Home Price Expectations

Felix Chopra

University of Copenhagen, CEBI

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PhD Course on Subjective Beliefs, Attention and Economic Behavior

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- **Today's lecture**: Focus on home price expectations as a working example

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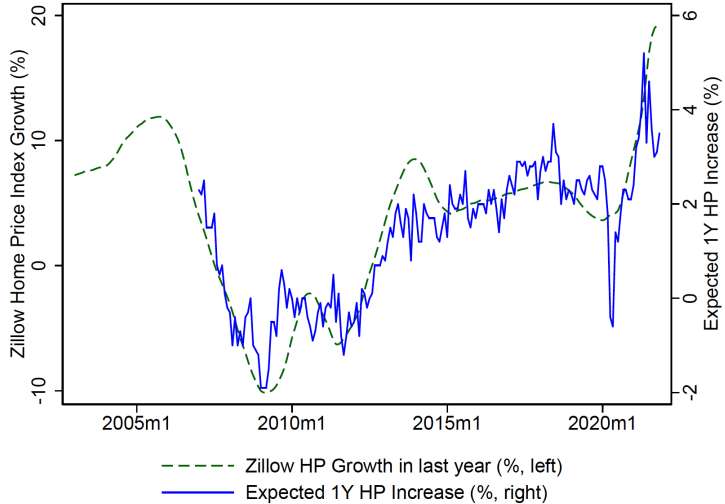
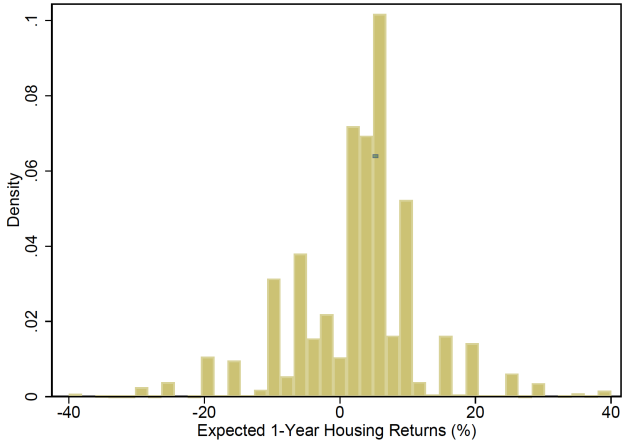
- **High stakes**: Housing is the most important asset on households' balance sheets
- **Behavioral relevance**: Housing (and mortgage) decisions should depend on future market conditions, which are inherently uncertain
- **Aggregate implications**: The housing market can have important spillover effects on the macroeconomy, as evidenced by the 2008 Global Financial Crisis

Descriptives: Home price changes vs home price expectations



Source: Kuchler et al. (2022)

Descriptives: Substantial disagreement in the cross-section



→ Cross-sectional variation in beliefs is larger than the time-series variation

Source: Kuchler et al. (2022); New York Fed SCE (2020).

Our plan for today

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2. What are key drivers of home price expectations? What can explain the dispersion in beliefs?

3. What are the effects of home price expectations on behavior?

(I) Measurement

How would you measure home price expectations in a survey?

Please **scan** the QR code, take **2 min** to think about how you would measure home price expectations in your survey, and post your suggestion on the board :)

Measuring home price expectations

- General rules of survey design apply (see Chris' lecture tomorrow)

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- Most studies elicit **subjective probability distributions** over future home price changes (Manski, 2004), typically in conjunction with a point forecast (e.g., for ORIV estimates (Gillen et al., 2019))

Measuring home price expectations

- General rules of survey design apply (see Chris' lecture tomorrow)
- Most studies elicit **subjective probability distributions** over future home price changes (Manski, 2004), typically in conjunction with a point forecast (e.g., for ORIV estimates (Gillen et al., 2019))
- Considerations specific to home price expectations:
  - **Time horizon**: 1-year ahead price change? 5-years ahead? Home prices exhibit short-term momentum and long-term mean reversion.
  - **Reference market**: Local home prices (zip code, county)? National home prices?

Example from the New York Fed's Survey of Consumer Expectations

What would you say is the percent chance that, **over the next 12 months**, the average home price nationwide will…

1. …increase by 12% or more ☐ percent.
2. …increase by 8% to 12% ☐ percent.
3. …increase by 4% to 8% ☐ percent.
4. …increase by 2% to 4% ☐ percent.
5. …increase by 0% to 2% ☐ percent.
6. …decrease by 0% to 2% ☐ percent.
7. …decrease by 2% to 4% ☐ percent.
8. …decrease by 4% to 8% ☐ percent.
9. …decrease by 8% to 12% ☐ percent.
10. …decrease by 12% or more ☐ percent.

(II) Origin and Determinants

Origin and determinants: What explains variation in the cross-section?

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- Turns out, information and experiences that are "close" to us (in some sense)
- Focus on three important determinants of belief dispersion:
  - Close in time: Past realized home price changes (Armona et al., 2019)
  - Close geographically: Local home price changes (Kuchler and Zafar, 2019)
  - Close socially: Social interaction and friendship networks (Bailey et al., 2018)

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  - Close geographically: Local home price changes (Kuchler and Zafar, 2019)
  - Close socially: Social interaction and friendship networks (Bailey et al., 2018)
- Other factors
  - Experience effects (e.g. Malmendier and Steiny, 2016)
  - Homeownership status (Kindermann et al., 2022)

Past home price changes

Armona, Fuster, Zafar (2019, REStud)

- Survey experiment in the NY Fed's Survey of Consumer Expectations
- **Prior beliefs**
  - Past local home price change in one's zip code (1-year and 5-year)
    - → To get at the perception gap (actual vs prior)
  - Local home price expectations (1-year and 5-years ahead)
- **Information treatment**: Inform respondents about actual local home price changes
  - **T1**: Past year
  - **T5**: Past 5 years
  - **Control**: No information
- **Outcome**: Re-elicit local home price expectations

Armona, Fuster, Zafar (2019, REStud): Beliefs are *extrapolative*

	Home price expectation revisions at horizon:					
	1 year	2–5 years	1 year	2–5 years	1 year	2–5 years
	(1)	(2)	(3)	(4)	(5)	(6)
T1 (β_1)	0.02	−0.12	0.08	−0.17	−0.01	−0.13
	(0.29)	(0.11)	(0.30)	(0.12)	(0.29)	(0.11)
T5 (β_2)	0.10	0.10	0.09	0.09	0.17	0.10
	(0.29)	(0.11)	(0.30)	(0.12)	(0.30)	(0.12)
1yr Perception Gap[a] (β_3)	0.00	0.00	0.01	0.00	0.00	0.00
	(0.03)	(0.01)	(0.03)	(0.01)	(0.03)	(0.01)
5yr Perception Gap (β_4)	0.05	0.00	0.05	−0.00	0.05	−0.00
	(0.05)	(0.02)	(0.05)	(0.02)	(0.05)	(0.02)
T1 * 1yr Perception Gap (β_5)	0.20***	0.04**	0.19***	0.05***	0.19***	0.04***
	(0.04)	(0.02)	(0.05)	(0.02)	(0.04)	(0.02)
T5 * 5yr Perception Gap (β_6)	0.07	0.05*	0.07	0.05*	0.08	0.06**
	(0.08)	(0.03)	(0.08)	(0.03)	(0.08)	(0.03)

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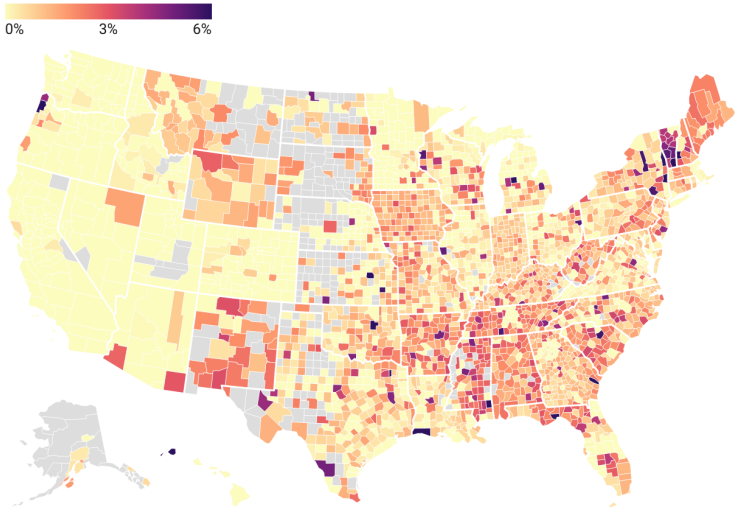
	(0.08)	(0.03)	(0.08)	(0.03)	(0.08)	(0.03)

→ Extrapolation both for short and longer time horizons – in contrast to mean reversion of actual home prices over longer horizons

Local home price changes

Quarterly Real Estate Appreciation by County

Last Updated: Q1 2023



SparkRental Real Estate Blog

Map: G. Brian Davis, SparkRental • Source: Zillow • Created with Datawrapper

Kuchler and Zafar (2019, JF)

- To what extent do people rely on **local** price information when forming **aggregate** home price expectations?
  - Local price changes arguably more salient than home price changes in distant markets
  - Different local housing market experiences could potentially explain disagreement

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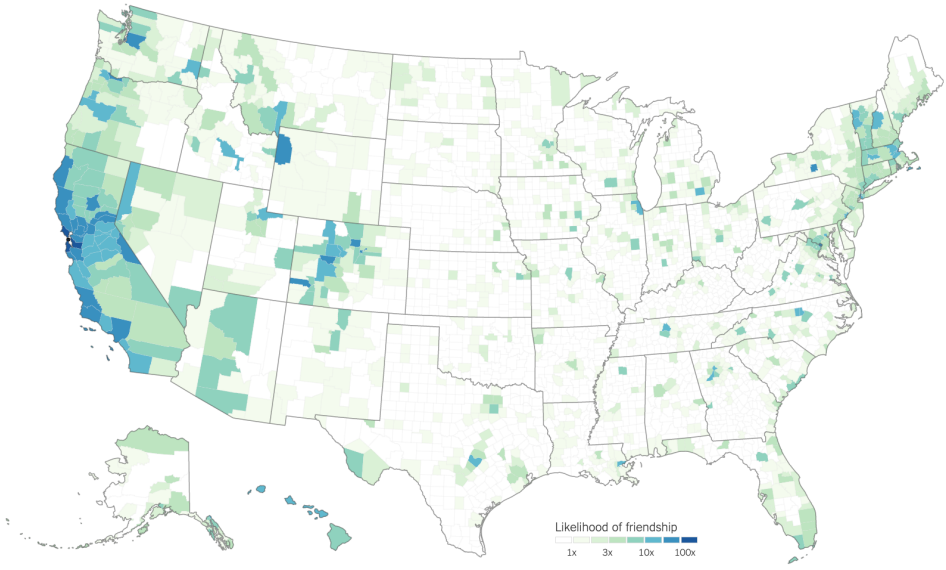
- Data and empirical strategy:
  - Survey of Consumer Expectations:
    - Respondents: **Monthly** measures of 1-year ahead **national home** price expectations
    - Match respondents with monthly data on local home price changes (from CoreLogic)
  - Exploit monthly variation in local home prices to examine updating about national home price expectations

Do local price changes affect national home price expectations? – **Yes!**

	(1) ZIP	(2) MSA	(3) State
Panel A: Expected One-Year Change in U.S. House Prices			
Past Local House Price Change	0.095***	0.172***	0.217***
	(0.0181)	(0.0332)	(0.0412)
Time Fixed Effects	Y	Y	Y
Demographics	Y	Y	Y
Effect of 1 std	0.516	0.686	0.738
Effect of 1 std when weighted	0.635	0.838	0.809
Number of observations	6,032	6,925	8,104
R^2	0.0436	0.0388	0.0367
Panel B: Expected One-Year Change in U.S. House Prices in Two Years			
Past Local House Price Change	0.0886***	0.116***	0.144***
	(0.0178)	(0.0276)	(0.0390)
Time Fixed Effects	Y	Y	Y
Demographics	Y	Y	Y
Effect of 1 std	0.483	0.465	0.493
Effect of 1 std when weighted	0.657	0.578	0.570
Number of observations	5,881	6,758	7,907
R^2	0.0602	0.0496	0.0494

Social interaction

The relative probability that someone in any U.S. county has a Facebook friendship link to San Francisco County, Calif.



Bailey, Cao, Kuchler, Stroebel (2018, JPE)

- Are experienced local home price propagated through social networks?
- Data and identification
  - Facebook data on individual friendship networks
  - Survey data among LA facebook users (N=1,243):
    "If someone had a large sum of money that they wanted to invest, would you say that relative to other possible financial investments, buying property in your zip code today is…?" [A very good investment, …, A very bad investment]

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    "If someone had a large sum of money that they wanted to invest, would you say that relative to other possible financial investments, buying property in your zip code today is…?" [A very good investment, …, A very bad investment]
  - **Identification**: Compare two individuals within the same zip code with friends who experienced different local home price changes in their county c

$$\text{FriendHPExp}_i = \sum_c \text{ShareFriends}_{i,N,c} \times \Delta HP_{c,t_1,t_2} \tag{1}$$

$$\text{GoodInvestment}_i = \alpha + \beta\, \text{FriendHPExp}_{i,2013-2015} + \gamma X_i + \psi_{\text{zip}} + \varepsilon_i \tag{2}$$

Bailey, Cao, Kuchler, Stroebel (2018, JPE)

	Dependent Variable: Local Housing a Good Investment? (Question 4)				
	(1)	(2)	(3)	(4)	(5)
Δ friend house prices, 2013–15 (%)	.040**	.036*			
	(.017)	(.019)			
Δ friend house prices, 2013–15 (%) × knowledge of house prices where friends live:					
Not at all informed				.002	
				(.036)	
Somewhat informed				.036	
				(.023)	
Well informed				.068*	
				(.039)	
Very well informed				.119*	
				(.069)	
Δ friend house prices, 2013–15 (%) × talk with friends about housing investments:					
Never					−.050
					(.038)
Rarely					.001
					(.028)
Sometimes					.086***
					(.027)
Often					.096**
Demographic controls	Yes	Yes	Yes	Yes	Yes
Zip code fixed effects	Yes	Yes	Yes	Yes	Yes
Sample		LA in 2012			
Observations	1,242	1,110	1,242	1,242	1,242

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3. The experienced price changes of our friends and peers propagate through **social networks** and affect expectations about the local housing market — even if friends live in geographically distant housing markets.

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3. The experienced price changes of our friends and peers propagate through **social networks** and affect expectations about the local housing market — even if friends live in geographically distant housing markets.

→ *Heterogeneity* in local experiences and friendship networks can help explain part of the cross-sectional dispersion in expectations.

Questions?

(III) Expectations and Behavior

The role of home price expectations for behavior

- Home price expectations affect important housing market outcomes
  - Homeownership (Bailey et al., 2018; Bottan and Perez-Truglia, 2022)
  - Search behavior, i.e., duration and breadth of search (Gargano et al., 2020)
  - Mortgage choice (Bailey et al., 2019)

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- Key challenge: Linking survey measures of expectations with field data on behavior
  - Only a few studies link survey measures of macro expectations with admin data

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- **Remainder of the lecture**: What about **non-housing** market outcomes?
  - Example of linked survey-admin data
  - *Bonus material*: How do people reason about home price changes?

Home Price Expectations and Spending: Evidence from a Field Experiment

Felix Chopra[1] Christopher Roth[2] Johannes Wohlfart[1]

[1]University of Copenhagen, CEBI
[2]University of Cologne and ECONtribute

Home Price Expectations and Business Cycle Movements

- Housing is the **most important asset** on households' balance sheets.
  - It accounted for **28%** of US households' net wealth as of 2020 (Hays and Sullivan, 2022).

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- Expectations about future house prices typically undergo **large swings** and have been hypothesized to be an influential driver of **business cycle movements** (Akerlof and Shiller, 2010; Kuchler et al., 2022).
  - Shiller (2015) argues that home price expectations played a key role in the 2008 US housing crisis.

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  - Shiller (2015) argues that home price expectations played a key role in the 2008 US housing crisis.

- These expectations can shape **aggregate outcomes** through a variety of mechanisms:
  - direct effects on housing markets (Armona et al., 2019; Bottan and Perez-Truglia, 2022).
  - effects on households' **spending decisions**.

Do home price expectations affect current spending?

- Home price expectations could affect spending through several channels
  - Perceived wealth effects
  - Changes in the expected future cost of living
  - Changes in perceived future borrowing constraints

  $\rightarrow$ Potentially heterogeneous effects across **renters** and **homeowners**

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- Home price expectations could affect spending through several channels
  - Perceived wealth effects
  - Changes in the expected future cost of living
  - Changes in perceived future borrowing constraints
  - → Potentially heterogeneous effects across **renters** and **homeowners**

- Identification challenges
  - Home price expectations are typically **unobserved** in economic datasets
  - Home price expectations are **endogenous**, e.g., to individual characteristics or past price changes
  - Substantial **measurement error** in survey-based measures of expectations and spending behavior

What we do

- **Field experiment** on the effect of home price expectations on current spending
  - Measure home price expectations in a survey
  - Exogenous variation in home price expectations from an **information intervention**
  - Link survey responses with **administrative spending data**
- Examine spending responses among homeowners and renters
- Mechanism evidence: Measure people's **thoughts and reasoning** about the effects of changes in home price expectations

Preview of results

Preview of results

- Homeowners do not adjust their spending in response to exogenously higher home price expectations.
- **Renters reduce their spending** when expecting home prices to grow more strongly.
- Effects seem to be driven by:
  - higher expected housing costs (among both owners and renters).
  - higher expected wealth (among owners).

Literature

- **Households' spending responses to realized home price changes**
  (Aladangady, 2017; Andersen and Leth-Petersen, 2021; Browning et al., 2013; Campbell and Cocco, 2007; Mian et al., 2013; Piazzesi and Schneider, 2016; Stroebel and Vavra, 2019)

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- **Formation and consequences of house price expectations**
  (Adelino et al., 2018; Armona et al., 2019; Bailey et al., 2019, 2018; Bottan and Perez-Truglia, 2022; Kuchler and Zafar, 2019; Kuchler et al., 2022)

  → Document potential spillover effects on non-housing outcomes

  → Find evidence that higher home price expectations reduce renters' spending

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- **Information experiments studying macroeconomic expectations**
  (Armantier et al., 2016; Binder and Rodrigue, 2018; Cavallo et al., 2017; D'Acunto et al., 2022; Haaland et al., 2023; Laudenbach et al., 2022; Roth and Wohlfart, 2020)

  → Only few papers link experiments shifting macro expectations with admin data

Design

Field experiment with Nielsen Homescan panelists (HMS)

- Nationally representative household-level panel data on retail spending
  - Panelists record retail purchases using scanners at home
  - Observe prices, quantities, discounts for over 1 million tracked products
  - Self-reported sociodemographic data

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- Unique setting that allows **linked admin-survey data** in the US

- Widely used in economic research, e.g.
  - D'Acunto et al. (2021) link inflation expectations to (salient) grocery price changes
  - Broda and Parker (2014) estimate micro MPCs out of tax rebates

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- **Our study**: Field experiment with 2,554 panelists
  - Nov 2019: Invited to participate in an online survey
  - Dec 2019: 4-week follow-up survey

Design overview

1. Main survey
   - Elicit prior beliefs: Average annual home price changes over the next 10 years
   - **Treatment**: Provide differential expert forecasts about future home price changes
   - Measure post-treatment beliefs
2. Follow-up survey
   - Re-elicit expectations four weeks later
   - Addresses concerns about demand effects and numerical anchoring

Information treatment with an active control group

- **High forecast treatment**: 6% annual home price growth rate
- **Low forecast treatment**: 1.5% annual home price growth rate

"We now would like to provide you with a forecast of home price growth from an expert who regularly participates in the World Economic Survey, an expert survey on macroeconomic forecasts.

According to this expert forecast, the average annual growth rate of home prices in the US over the next ten years will be [**6**; **1.5**] percent.

In the case where home prices increase by [**6**; **1.5**] percent in each of the next ten years, this would mean that a home worth $100,000 today will be worth about [**$179,085**; **$116,054**] in ten years from now."

Fixing inflation expectations across treatment arms

"We now would like to provide you with a forecast of inflation from an expert who regularly participates in the Survey of Professional Forecasters. According to this expert forecast, the average annual rate of inflation in the US over the next ten years will be 2.2 percent."

Quantitative posterior: Home price expectations

In this question we present you with eight possible scenarios for the average annual growth rate of the value of a typical home in the US, over the next ten years.

Please let us know how likely you think it is that each scenario will occur. Please type in the number to indicate the probability, in percent, that you attach to each scenario. The probabilities of the eight scenarios have to sum up to 100 percent.

The average growth rate of the value of a typical home in the US over the next ten years will be

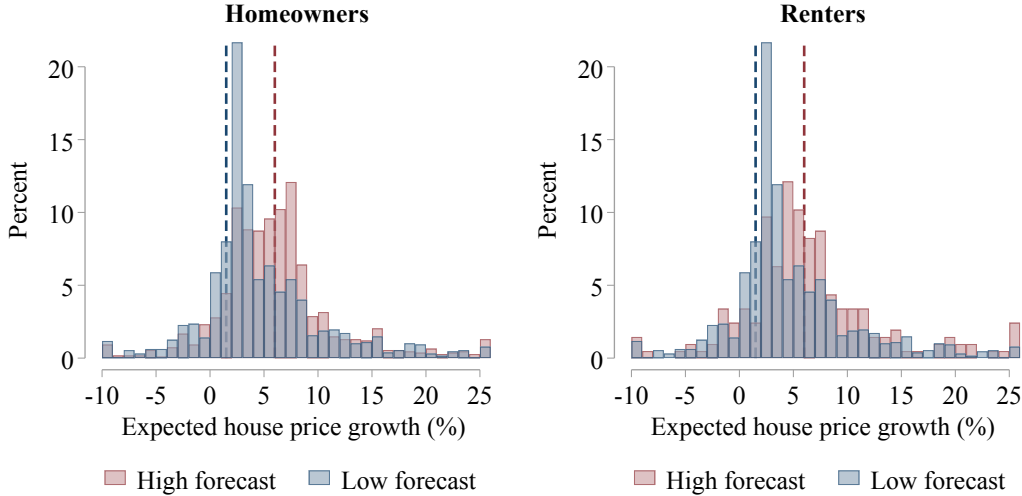
1. . . . more than 20 percent. ☐ percent.
2. . . . between 10 and 20 percent. ☐ percent.
3. . . . between 5 and 10 percent. ☐ percent.
4. . . . between 0 and 5 percent. ☐ percent.
5. . . . between -5 and 0 percent. ☐ percent.
6. . . . between -10 and -5 percent. ☐ percent.
7. . . . between -20 and -10 percent. ☐ percent.
8. . . . less than -20 percent. ☐ percent.

Qualitative posteriors

- **Rental prices**: Rent on homes/apartments in the US will increase strongly over the next ten years. [Strongly disagree – strongly agree]
- **Home prices**: US home prices will increase strongly over the next ten years. [Strongly disagree – strongly agree]
- **Wealth:** How do you think that the total net wealth of your household will change over the next ten years? [Increase very strongly – Decrease very strongly]
- **Borrowing constraints**: Assume that your household's car broke down and the repair costs $1,000. How difficult would it be for your household to take out a loan to finance this repair [currently/10 years from now]? [Very difficult – Very easy]

Results

1.5pp wedge in posterior expected home price growth across treatments



→ Learning rate of 1/3 from the information treatment

Treatment effects on expectations

	Dependent variable: House price growth		
	Quantitative measure		Qualitative measure
	(1)	(2)	(3)
	Mean (%)	Std. dev.	House prices will increase strongly
High forecast	1.333***	0.092	0.334***
	(0.257)	(0.241)	(0.042)
High forecast x Renter	0.805	0.366	0.057
	(0.668)	(0.599)	(0.100)
N	2,554	2,554	2,554
Dep. var. mean	5.408	7.836	0
Controls	Yes	Yes	Yes
z-scored			Yes

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Robust standard errors in parentheses.

→ **Persistent change** in home price expectations in the **4-week** follow-up

Table

Do changes in home price expectations affect spending?

We match survey responses to household scanner data from Aug 2019 to Feb 2020:

$$\text{Log expenditures}_{i,t} = \boldsymbol{\beta}\ \text{High forecast}_i \times \text{Post}_t + \tau_i + \mu_t + \varepsilon_{i,t} \tag{3}$$

- $\text{Log expenditures}_{i,t}$ — log of monthly household expenditures
- High forecast_i — dummy for respondents in the high-forecast arm
- Post_t — 1 if $t \geq$ Nov 2019, 0 otherwise
- τ_i, μ_t — Household and year-month fixed effects

Test of balance

Main result: Treatment effects on scanner expenditures

	Dependent variable: Log expenditures		
	(1) All respondents	(2) Homeowners	(3) Renters
High forecast x Post	-0.015	-0.001	-0.076**
	(0.013)	(0.014)	(0.033)
	[0.251]	[0.951]	[0.020]
N	17,877	14,552	3,325
R^2	0.727	0.724	0.725
Households	2,554	2,079	475
Household FEs	Yes	Yes	Yes
Month FEs	Yes	Yes	Yes

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

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→ **Renters**: 2SLS estimates imply a **spending elasticity of 2.8%** per 1 pp change in home price expectations among renters

Mechanisms

Potential mechanisms in standard models

1. Perceived wealth effects
   - Positive for homeowners

2. Changes in expected housing costs and affordability of homes
   - Negative for both renters and homeowners, who both require a place to live
   - Potentially particularly important for renters that plan to buy homes in the future

3. Changes in expected future borrowing constraints
   - Homeowners may anticipate lower borrowing constraints

Effects on expected wealth, rental prices, and borrowing constraints

	Dependent variable:			
	Wealth effects	Rental prices	Borrowing constraints	
	(1) Net wealth changes (qualitative)	(2) Rent prices will increase strongly (qualitative)	(3) Currently: Take out $1,000 loan	(4) In 10 years: Take out $1,000 loan
Panel A: Homeowners				
High forecast	0.089**	0.158***	-0.018	-0.003
	(0.041)	(0.043)	(0.037)	(0.040)
N	2,079	2,079	2,079	2,079
Controls	Yes	Yes	Yes	Yes
z-scored	Yes	Yes	Yes	Yes
Panel B: Renters				
High forecast	0.042	0.310***	0.083	0.018
	(0.091)	(0.098)	(0.096)	(0.091)
N	475	475	475	475
Controls	Yes	Yes	Yes	Yes
z-scored	Yes	Yes	Yes	Yes

Treatment effects on spending: Heterogeneity by **moving intentions**

	Dependent variable: Log scanner expenditures			
	(1) No plans to move in the next 10 years	(2) Plans to move in the next 10 years	(3) Plans to move to a cheaper home	(4) Plans to move to a more expensive home
Panel A: Homeowners				
High forecast x Post	0.014	-0.011	-0.002	-0.016
	(0.023)	(0.018)	(0.029)	(0.023)
N	5,788	8,764	3,493	5,271
R^2	0.728	0.721	0.715	0.723
Household FEs	Yes	Yes	Yes	Yes
Month FEs	Yes	Yes	Yes	Yes
Panel B: Renters				
High forecast x Post	0.024	-0.089***	0.011	-0.133***
	(0.115)	(0.034)	(0.057)	(0.042)
N	343	2,982	889	2,093
R^2	0.747	0.723	0.771	0.701
Household FEs	Yes	Yes	Yes	Yes
Month FEs	Yes	Yes	Yes	Yes

Interpreting magnitudes of renters' responses

- Is the treatment effect on spending consistent with renters' higher expected home purchase costs?
- Three main assumptions:
  1. Renters expect to buy in the next ten years, with uniformly distributed purchase date.
  2. Require liquidity for a down payment equivalent to 20% of the purchase price.
  3. Treated renters expect to permanently increase their spending by about $35 per month.
- Average zip-code level home value among renters in our sample was about $259,000.
- Treatment effects imply that renters in the high forecast treatment arm should expect a down payment that is $8,104 higher.
- Renters in the high forecast have an expected higher cumulative savings difference of $2,314, corresponding to **28.6% of the difference in the expected down payment**.

How do people reason about home price changes?

Survey experiment on Prolific ($N = 500$, Nov 2022)

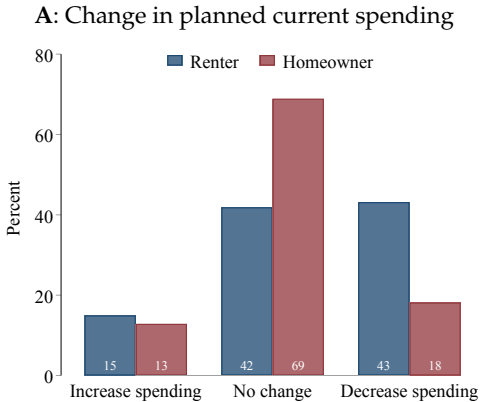
Imagine that you expect home prices to grow by 1.5% per year over the next 10 years. Now imagine that you increase your expectations about future home prices. You now expect home prices to increase by 6% per year over the next 10 years.

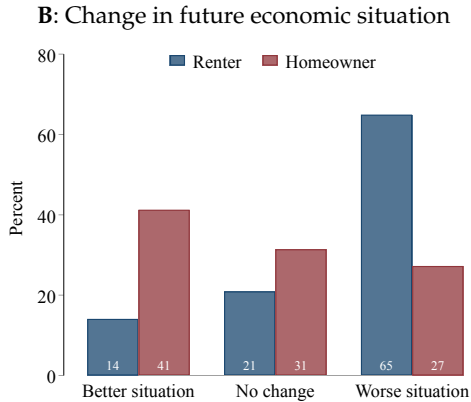
How would this change in your expectations about future home prices affect your expectations about your household's future economic situation?

a) My household's future economic situation would **improve** because of this change.
b) My household's future economic situation would be **unaffected** by this change.
c) My household's future economic situation would **worsen** because of this change.

Please explain why. Respond in full sentences.

Renters expect a worse economic situation & plan to cut current spending





Thoughts about rising home price expectations: Examples

- **Own housing wealth**

  "We plan on selling our home in about 10 years when our mortgage would be completely paid off. We would be able to walk away with a higher profit, therefore more money in our pockets."

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  "It means I have to save more money in the future when I'm getting a house. I might have to get another job in order to afford a house and might not be able to have enough money for my and my family's other needs."

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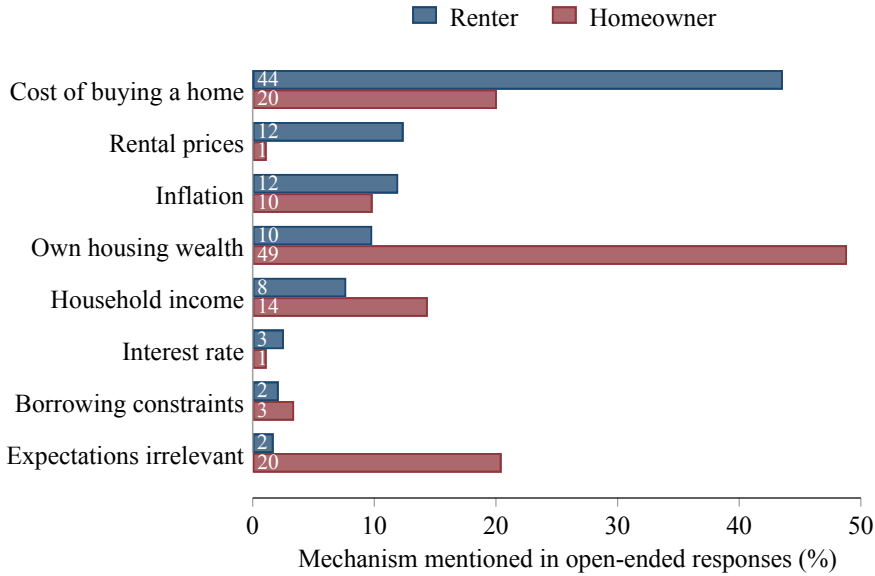
- **Conflicting effects**

  "My house going up in value is always a positive, but it wouldn't necessarily affect how much financial freedom I have unless we sell the house. Selling the house would still require us to buy a new house however, which would also presumably have gone up in value."

Changes in home price expectations: What is on top of people's minds?



Thoughts explain differential planned current spending responses to changes in home price expectations

	Dep. var.: Planned decrease in current spending (binary)				
	(1)	(2)	(3)	(4)	(5)
Homeowner	-0.250***	-0.195***	-0.176***	-0.138***	-0.062
	(0.040)	(0.041)	(0.043)	(0.043)	(0.047)
Cost of buying a home		0.234***		0.213***	0.191***
		(0.047)		(0.047)	(0.047)
Home equity			-0.189***	-0.157***	-0.225***
			(0.040)	(0.040)	(0.043)
Expectations irrelevant					-0.296***
					(0.040)
Constant	0.432***	0.330***	0.450***	0.354***	0.376***
	(0.032)	(0.037)	(0.033)	(0.038)	(0.038)
Explained homeowner effect:		22%	30%	45%	75%
N	498	498	498	498	498
R^2	0.074	0.126	0.104	0.146	0.182

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Robust standard errors in parentheses.

Financial Advice Websites: The Supply of Information

- Additional evidence from popular financial advice websites on the key mechanisms underlying the effects of expected home price appreciations on household spending.
- Many individuals consult financial advice websites and blogs in matters related to their household's finances.
- The advice given on these websites may thus be informative about the relevance of particular mechanisms (Choi, 2022).

Financial Advice Websites: Homeowners

- For homeowners, many websites emphasize that rising home values do not necessarily make them better off, as housing costs rise in parallel with own housing wealth.

- For instance, *The Motely Fool* makes the following argument:

  "The problem with selling a home in today's market is that what you gain in the form of a higher sale price, you stand to lose when you buy a replacement home. You may have to pay a premium when you buy."

Financial Advice Websites: Renter

- Many websites advise prospective homebuyers to start saving more when homes become less affordable.

- For instance, *realtor.com* writes:

  "Continue to save. If you decide to hit the pause button on your search, keep saving. [...] So create a budget to help you increase your down payment. A budget will help you see where you spend your money each month and where you can save."

Conclusion

Taking stock and wrapping up

- First **field evidence** on the effect of **home price expectations** on **current spending**
  - Renters decrease current spending in response to rising home price expectations
  - Homeowners do not change their spending behavior

- **Mechanisms**: Measure people's thoughts about rising home price expectations
  - Homeowners: Offsetting effects from higher expected wealth and higher expected housing costs
  - Renters: Plan to buy homes, which they expect to be more expensive

- **Macroeconomic implications**
  - Expectations about asset price swings contribute to consumption inequality across prospective buyers and sellers of the asset.
  - Expected home price changes dampen the business cycle by reducing spending among renters.

Disclaimer

Researcher(s)' own analyses calculated (or derived) based in part on data from Nielsen Consumer LLC and marketing databases provided through the NielsenIQ Datasets at the Kilts Center for Marketing Data Center at The University of Chicago Booth School of Business. The conclusions drawn from the NielsenIQ data are those of the researcher(s) and do not reflect the views of NielsenIQ. NielsenIQ is not responsible for, had no role in, and was not involved in analyzing and preparing the results reported herein.

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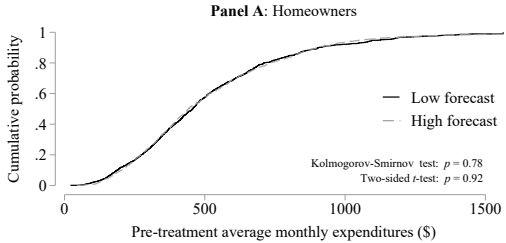
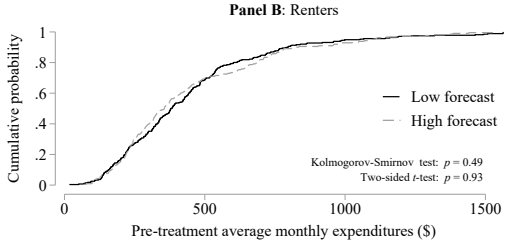
Pre-treatment spending is balanced across treatment arms





Return

Persistent changes in home price expectations: 4-week follow-up survey

	Dependent variable: 10-year avg. annual percent change						
	(1) Interest rate	(2) Inflation rate	(3) House price growth	(4) Labor income growth	(5) Stock market returns	(6) Real GDP growth	(7) Rental price growth
High forecast	0.111*	0.437***	1.117***	0.196	0.376	0.409**	0.495
	(0.067)	(0.162)	(0.317)	(0.325)	(0.238)	(0.170)	(0.333)
N	1,702	1,702	1,702	1,702	1,702	1,702	1,702
Dep. var. mean	1.713	4.367	8.173	5.599	6.539	4.378	8.127
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. Robust standard errors in parentheses.

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