

# Compilation of household distribution during COVID-19 in Australian National Accounts: Preliminary results and process improvements.



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Australian Bureau of Statistics  
Informing Australia's important decisions



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# Background - Overview of the study

- The estimates presented here are based on (and expand upon) the work undertaken by the ABS with the OECD-Eurostat Expert Group.
- The macro estimates - Australian System of National Accounts (ASNA).
- The micro estimate - ABS household distributional estimates suite of ABS publications derived from the ABS Survey of Income and Housing (SIH) and Household Expenditure Survey (HES).
- The results integrate the ABS micro and macro sources and produce distributional information of household income, consumption and wealth, consistent with ASNA.
- Household distributional indicators presented are main source of income; equivalised income quintiles; household composition; age of reference person in household; and equivalised net worth quintiles.

# Background: ABS Data releases

- ▶ Information Paper:
  - ***Australian National Accounts, Distribution of Household Income, Consumption and Wealth, 2009-10***
  - Estimates for 2009-10 and detail methodology
  - released 2013
- ▶ Publications:
  - ***Australian National Accounts, Distribution of Household Income, Consumption and Wealth***
  - Estimates 2003-04 to 2017-18 (biennial); 2017-18 are nowcast
  - 3 releases since 2014
- ▶ Preliminary Publication
  - ***Australian National Accounts, Distribution of Household Income, Consumption and Wealth, 2019-20***
  - Estimates 2003-04 to 2017-18 ; 2017-18 –includes final annual survey data;
  - Estimates for 2019-20, only one indicator (equivalised income quintiles) for income and consumption and saving (no wealth estimates); based on quarterly survey data
  - Released June 2021
- ▶ Next release
  - ***Australian National Accounts, Distribution of Household Income, Consumption and Wealth, 2020-21***
  - Estimates 2003-04 to 2019-20 ( annual survey data); 2020-21 possible nowcast estimates
  - Planned release , first half of 2022

# Background: Availability of Survey Data

Micro source data	2003-04	2005-06	2007-08	2009-10	2011-12	2013-14	2015-16	2017-18	2019-20
SIH - Income	A	A	A	A	A	A	A	A	NA
SIH - Wealth	A	A	NA	A	A	A	A	A	NA
Social Transfers in Kind (STiK)	A	NA	NA	A	A	A	A	A	NA
HES - Consumption	A	NA	NA	A	NA	NA	A	NA	NA
SIH - Income and Wealth (Preliminary)	NA	NA	NA	NA	NA	NA	NA	NA	A

- ▶ A = Available  
NA = Not available

# Relevance National Accounts household distributions

- ▶ Household Distribution estimates - shows different household group material (or economic) well-being .
- ▶ Aggregates and average growth rates only provide a partial story, which may conceal large discrepancies between different types of households.
- ▶ Household distributional information within the System of National Accounts (SNA) enables the derivation of distributional results that are consistent across accounts (e.g. income, consumption and wealth), coherent with macroeconomic aggregates, and comparable over time and across countries.
  - Micro distributional information - may not always be consistent across the primary components of economic well-being (e.g. income, consumption and wealth). That is surveys or register data covering all these aspects are rarely available.
  - Micro distributional information may not always be consistent over time and their aggregated trends may often diverge from national accounts data.
- ▶ Distributional estimates that take into account the joint relationships between income, consumption and wealth, allows the compilation of multivariate indicators ( e.g. consumption-to-income, debt-to-income or wealth-to-income ratios) for household groups
- ▶ **Distributional information considerable relevance for macroeconomic analyses and the monitoring of economic well-being. Provides insight in how specific household groups are faring and how macroeconomic trends and policies may affect specific household groups.**

# Preliminary 2019-20 Release: Method Equivalised Disposable Income Quintiles

- ▶ Preliminary quarterly 2019-20 SIH - subset of the final annual data due for release in early 2022
  - Data excluded taxes on income and Social Transfer in Kind.
  - Indicators - Main Source of Income, Equivalised Gross Income Quintiles, Age of household reference person and Equivalised Net wealth quintiles (;
  - Trade off - smaller sample size and less editing
- ▶ Due to data quality issues with preliminary SIH, National Accounts released only Equivalised Disposal Income Quintiles
- ▶ Exclusion of taxes on income – needed transform the quintiles from a gross income to a disposable income basis A modification factor was applied, factor derived
  - by dividing a SIH income item on a disposable income quintile basis by the equivalent item on a gross income quintile basis using 2017-18 data.
  - SIH income item for 2019-20 on a disposable income quintile basis is then derived by multiplying the modification factor by the 2019-20 estimate of the SIH income item on a gross income quintile basis.

# Preliminary 2019-20 Release: Impacts of Cyclical Effects

- ▶ The 2019-20 SIH data collected on current income.
- ▶ Analysis of equivalised income quintiles - household income can vary for lifecycle reasons and cyclical reasons such as significant economic shocks.
- ▶ The impacts of the COVID-19 pandemic and the Australian government policy response during 2019-20 - resulted significant impacts on household income in a short timeframe.
- ▶ To facilitate comparison between household groups across time, households should ideally be ranked in terms of their usual income (without economic shocks).
- ▶ The preliminary 2019-20 SIH data published in [Household Financial Resources, June 2020](#), income items published by equivalised private income quintiles (which excludes social assistance benefits). Done to minimise the effect of households temporarily moving between quintiles due to impacts of COVID-19 and subsequent government support payments.
- ▶ The difference between private income and the gross income (starting point for the national accounts quintile estimates) is that gross income includes social assistance benefits and net imputed rent.
- ▶ Household Final Consumption Expenditure (HFCE)-Shares for all categories of HFCE were held constant to 2017-18 quintiles shares.

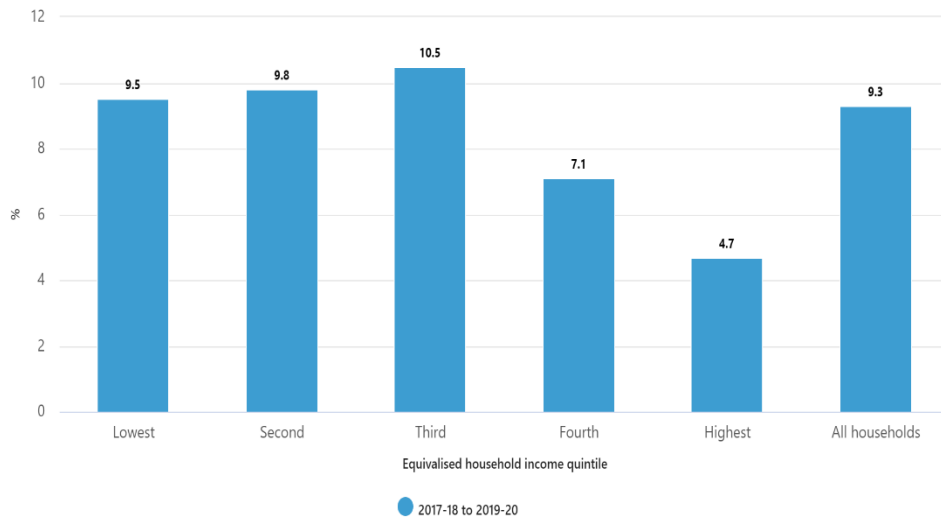


# Preliminary 2019-20 Release: Shifts between quintiles

	Lowest	Second	Third	Fourth	Highest	Total
<b>2017-18</b>						
Gross income by equivalised private income quintiles	6.3%	10.6%	16.2%	23.0%	43.9%	100.0%
Gross income by equivalised gross income quintiles	6.0%	10.8%	16.1%	23.2%	44.0%	100.0%
Change in share	-0.3%	0.2%	-0.2%	0.2%	0.1%	0.0%
<b>2019-20</b>						
Gross income by equivalised private income quintiles	8.0%	10.8%	15.5%	22.2%	43.5%	100.0%
Gross income by equivalised gross income quintiles	6.0%	11.4%	16.6%	22.7%	43.3%	100.0%
Change in share	-2.0%	0.6%	1.1%	0.5%	-0.1%	0.0%

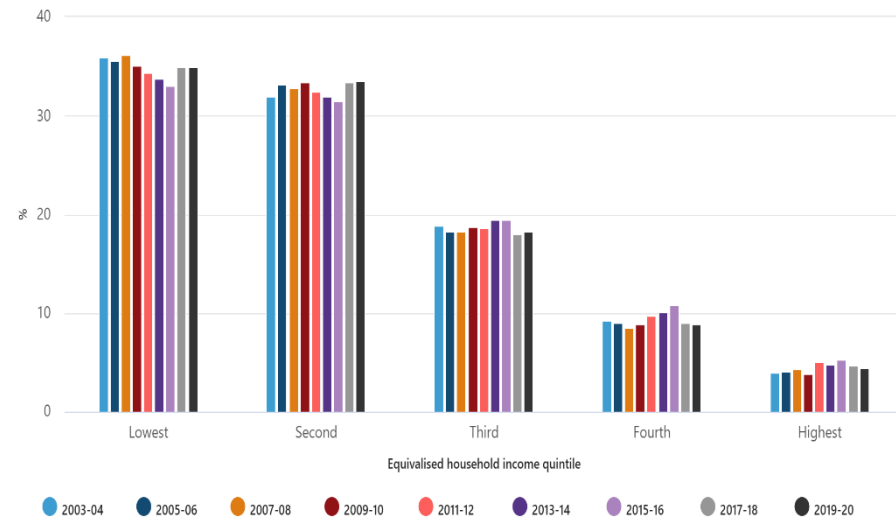
# Preliminary 2019-20 Release: Results Income

Social assistance benefits, Change per household, 2017-18 to 2019-20



Source: Australian Bureau of Statistics, Australian National Accounts: Distribution of Household Income, Consumption and Wealth 2019-20 financial year

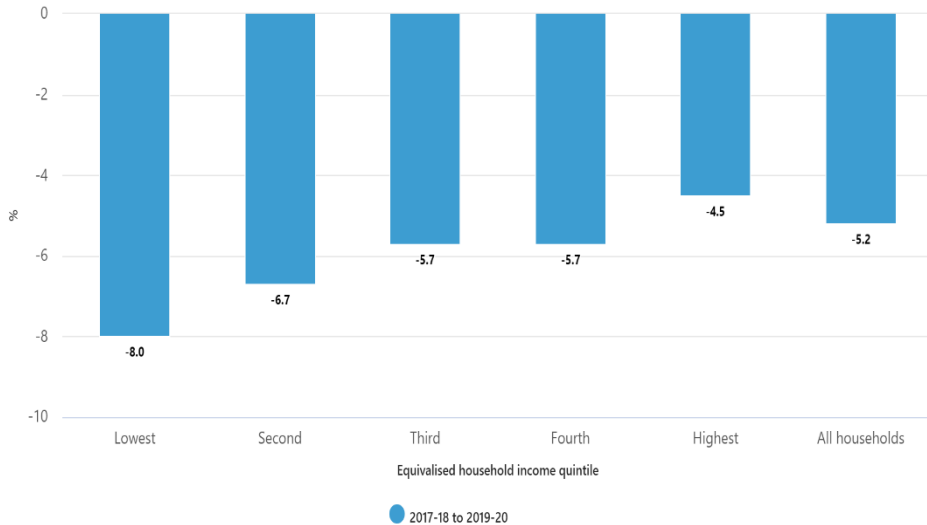
Social assistance benefits, Share of total households



Source: Australian Bureau of Statistics, Australian National Accounts: Distribution of Household Income, Consumption and Wealth 2019-20 financial year

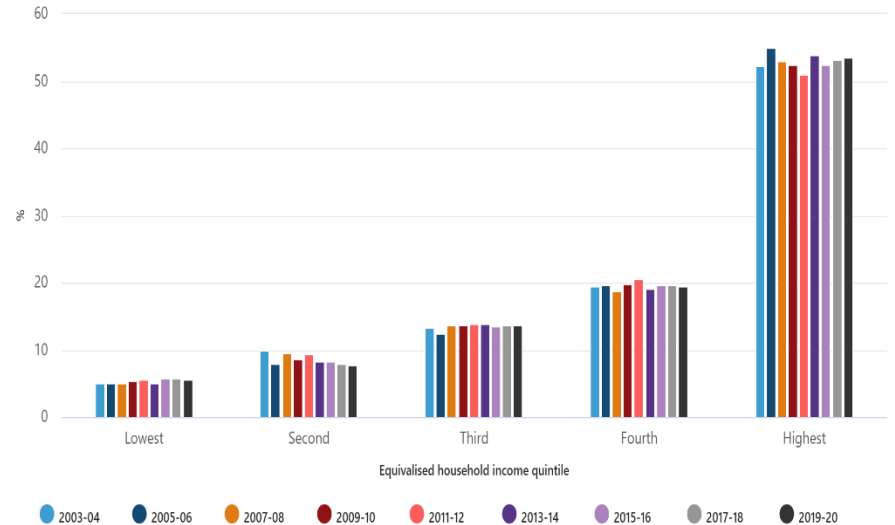
# Preliminary 2019-20 Release: Results Income

Property income receivable, Change per household, 2017-18 to 2019-20



Source: Australian Bureau of Statistics, Australian National Accounts: Distribution of Household Income, Consumption and Wealth 2019-20 financial year

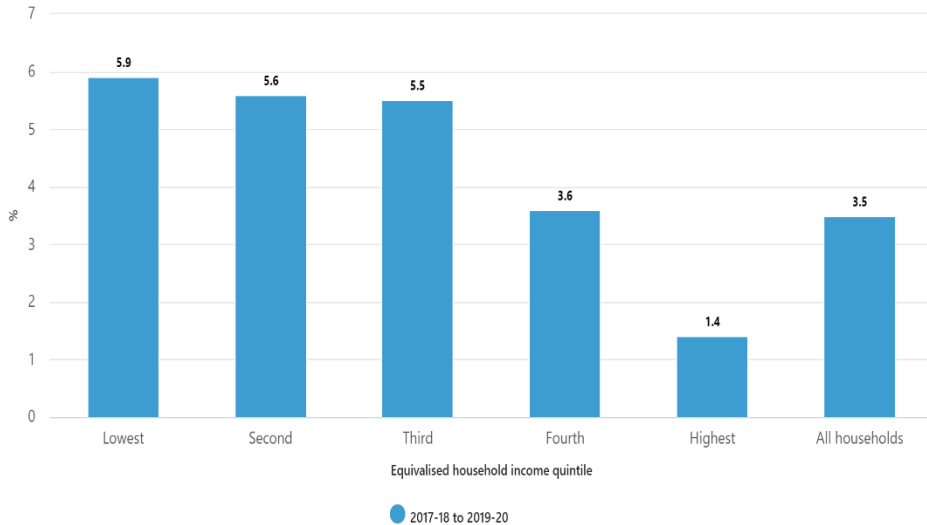
Property income receivable, Share of total households



Source: Australian Bureau of Statistics, Australian National Accounts: Distribution of Household Income, Consumption and Wealth 2019-20 financial year

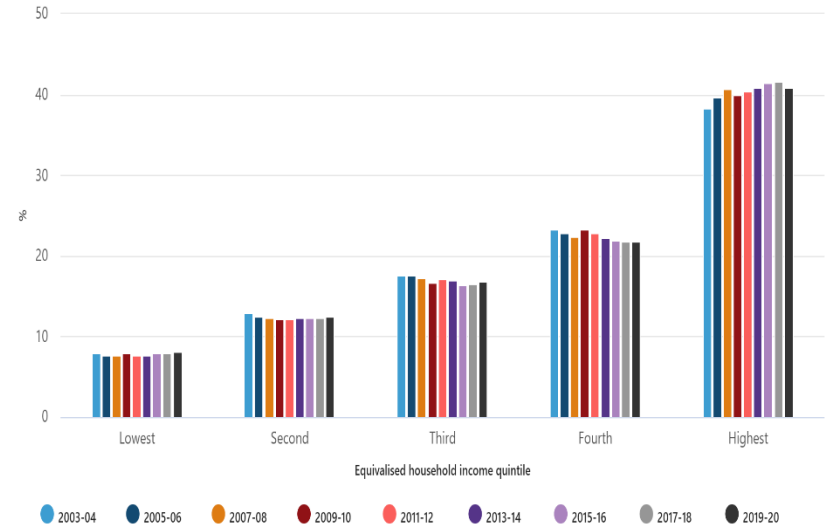
# Preliminary 2019-20 Release: Results Income

Gross disposable income, Change per household, 2017-18 to 2019-20



Source: Australian Bureau of Statistics, Australian National Accounts: Distribution of Household Income, Consumption and Wealth 2019-20 financial year

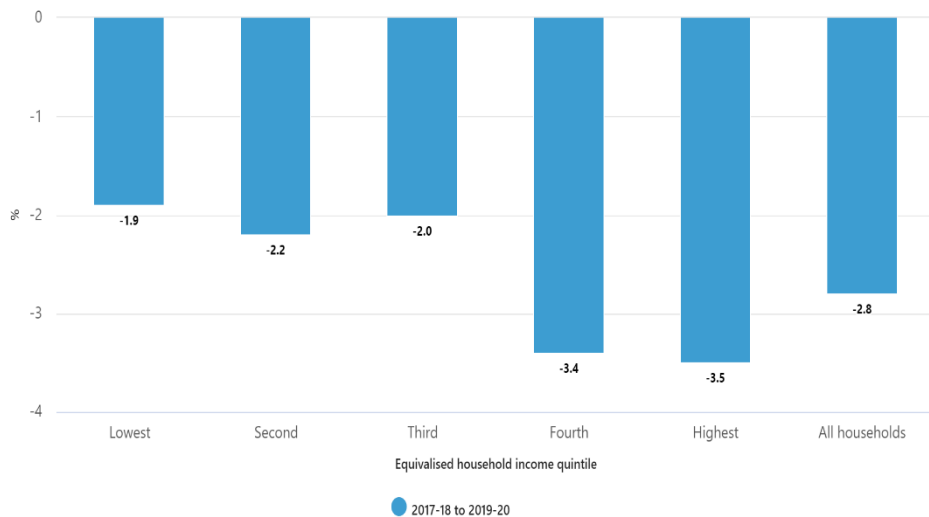
Gross disposable income, Share of total households



Source: Australian Bureau of Statistics, Australian National Accounts: Distribution of Household Income, Consumption and Wealth 2019-20 financial year

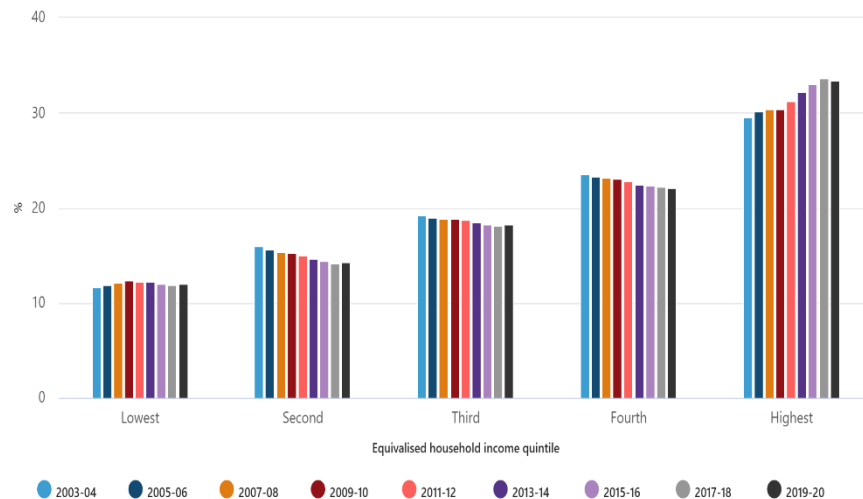
# Preliminary 2019-20 Release: Results Consumption

Final consumption expenditure, Change per household, 2017-18 to 2019-20



Source: Australian Bureau of Statistics, Australian National Accounts: Distribution of Household Income, Consumption and Wealth 2019-20 financial year

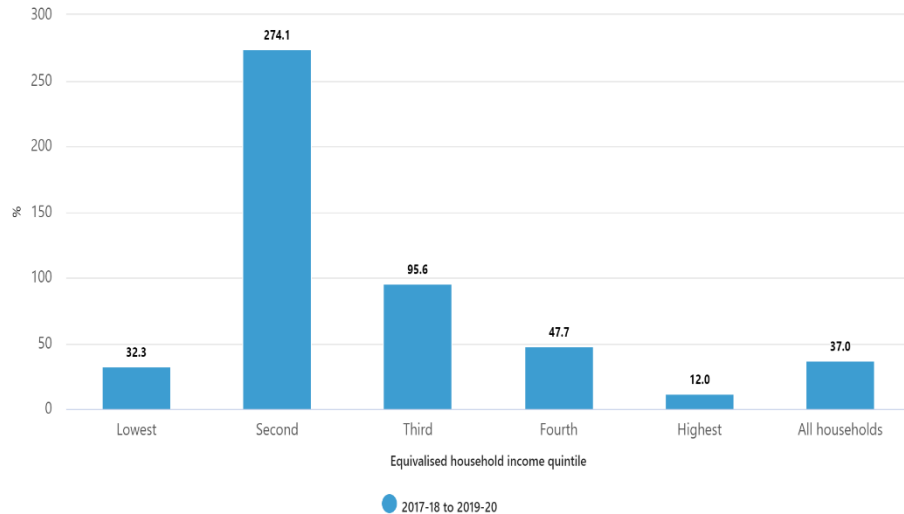
Final consumption expenditure, Share of total households



Source: Australian Bureau of Statistics, Australian National Accounts: Distribution of Household Income, Consumption and Wealth 2019-20 financial year

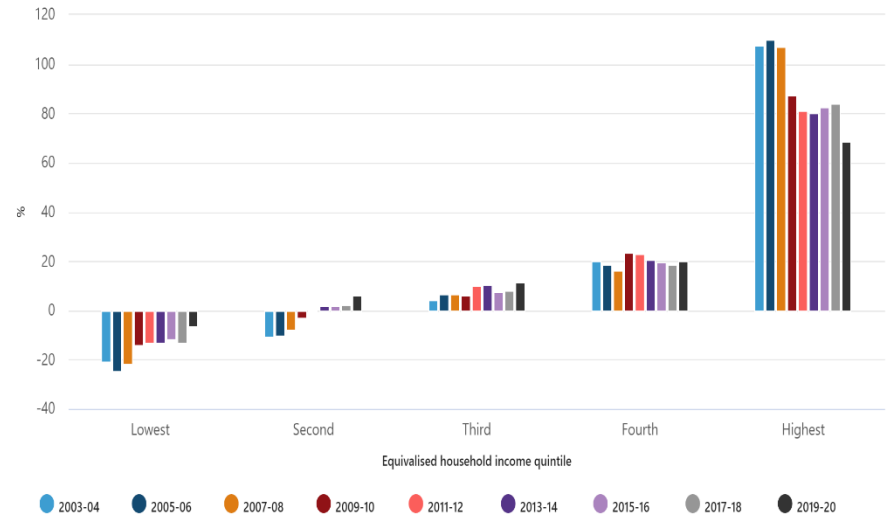
# Preliminary 2019-20 Release: Results Saving

Gross saving, Change per household, 2017-18 to 2019-20



Source: Australian Bureau of Statistics, Australian National Accounts: Distribution of Household Income, Consumption and Wealth 2019-20 financial year

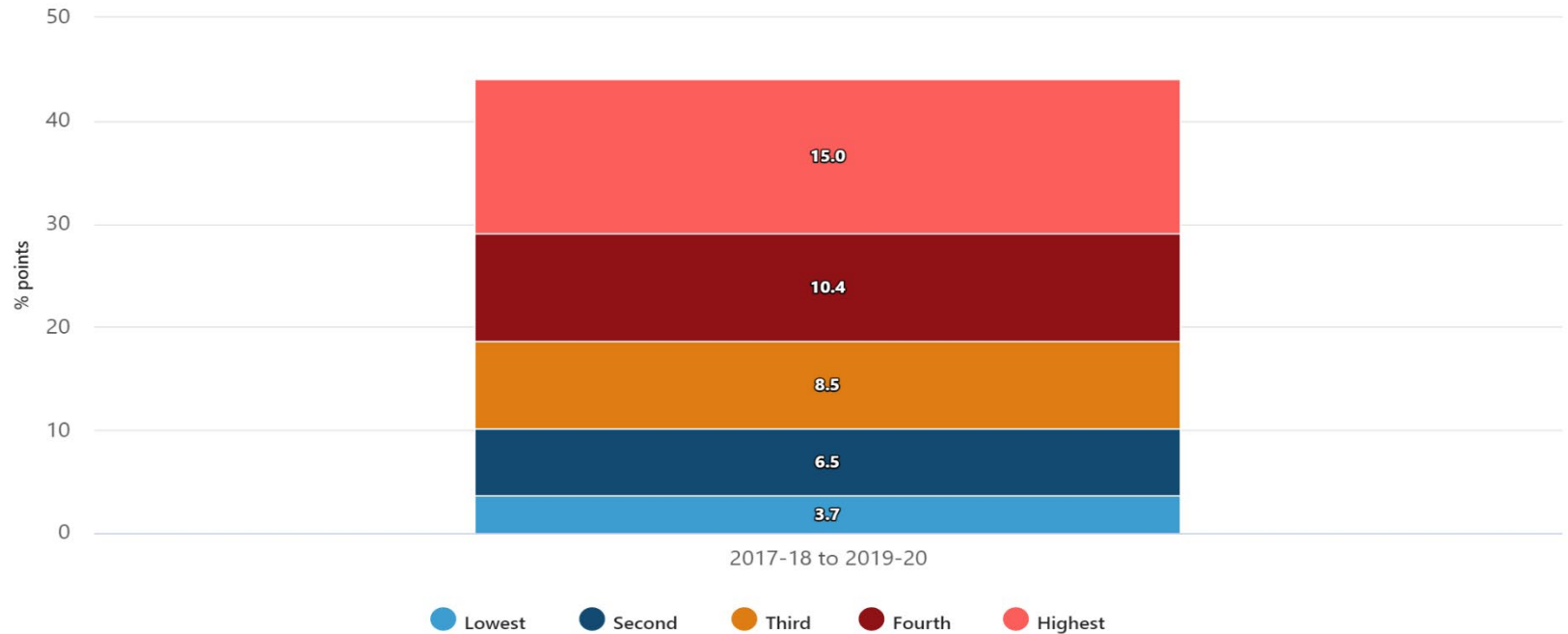
Gross saving, Share of total households



Source: Australian Bureau of Statistics, Australian National Accounts: Distribution of Household Income, Consumption and Wealth 2019-20 financial year

# Preliminary 2019-20 Release: Results Saving

Gross saving, Contribution to growth by equivalised household income quintile, 2017-18 to 2019-20



# Way Forward: Process Improvements

## ▶ Process improvements

- Working much more closely with micro survey area (SIH) to validate data;
  - Getting early access to preliminary micro data to help validate and quality assure data:
    - Feedback any inconsistencies in data to SIH;
    - Have set up quality gates to flag major issues.
  - Attending SIH clearance meetings;
  - Presentation to SIH on expectations (from economic intelligence);
  - New data visualisation tools which allow time series presentation of SIH micro data early;
- Working more closely with Statistical Methodology area of the ABS;
  - Reviewing nowcasting techniques and micro-macro gaps (e.g. Pareto technique for the tail end of the wealth distribution).



# Way Forward: Publication

- ▶ National Accounts Publication improvements: short and long term
  - Non-Private Dwellings - separately publish these distributions
  - Time series of micro macro coefficients
  - Cross tabular information e.g. Social Benefits by Age of household reference person by income quintiles;
  - Number of Consumption units in each household group;
  - Keeping up with user demand

# Way Forward: Expectations – How we build them

- ▶ Developed expectations by:
  - Working closely with Aggregate National Accounts teams to understand stories at a macro level e.g. impact of COVID19 stimulus measures, bushfires, policy changes;
  - Gathering information at a micro/distributional level from other sources e.g. ABS published statistics, administrative data (Regulator, Tax Office , Government Departments)
  - Applying research and judgment to translate macro stories to the micro level. Process involved:
    - Picking a “leading” indicator. In many cases we only had distributional intelligence for one household indicator e.g. Age of household reference person;
    - Using 2017-18 SIH unit record data (MURF) to cross tabulate back from the “leading” indicator to get a distribution for the remaining household groups.



Questions?