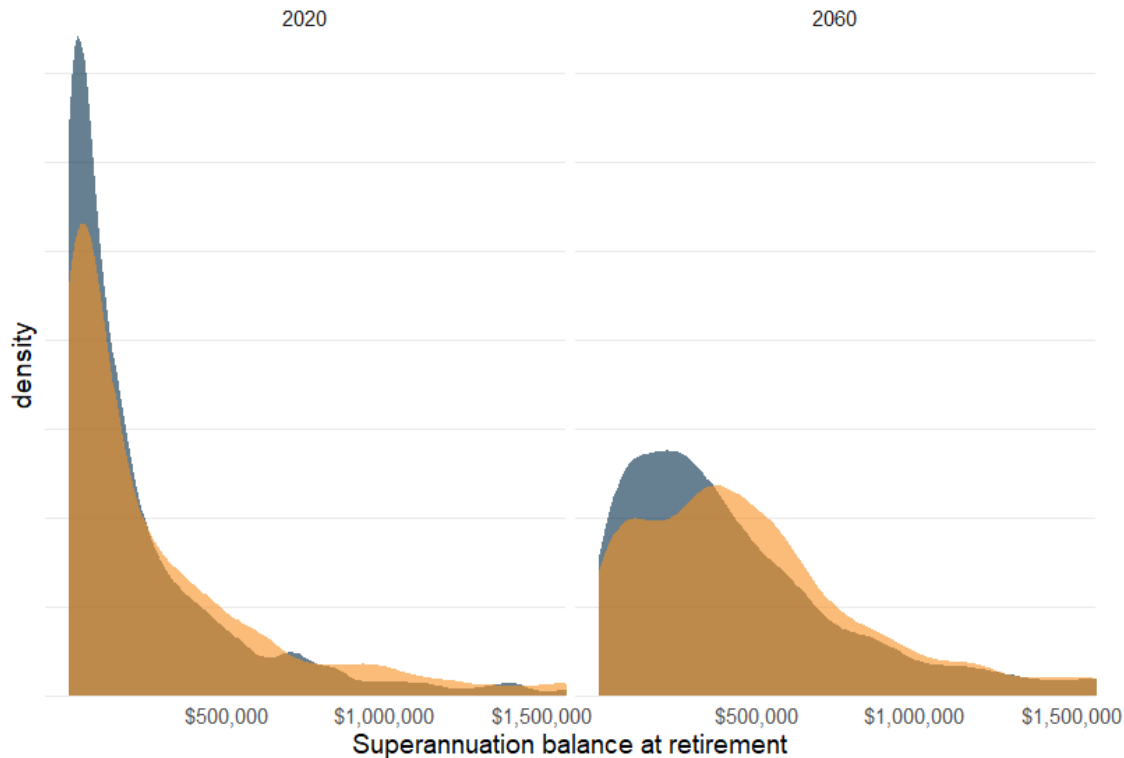
Fewer retirees will have low balances

Chart 9: Proportion of superannuation balance ranges at retirement (2019 dollars, AWE deflated)

The gender gap at retirement remains

Chart 10: Distribution of superannuation balances at retirement by gender (2019 dollars, AWE deflated)

Summary of background on MARIA

- Long-term retirement income population model
- Long-term analysis of sustainability and adequacy
- Evolution of retirement income system, given policy settings
- System as a whole or specific groups (e.g. age groups)

Summary of illustrative results

- MARIA provides useful insights on the retirement income system over the next forty years.

- Superannuation earnings are the key driver of total balances.

- Drawdowns are expected to increase while Age Pension remains steady relative to the economy.

- Balances are projected to increase for future generations, growing at a faster rate for those on high incomes.

- The gender gap is expected to narrow, but persist.

Questions?

MARIA

Information Note

Treasury Research Institute

research.treasury.gov.au/treasurys-two-cents