RESERVE BANK OF AUSTRALIA

Household Interest-rate Expectations and Monetary Policy Decisions

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†*The views expressed in this presentation are those of the authors and do not necessarily reflect the views of the Reserve Bank of Australia*

Motivation

Key question: How do households form expectations about the future path of interest rates?

- Understanding household interest-rate expectations is important for assessing the transmission of monetary policy through the household sector
  - Particularly households' consumption, asset allocation, and housing decisions
- Yet they are less studied than market or professional forecasters' expectations
- Today we will show how household expectations have evolved over time, how they respond to monetary policy decisions, and how they diverge

Key questions that we answer

1. How do households' interest-rate expectations compare to the market? Does this vary between households?

2. To what extent do the Bank's monetary policy announcements affect households' future interest-rate expectations?

Key questions that we answer… a preview

1. How do households' interest-rate expectations compare to the market? Does this vary between households?
   They often differ greatly, tending to be higher and less responsive, particularly for younger and renter households

2. To what extent do the Bank's monetary policy announcements affect households' future interest-rate expectations?
   Households pay attention, but do not always react how we would expect

Data: the Westpac-Melbourne Institute survey

The Westpac-Melbourne Institute dataset is a repeated cross-sectional survey running from 1995 to present. It collects information on households' expectations, sentiment, demographics, and other related information.

In late 2024, the Bank obtained additional data from this survey regarding households' expectations for changes in standard variable mortgage interest rate over the next 12 months. These data are semi-annual (Feb and Aug) between 2016 and 2021 and is monthly from 2022 onwards.

"Over the next 12 months do you expect standard variable mortgage interest rates to…"

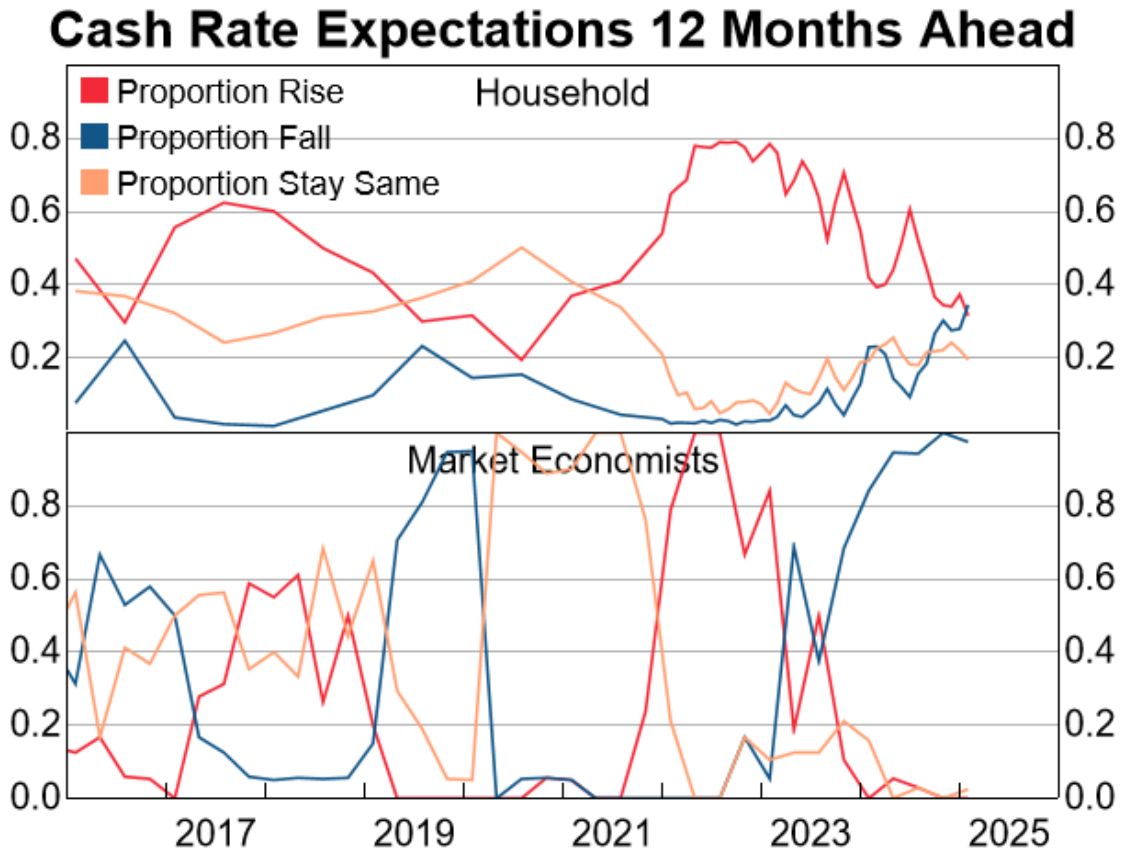
Answer choice	Linear encoding
Rise by more than 1%	1
Rise by 0 to 1%	0.5
Stay the same	0
Fall by 0 to 1%	–0.5
Fall by more than 1%	–1
Don't know/no opinion	NA

Key questions that we answer

1. **How do households' interest-rate expectations compare to the market? Does this vary between households?**

2. To what extent do the Bank's monetary policy announcements affect households' future interest-rate expectations?

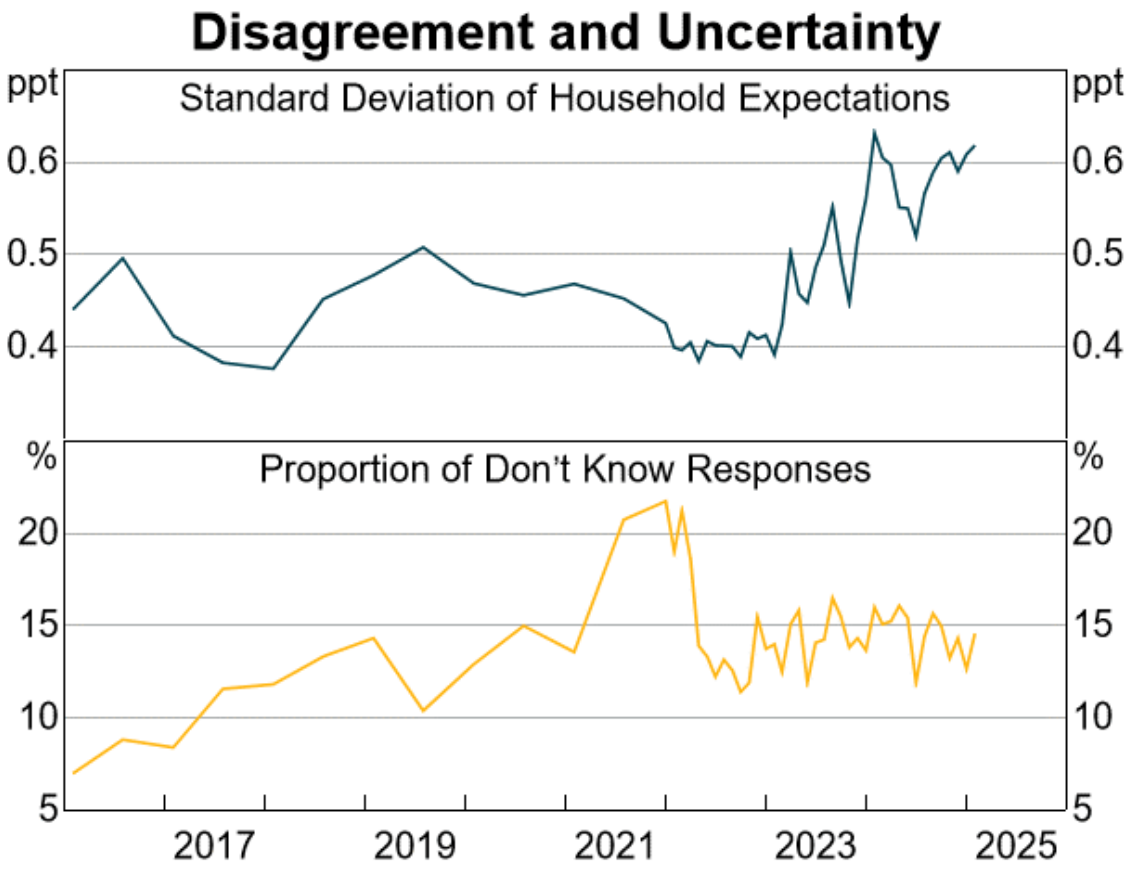
Household expectations over time



* Household expectations for the change in standard variable mortgage interest rates are used as a proxy for cash rate expectations

Sources: Consensus Forecasts; RBA; Westpac-Melbourne Institute Survey.

Household disagreement and uncertainty



* The horizontal axis is the date when household forecasts were made.

Sources: RBA; Westpac-Melbourne Institute Survey.

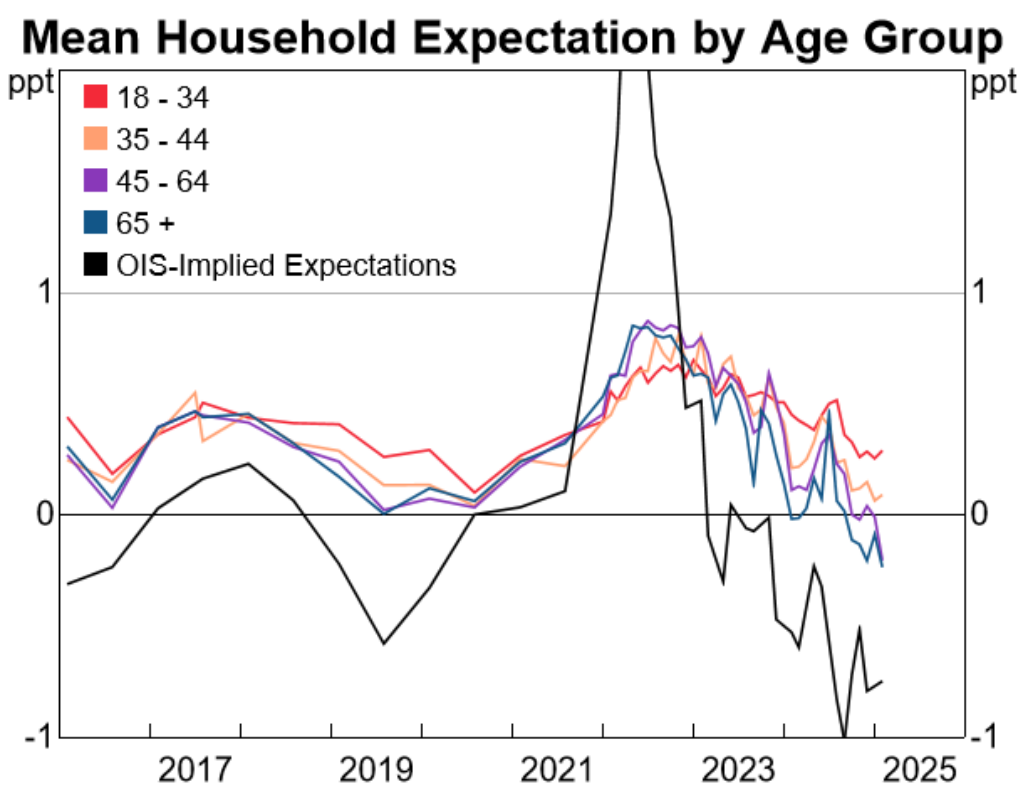
Heterogeneity in household expectations

Understanding how expectations differ by demographic characteristics can help shed light on:

- Which groups are less informed or less responsive to RBA communications

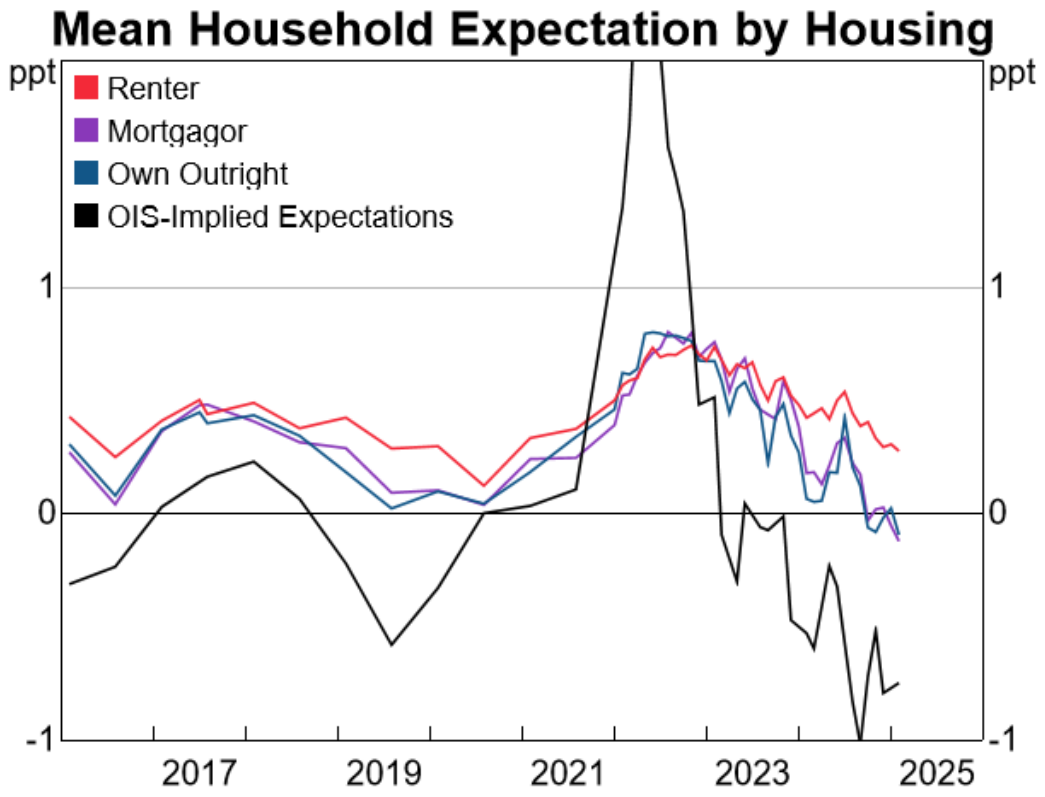
- How monetary policy is transmitted through the expectations channel.

Heterogeneity in household expectations



* The horizontal axis is the date when the household forecast was made

Sources: RBA; Westpac-Melbourne Institute Survey.



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Sources: RBA; Westpac-Melbourne Institute Survey.

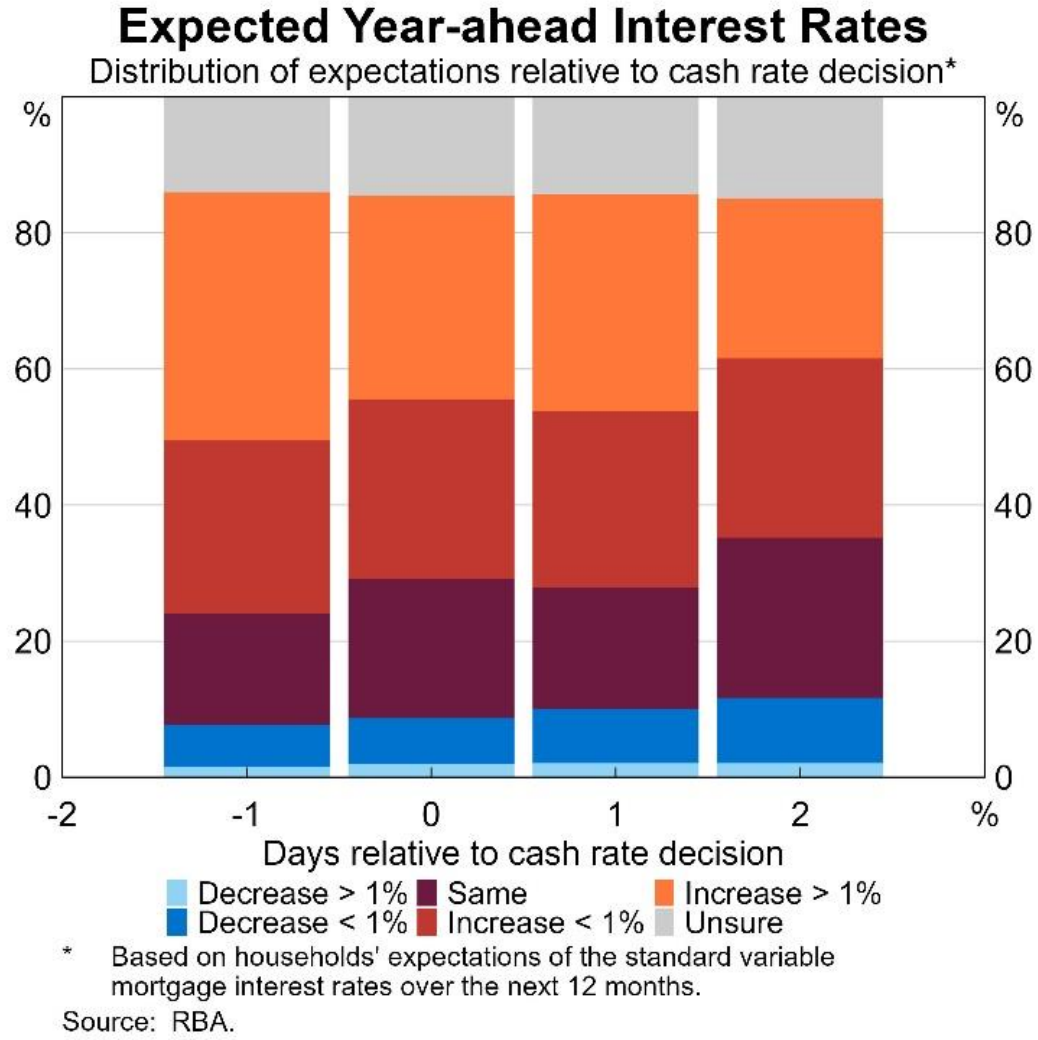
Key questions that we answer

1. How do households' interest-rate expectations compare to the market? Does this vary between households? Young

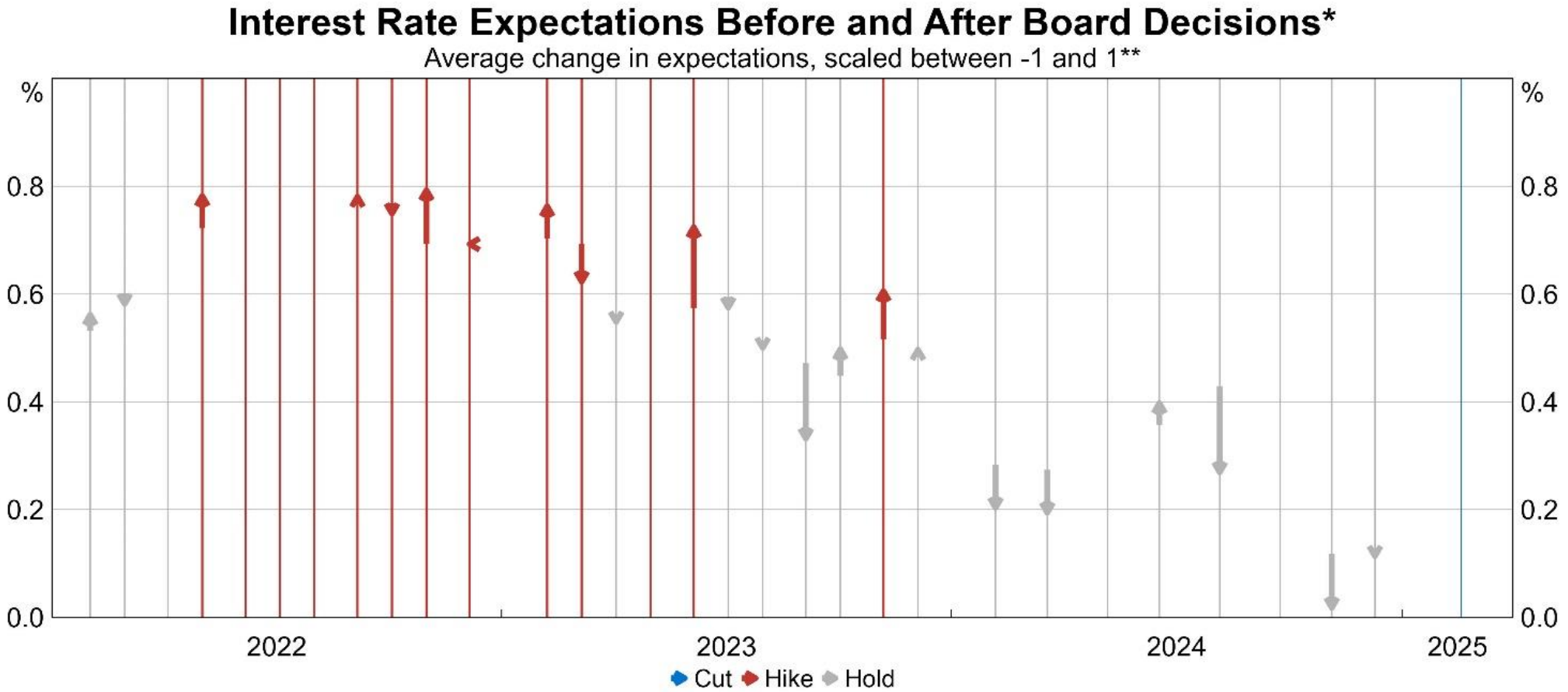
2. **To what extent do the Bank's monetary policy announcements affect households' future interest-rate expectations?**

The aggregate change after a meeting is slightly negative

- Households surveyed across several days, some before board decisions and some after



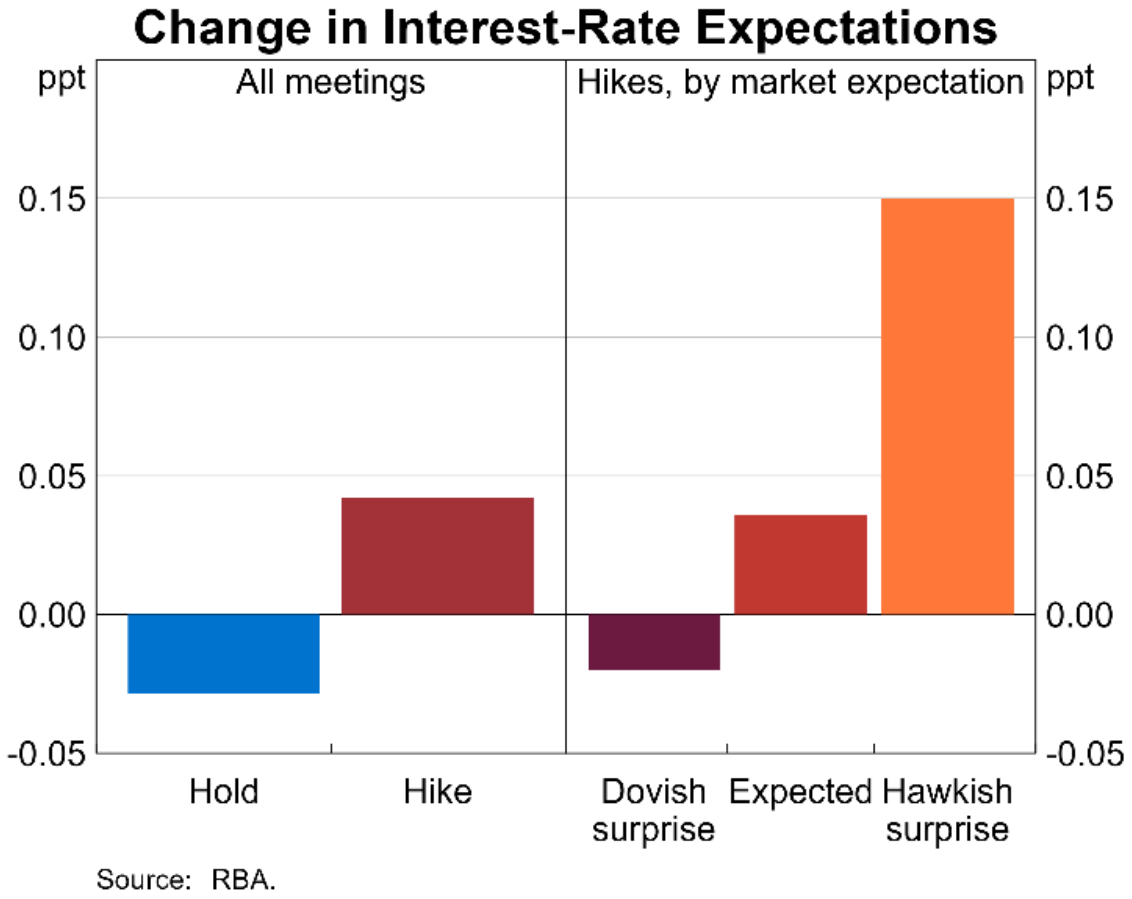
There is substantial variation in the impact of different meetings



* Vertical lines represent board decision dates, arrows show the change in expectations between the day before and day after the decision.
** Scaled between -1 and 1, where a value of 1 means that all respondents are expecting >1% increase in mortgage interest rates, and -1 means all respondents are expecting >1% decrease in rates.

Source: RBA.

…and variation is related to the nature of the decision



- Regression discontinuity design (RDD) results tend to reinforce these findings

RDD results tend to reinforce the graphical findings

- Regression discontinuity design (RDD) to formally test for differences in expectations by comparing households surveyed just before and just after the decision

RD Effects of Survey Day on Interest Rate Expectations

Subset of meetings:	Diff-in-Means Statistic
All meetings	–0.064**
Hold meetings	–0.055**
Hike meetings	0.014*
Hikes, by surprise	
Dovish surprise	–0.022
Expected	–0.008
Hawkish surprise	0.057**

(a) The adjustments are estimated using a simple difference-in-difference framework

What do these results tell us about behaviour?

Households' expectations **do** appear to respond to the RBA's monetary policy decisions, and at least part of this occurs quite quickly

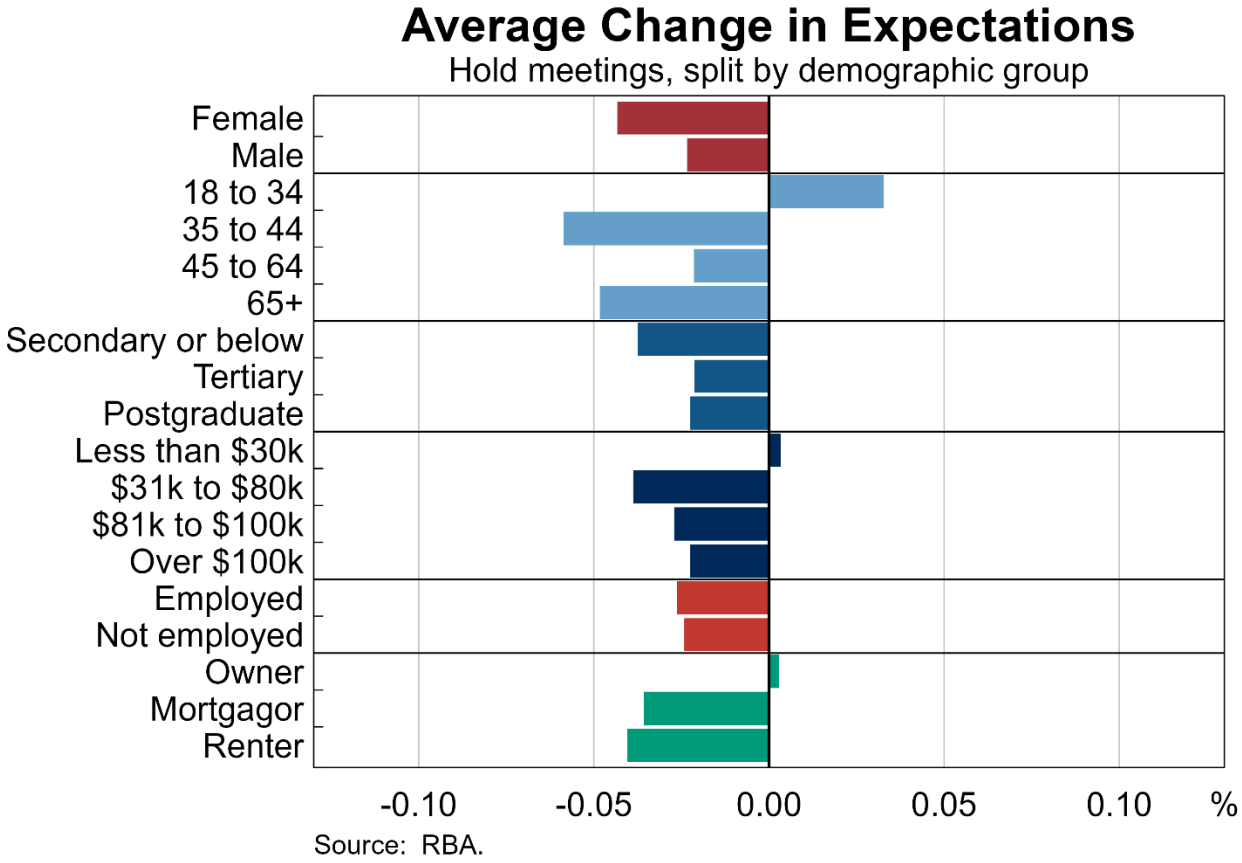
Why do households respond to expected decisions? A few potential explanations:

1. Extrapolating from the observed decision somewhat
2. While the hike or hold was expected by markets, it was less expected by households
3. The Bank's communications may provide new information about the path of rates

Explanations may be different for different households due to rational inattention

Most demographic groups have similar responses

- Younger, lower income, and owner demographic groups tend not to decrease their expectations on average following hold meetings



Key conclusions

- Household interest-rate expectations appear to be upwardly biased and slower moving than the market
- However, households **do** pay attention to monetary policy decisions, but do not always react how we expect
- Significant heterogeneity exists in both the level and ‘rationality’ of expectations across demographic groups
- But most demographic groups respond similarly to meetings

Policy message

- Our findings are consistent with rational inattention – households pay attention selectively depending on whether it is important to do so
- If this is the case, this may imply time-varying passthrough of interest rates:
  - E.g. more passthrough when inflation and interest rates are elevated
- It also seems that who we communicate to matters, because not all groups react in the same way
- Future work will consider whether the nature of the RBA's communications and subsequent media coverage matters?

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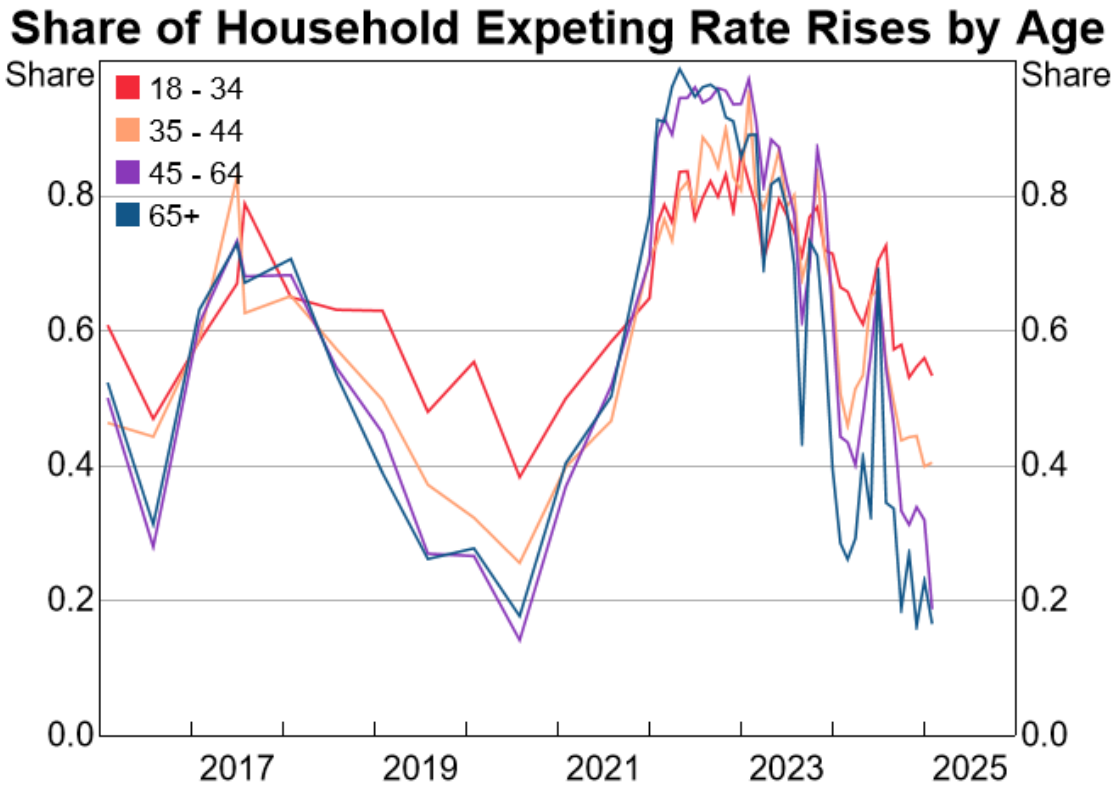
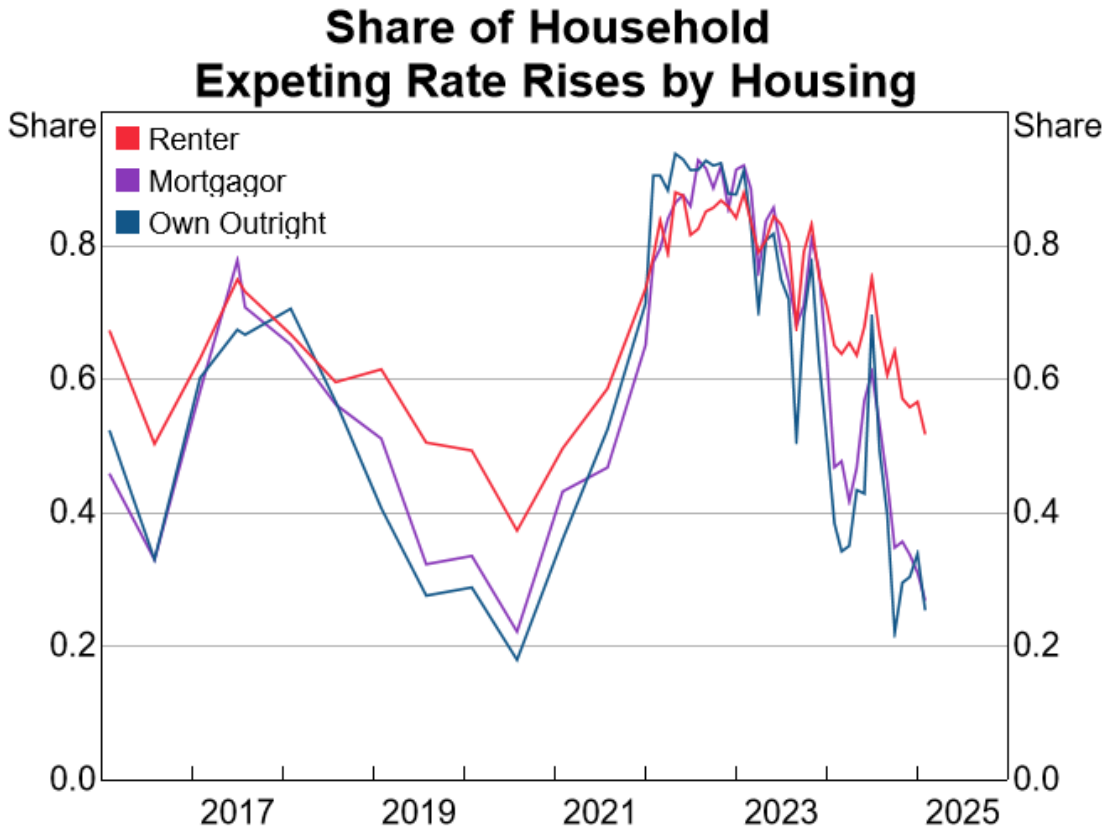
Appendix

Heterogeneity in household expectations



* The horizontal axis is the date when the household forecast was made

Sources: RBA; Westpac-Melbourne Institute Survey.



* The horizontal axis is the date when the household forecast was made

Sources: RBA; Westpac-Melbourne Institute Survey.

Heterogeneity in household expectations

Key takeaways:

- Interest rate expectations vary considerably with household characteristics.
- Homeowners/mortgagors and older individuals have expectation's most consistent with the 'rational' benchmark.
- Little evidence that low-income households have less rational expectations.

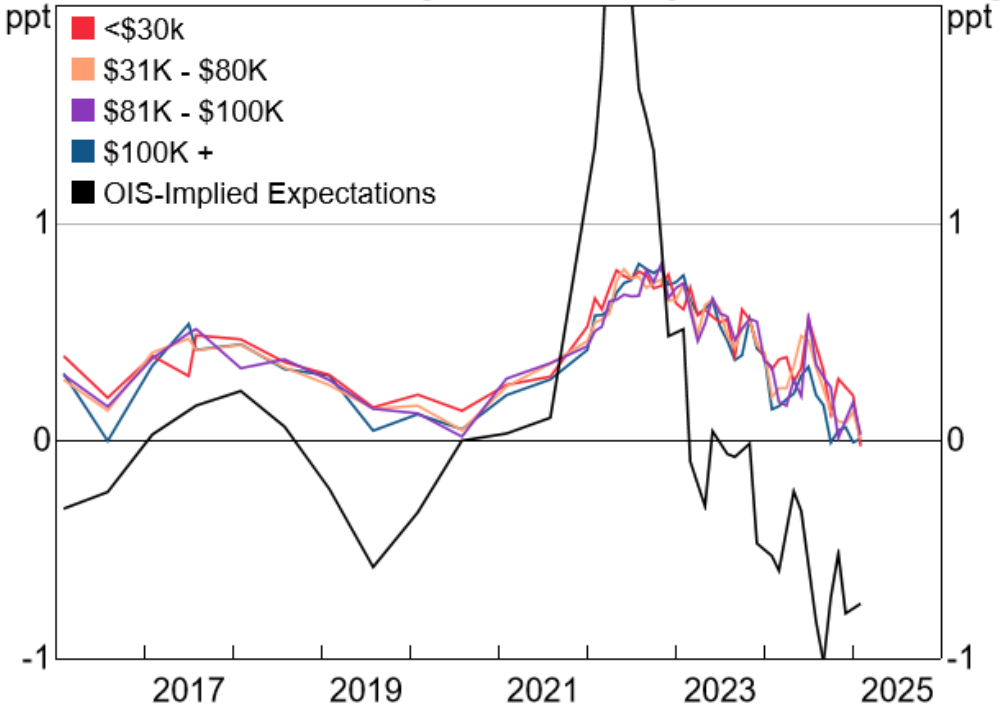
Determinants of Deviations from Market

Age (relative to 35-44)	
18-34	0.051 (0.008)***
45-64	-0.084 (0.008)***
65+	-0.150 (0.012)***
Income (relative to $31k - $80k)	
<$30K	0.023 (0.009)*
$81K - $100K	-0.003 (0.010)
$100K+	-0.039 (0.007)***
Housing (relative to renters)	
Mortgage	-0.061 (0.008)***
Own Outright	-0.058 (0.008)***
Other	-0.026 (0.027)
Education (relative to secondary school)	
Non-secondary	0.028 (0.008)***
Tertiary	-0.016 (0.007)*
Postgraduate	0.004 (0.009)

Note: Statistical significance indicated by *, **, *** for 90%, 95%, and 99% respectively. Standard errors are heteroskedasticity-robust.
Observations = 41,199

Heterogeneity in household expectations

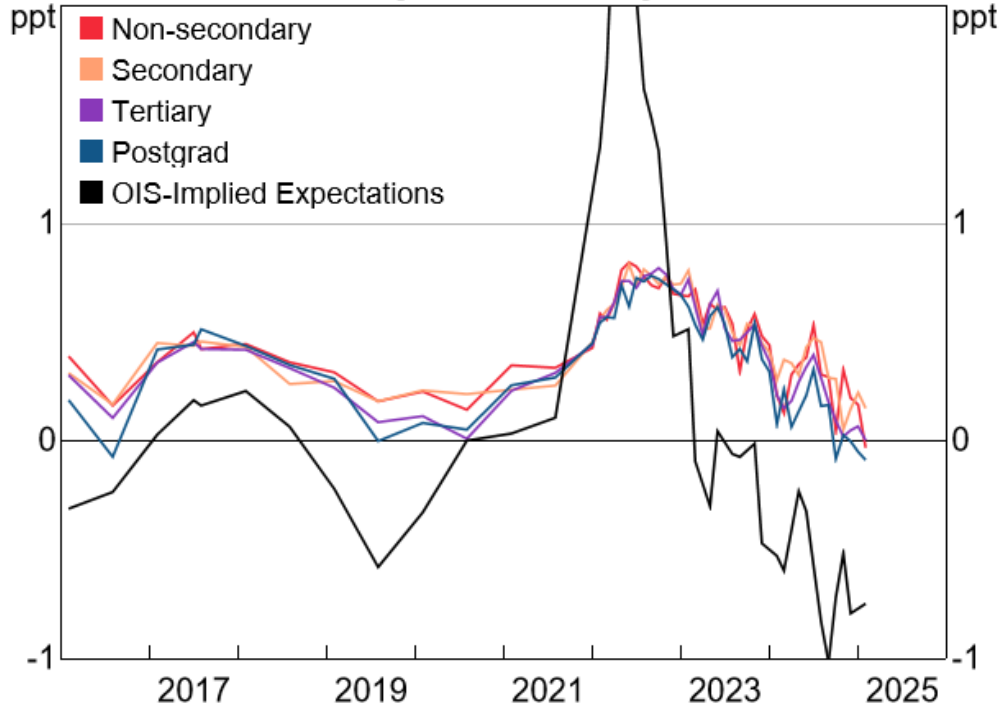
Mean Household Expectation by Income Group



* The horizontal axis is the date when the household forecast was made

Sources: RBA; Westpac-Melbourne Institute Survey.

Mean Household Expectation by Education Group



* The horizontal axis is the date when the household forecast was made

Sources: RBA; Westpac-Melbourne Institute Survey.

Heterogeneity in household expectations

$$Absloute\ Deviation_{i,t} = \beta X_{i,t} + \delta_t + \varepsilon_{i,t}$$

Table 2: Determinants of Deviations from Market

Age (relative to 35-44)	
18-34	0.051 (0.008)***
45-64	-0.084 (0.008)***
65+	-0.150 (0.012)***
Income (relative to $31k - $80k)	
<$30K	0.023 (0.009)*
$81K - $100K	-0.003 (0.010)
$100K+	-0.039 (0.007)***
Housing (relative to renters)	
Mortgage	-0.061 (0.008)***
Own Outright	-0.058 (0.008)***
Other	-0.026 (0.027)
Education (relative to secondary school)	
Non-secondary	0.028 (0.008)***
Tertiary	-0.016 (0.007)*
Postgraduate	0.004 (0.009)

Note: Statistical significance indicated by *, **, *** for 90%, 95%, and 99% respectively. Standard errors are heteroskedasticity-robust. Observations = 41,199

$$Cohort\ Mean\ Expectation_{g,t} = \alpha_g + \beta_g Market\ Expectation_t + \varepsilon_{g,t}$$

Table 3: Determinants of Correlation with Market

Age (relative to 35-44)	
18-34	0.089 (0.018)***
35-44	0.135 (0.027)***
45-64	0.208 (0.031)***
65+	0.260 (0.028)***
Income (relative to $31k - $80k)	
<$30K	0.143 (0.021)***
$31k-$80k	0.160 (0.024)***
$81K - $100K	0.150 (0.026)***
$100K+	0.175 (0.027)***
Housing (relative to renters)	
Renter	0.101 (0.019)***
Mortgage	0.210 (0.026)***
Own Outright	0.179 (0.029)***
Other	0.138 (0.037)***
Education (relative to secondary school)	
Non-secondary	0.167 (0.023)***
Secondary	0.143 (0.023)***
Tertiary	0.170 (0.026)***
Postgraduate	0.177 (0.026)***

Note: Statistical significance indicated by *, **, *** for 90%, 95%, and 99% respectively. Standard errors are heteroskedasticity-robust. Observations = 51,511

Average expectation changes: 2017-2021

* Vertical lines represent board decision dates, arrows show the change in expectations between the day before and day after the decision.

** Scaled between -1 and 1, where a value of 1 means that all respondents are expecting >1% increase in mortgage interest rates, and -1 means all respondents are expecting >1% decrease in rates.

Source: RBA.

Data cleaning

- Remove three problematic surveys (Feb-2018, Feb-2022, Dec-2024), where the demographics were not sufficiently balanced across survey dates
- The remaining sample passes the covariate balance test for all subset specifications

Meeting-level Summary Statistics

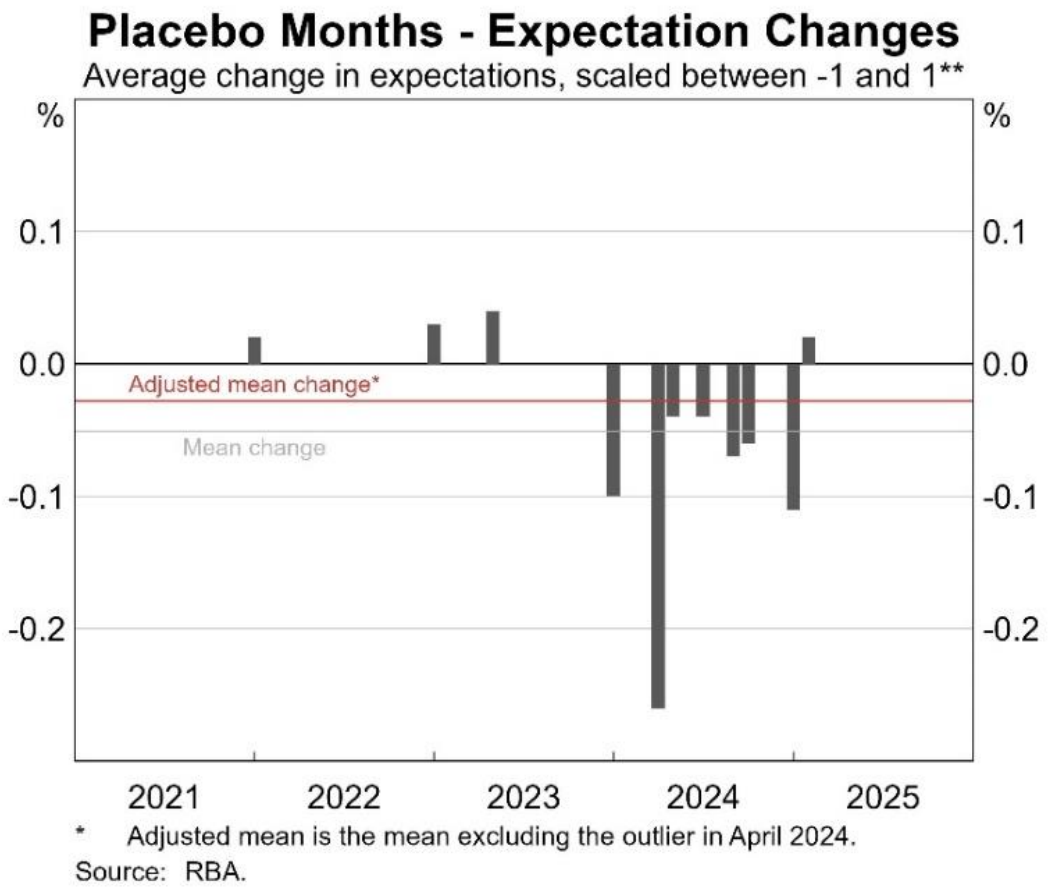
Meeting type	Number of meetings	Number of respondents
Hike		
Dovish surprise	1	861
Expected	7	6,295
Hawkish surprise	1	992
Hold	24	21,392

RDD Methodology

- Regression discontinuity design (RDD) to formally test for differences in expectations – local randomisation approach
- Compares households surveyed just before and just after the decision

- Robustness: Are those surveyed the day before and after systematically different?
  - Test observable characteristics: no significant differences
  - Test unobservable characteristics by comparing to a placebo sample of months
  - Adjust for average bias using a difference-in-difference framework

Placebo test



Estimating the bias-adjusted difference with a difference-in-difference regression:

$$expected\ rate = \alpha + \beta\ meeting + \gamma\ post + \lambda\ meeting \times post$$

Where:

- $meeting$ equals 1 for meeting months and 0 for placebos
- $post$ equals 1 for households surveyed on days 3 and 4
- The estimator λ is the new '**bias adjusted difference**'

λ is the additional effect on expectations beyond the placebo baseline for a household surveyed after the board meeting

Bias-adjusted difference

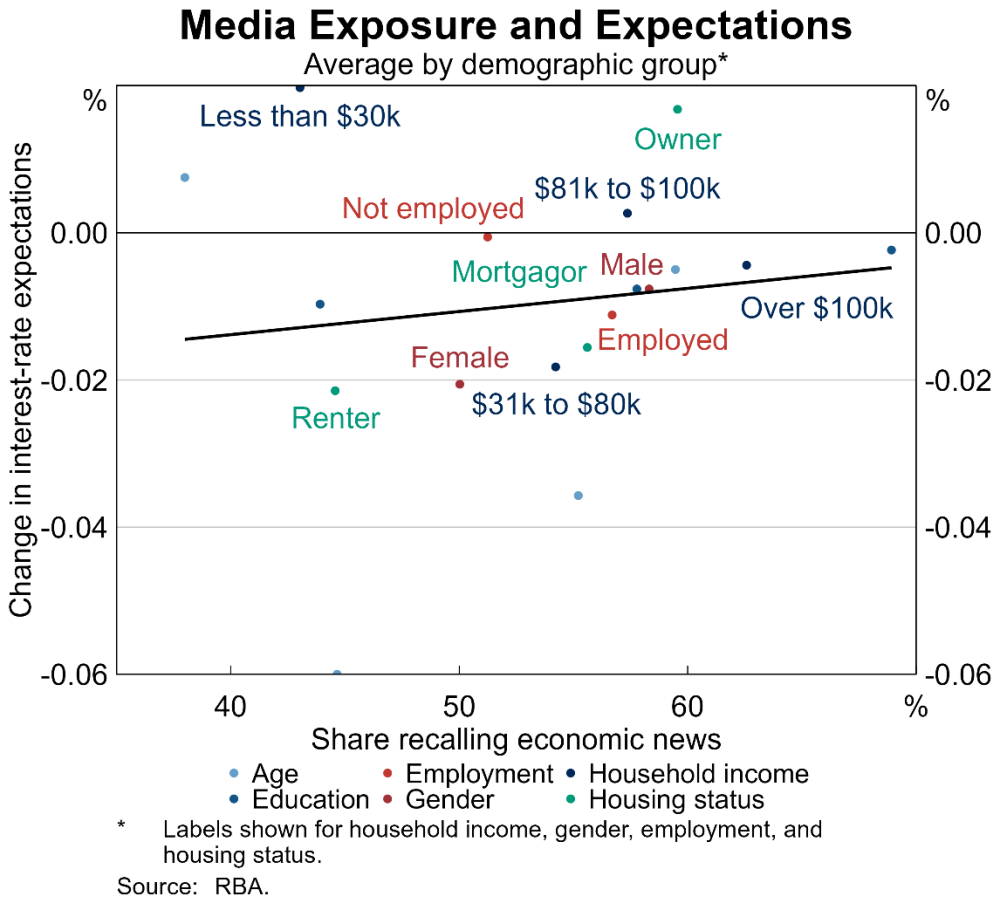
RD Effects of Survey Day on Interest Rate Expectations

Subset of meetings:	Diff-in-Means Statistic	Bias-adjusted difference[(a)]
All meetings	–0.064**	0.003
Hold meetings	–0.055**	0.035**
Hike meetings	0.014*	0.101***
Hikes, by surprise		
Dovish surprise	–0.022	0.075
Expected	–0.008	0.090***
Hawkish surprise	0.057**	0.148***

(a) The adjustments are estimated using a simple difference-in-difference framework

Media exposure explains some of this difference

- Demographic groups who interact more with economic news also tend to change their interest-rate expectations less following board meetings



Split by direction