

For online publication only:

Home Price Expectations and Spending: Evidence from a Field Experiment

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Summary of the online appendix

Section A contains additional figures.

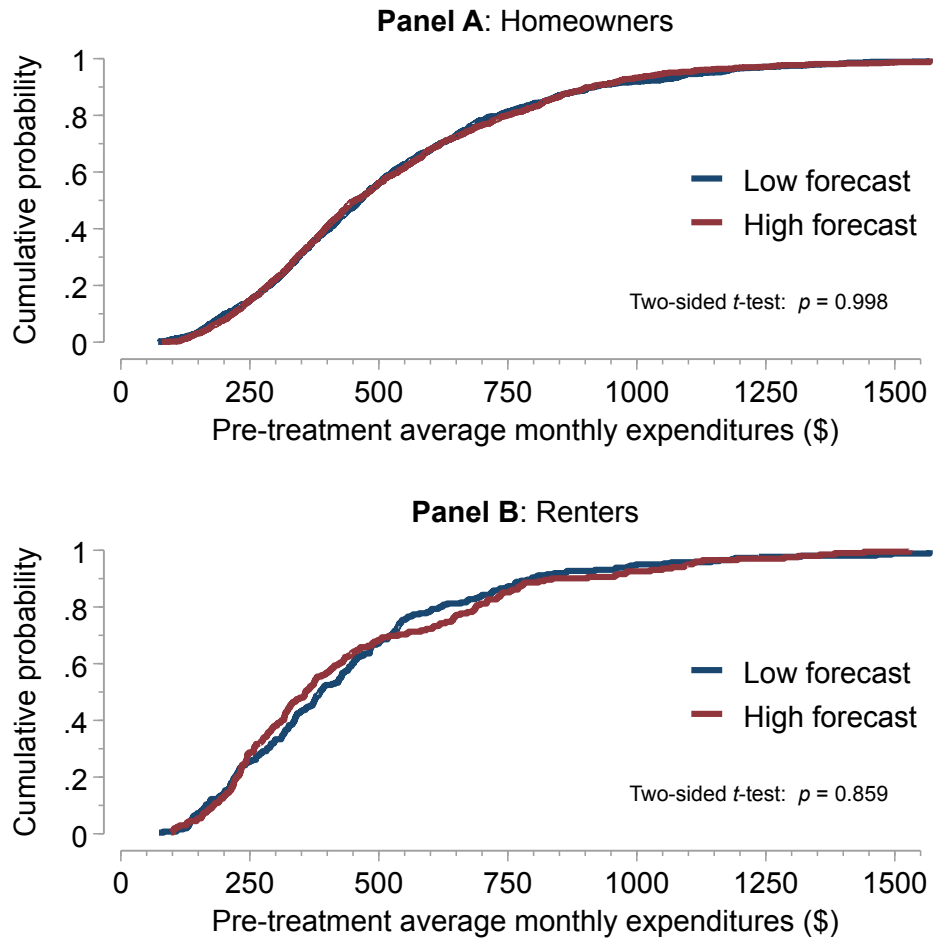
Section B contains additional tables.

Section C contains additional analyses.

Section D contains the key instructions for the survey modules.

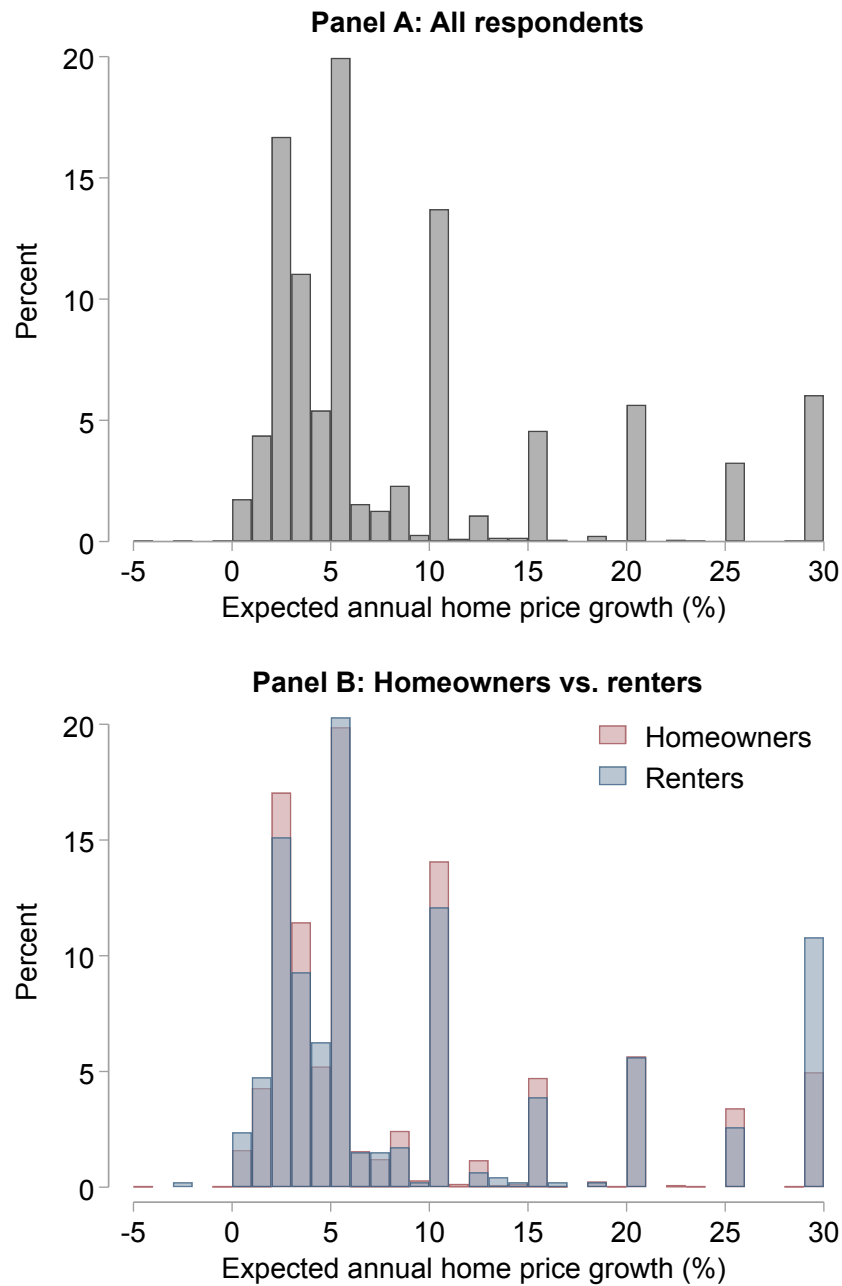
A Additional figures

Figure A.1: Test of balance: Pre-treatment monthly expenditures



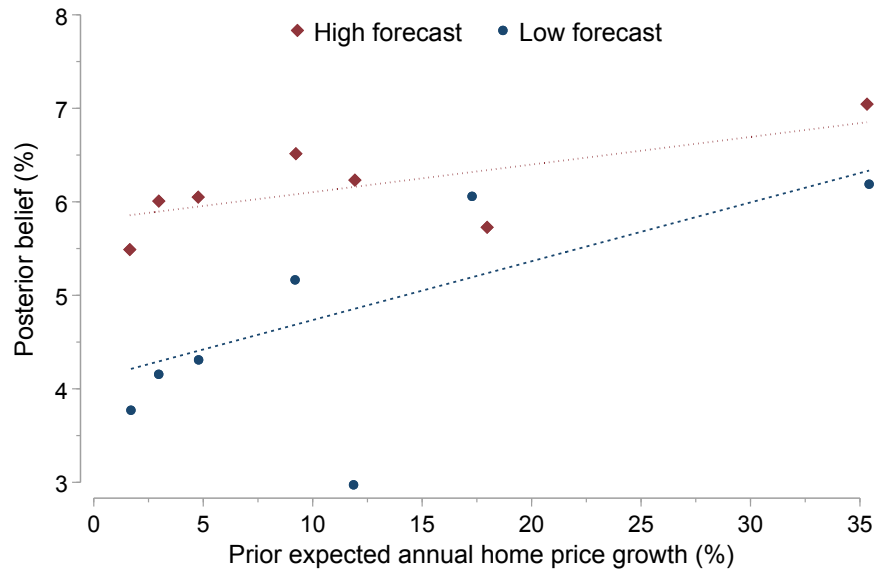
Note: This figure plots the distribution of pre-treatment average monthly expenditures measured in the scanner data in the three months before respondents participated in the baseline survey of our main experiment. Panel A and B plot the distribution for homeowners and for renters, respectively. Each panel displays the distribution separately for respondents assigned to the *high forecast* treatment arm and for respondents assigned to the *low forecast* treatment arm. p -values of a two-sided t -test for equality of means across treatment arms are shown in each panel.

Figure A.2: Prior beliefs about future home price growth



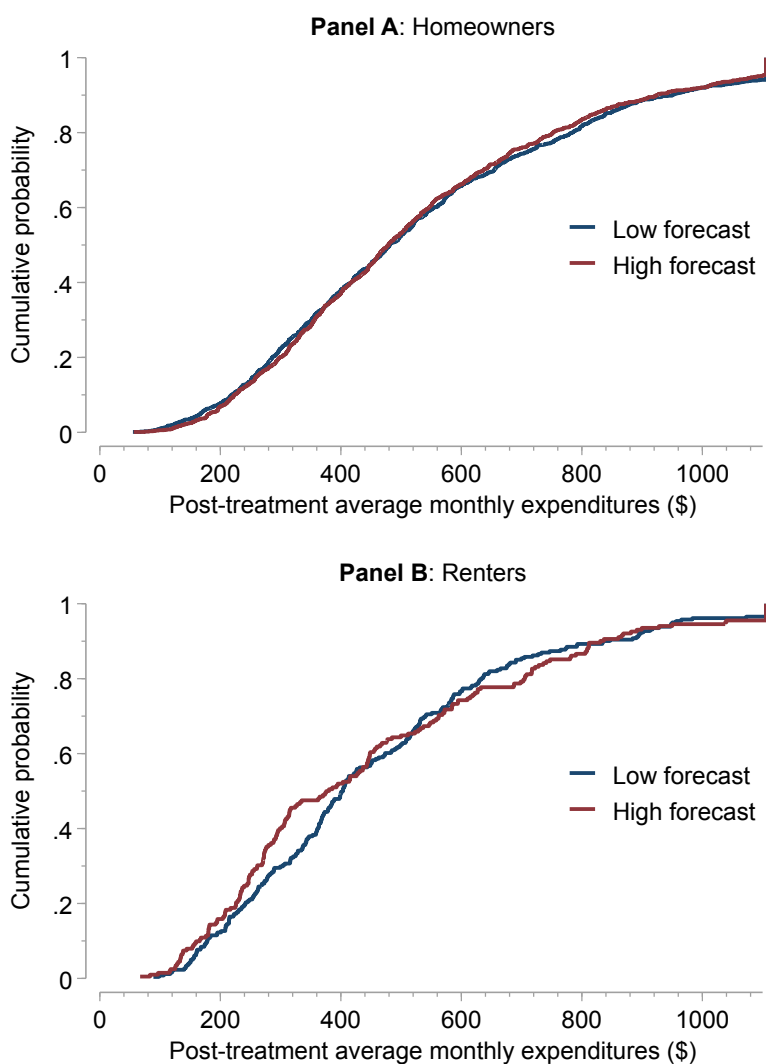
Note: This figure plots the distribution of respondents' prior point beliefs about average annual home price growth over the next ten years using data from the baseline survey of our main experiment. Panel A shows the distribution in the full sample, while Panel B shows the distribution separately for homeowners and for renters, respectively. Beliefs are winsorized at the 95th percentile for ease of visualization.

Figure A.3: Prior versus posterior annual home price growth expectations



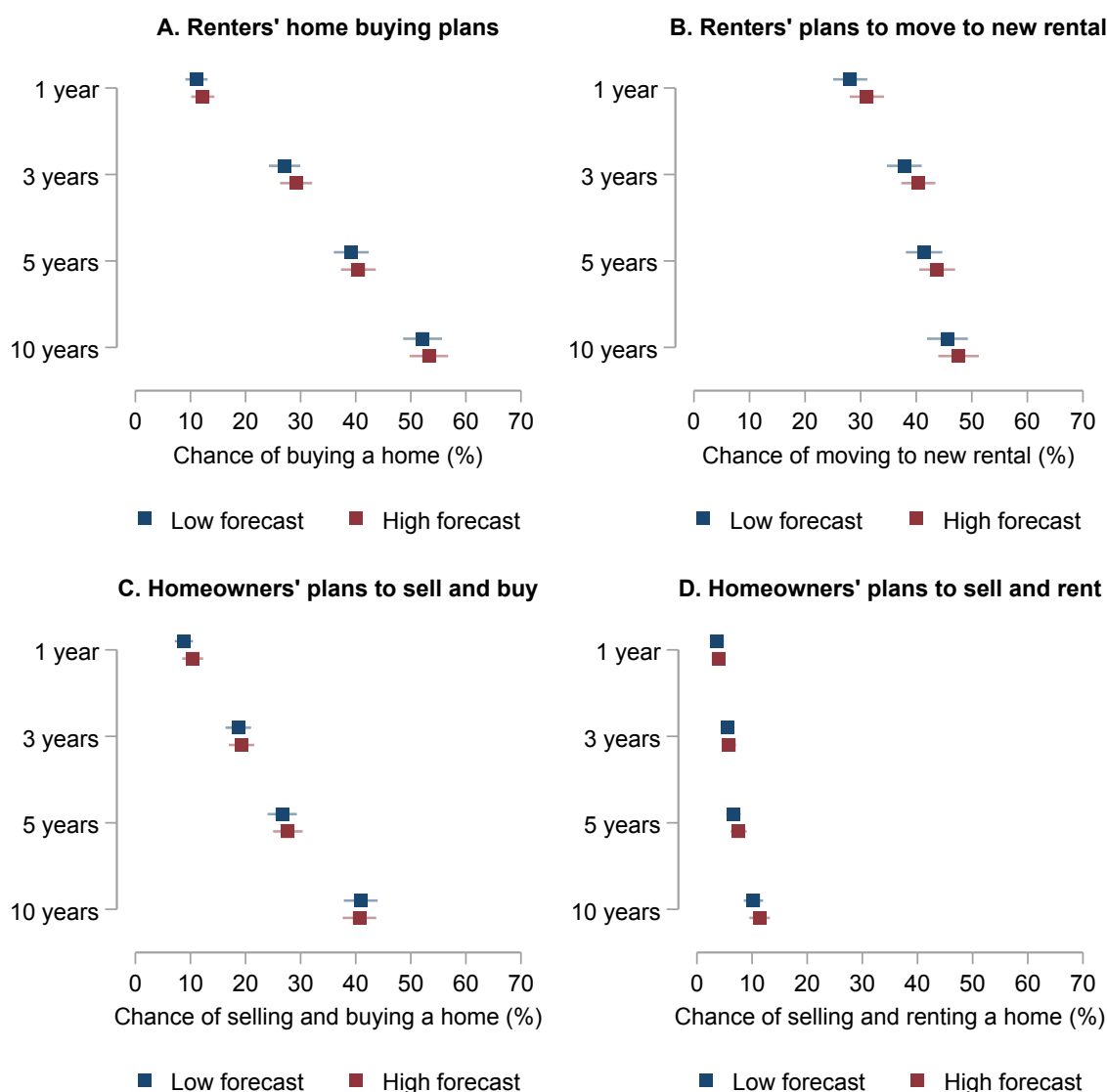
Note: This figure presents a binscatter plot of prior expected annual home price growth (%) against posterior expected annual home price growth (%) separately for respondents assigned to the *high forecast* and the *low forecast* treatment arms. Beliefs are trimmed at the 1st and 99th percentile. Prior beliefs are elicited as a point forecast, while posterior beliefs are measured probabilistically.

Figure A.4: Post-treatment average monthly expenditures



Note: This figure plots the distribution of post-treatment average monthly expenditures measured in the scanner data. Panel A and B plot the distribution for homeowners and for renters, respectively. Each panel displays the distribution separately for respondents assigned to the *high forecast* treatment arm and for respondents assigned to the *low forecast* treatment arm. Expenditures are winsorized at the 95th percentile.

Figure A.5: Treatment effects on moving plans



Note: This figure presents moving plans for renters (Panels A and B) and homeowners (Panels C and D) at different time horizons using data from the moving plans experiment (see Table A.1 for an overview of data collections). Each panel reports the mean percent chance of an event happening within a given time horizon (12 months, 3 years, 5 years and 10 years) separately for respondents who received a *high forecast* (6%) or a *low forecast* (2%) about the average growth rate of home prices over the next ten years. The outcome in Panel A is the percent chance of buying a new home. The outcome in Panel B is the chance of moving to a new rental home. The outcome in Panel C is the chance of selling your current home and buying a new home. The outcome in Panel D is the chance of selling your current home and moving to a rental home. 95% confidence intervals derived from robust standard errors are shown as horizontal lines.

B Additional tables

Table A.1: Overview of data collections

<i>Data collection</i>	<i>Sample</i>	<i>Treatment arms</i>	<i>Main outcomes</i>
Main experiment			
Baseline survey (November 2019)	NielsenIQ Homescan Panel, $n = 2,516$	<i>High forecast</i> vs. <i>low forecast</i>	Home price expectations and home scanner spending
Follow-up survey (December 2019)	NielsenIQ Homescan Panel, $n = 1,678$	None	Home price expectations and durable spending
Robustness experiment			
Baseline survey (August 2023)	Prolific, $n = 3,365$	<i>High forecast</i> vs. <i>low forecast</i> , <i>supply-side</i> <i>narrative</i> vs. <i>demand-side</i> <i>narrative</i> (2x2)	Home price expectations
Follow-up survey (September 2023)	Prolific, $n = 2,804$	None	Home price expectations and spending items
Mechanism survey			
(November 2022)	Prolific, $n = 498$	None	Reasoning about home price growth (open-ended)
Moving plans experiment			
(September 2024)	Prolific, $n = 2,000$	<i>High forecast</i> vs. <i>low forecast</i>	Home price expectations, moving plans and properties of next home
Optimization frictions survey			
(September 2024)	Prolific, $n = 500$	None	Optimization frictions in housing decisions

Note: This table provides an overview of all our data collections. The sample sizes refer to the number of respondents in our main specification for each data collection. We pre-registered the moving plans experiment (#192007, <https://aspredicted.org/6454-tp2n.pdf>) and the optimization frictions survey (#192013, <https://aspredicted.org/925x-r9h4.pdf>).

Table A.2: No differential attrition across treatment arms

	Dependent variable: Attrition (binary)			
	Main survey	Follow-up survey		
	(1) All respondents	(2) All respondents	(3) Homeowners	(4) Renters
High forecast	0.006 (0.014)	0.002 (0.019)	0.015 (0.021)	-0.065 (0.043)
Constant	0.196*** (0.010)	0.332*** (0.013)	0.331*** (0.015)	0.337*** (0.029)
N	3,143	2,516	2,053	463
R ²	0.000	0.000	0.000	0.005

Note: This table presents an analysis of attrition. The dependent variable in Column 1 is an indicator for not completing the baseline survey in November 2019. The dependent variable in Columns 2–4 is a binary indicator for not having participated in the follow-up survey. “High forecast” is a binary indicator taking value one for respondents assigned to the *high forecast* treatment arm. Column 1 enriches the main sample with respondents that started the baseline survey but did not complete it. Information about homeownership status is missing for these respondents. Column 2 uses the main sample, while Columns 3 and 4 present estimates for the subset of homeowners and renters, respectively. Robust standard errors are shown in parentheses.

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

Table A.3: Overview of NielsenIQ product categories and retail channels

Product department (1)	Example product modules (2)
Health & Beauty Aids	baby care, cosmetics, cough/cold remedies, deodorant, hair care, oral hygiene, pain remedies, skin care, shaving
Dry Grocery	baby food, baking mixes, bottled water, candy, carbonated beverages, cereal, coffee, condiments, crackers, pet food, prepared foods, snacks, soup, canned vegetables
Frozen Foods	ice cream, frozen pizza, frozen vegetables
Dairy	cheese, eggs, yogurt
Deli	
Packaged meat	
Fresh produce	
Non-Food Grocery	detergent, diapers, fresheners/deodorizers, household cleaners, laundry supplies, pet care
Alcohol	beer, wine, liquor, coolers
General Merchandise	batteries/flashlights, candles, computer/electronic, cookware, film/cameras, insecticides, lawn/garden, motor vehicle, office supplies
Magnet products	
Retail channels:	
All Other Stores, Department Store, News/Book Store, Apparel Stores, Discount Store, Office Supplies Store, Athletic Footwear, Dollar Store, Online Shopping, Automotive Store, Drug Store, Optical Store, Bakery, Electronics Store, Party Supply Store, Barber/Salon, Fish Market, Pet Store, Beauty Supply Store, Free Sample/Gift, Pizzeria, Beverage Store, Fruit Stand, Pro Shop, Bodega, Garden Stores, Quick Serve Restaurants, Butcher, Mini Mart, Music/CD Store, Camera Shop, Grocery, Restaurant, Candy Store, Hardware/Home Improvement, Service Station, Catalog Showroom, Health Food Store, Shoe Store, Cheese Stores, Home Delivery, Sporting Goods, Close Out Store, Home Furnishings, Stationery Store, Coffee Store/Gourmet Coffee, Home Inventory, Swap meet Flea Market, Computer Store, Hypermarket, TV/Home Shopping, Convenience Store, Kennel/Vet, Tobacco Store, Coop/Farm/Feed, Liquor Store, Toy Store, Craft Stores, Mail Order, Vending Machine, Dairy Store, Manufacturer Outlet, Video Store, Delicatessen, Military Store, Warehouse Club	

Note: This table presents details about the NielsenIQ scanner data. The top part of the table presents an overview of the product categorization. Products are defined at the Universal Product Code (UPC) level. NielsenIQ assigns products to one of ten major product departments (Column 1). Each product department is then organized into a set of product modules within the product department. Column 2 provides examples of product groups that belong to the product departments. The lower part of the table provides a list of the retail channels that are distinguished in the NielsenIQ scanner data.

Table A.4: Summary statistics

	General population (ACS 2019)			Main experiment		
	All	Homeowners	Renters	All	Homeowners	Renters
Female	0.513	0.514	0.525	0.776 (0.417)	0.776 (0.417)	0.775 (0.418)
Age	47.779	51.056	41.646	54.651 (11.484)	55.562 (11.101)	50.613 (12.271)
Household income ('000 USD)	81.918	91.007	56.056	79.058 (45.399)	84.287 (45.560)	55.869 (36.603)
College degree	0.306	0.344	0.250	0.469 (0.499)	0.475 (0.499)	0.443 (0.497)
Employed	0.620	0.618	0.665	0.716 (0.451)	0.722 (0.448)	0.689 (0.463)
Northeast	0.174	0.169	0.183	0.376 (0.484)	0.383 (0.486)	0.343 (0.475)
Midwest	0.208	0.221	0.178	0.254 (0.435)	0.260 (0.439)	0.227 (0.419)
South	0.380	0.388	0.366	0.263 (0.440)	0.263 (0.440)	0.261 (0.440)
West	0.238	0.222	0.274	0.108 (0.310)	0.094 (0.292)	0.168 (0.375)
Ethnicity: White	0.736	0.794	0.623	0.824 (0.381)	0.847 (0.360)	0.721 (0.449)
Ethnicity: Black/African American	0.125	0.088	0.192	0.099 (0.299)	0.081 (0.273)	0.179 (0.384)
Hispanic	0.164	0.130	0.237	0.059 (0.236)	0.055 (0.227)	0.080 (0.271)
Household size	2.772	2.941	2.592	2.421 (1.274)	2.455 (1.247)	2.266 (1.374)
Children in household (below 18)	0.356	0.377	0.346	0.236 (0.425)	0.227 (0.419)	0.274 (0.447)
Prior: Home price growth (%)				9.322 (11.122)	8.944 (10.405)	11.001 (13.751)
Baseline monthly expenditures				513.254 (293.227)	526.245 (292.490)	455.650 (289.843)
Observations				2,516	2,053	463
Relative population share		67.8%	32.2%		81.6%	18.4%

Note: This table presents the mean and standard deviation (in brackets) of a range of background variables for the full sample and separately for homeowners and renters, respectively, in the main experiment. Columns 1–3 present the corresponding means in the general population based on data from the 2019 American Community Survey (ACS). “Female” is a binary indicator taking value one for female respondents. “Age” is the respondents’ numerical age. “Household income” is the total pre-tax household income from all sources (in US dollars, top-coded at \$150,000). “College degree” is a binary indicator for having completed a college degree. “Employed” is a binary indicator for being employed. “Northeast,” “Midwest,” “South” and “West” are binary region indicators. “Ethnicity: White” is a binary indicator for white respondents. “Ethnicity: Black/African American” is a binary indicator for Black/African American respondents. “Hispanic” is a binary indicator for respondents of Hispanic origin. “Household size” is the total number of individuals living in the respondent’s household. “Children in household (below 18)” is a binary indicator for the presence of at least one child below the age of 18 in the household. “Prior: Home price growth (%)” is the prior point belief about average annual home price growth over the next ten years. “Baseline monthly expenditures” are the average monthly expenditures (in \$) in the three months before our main study as recorded in the NielsenIQ data. The relative population share indicates the share of homeowners and renters in the respective sample (ACS or main experiment), excluding households that neither own nor rent their home.

Table A.5: Test of balance

	All respondents	Homeowners	Renters
	High vs low forecast	High vs low forecast	High vs low forecast
Female	0.005 (0.742)	0.022 (0.242)	-0.067* (0.087)
Age	0.042 (0.926)	-0.271 (0.580)	0.159 (0.890)
Household income	-1,293.907 (0.475)	-2,656.281 (0.187)	-2,639.885 (0.442)
College degree	-0.006 (0.753)	-0.001 (0.968)	-0.039 (0.403)
Employed	-0.011 (0.540)	0.008 (0.675)	-0.107** (0.014)
Ethnicity: White	0.032** (0.038)	0.035** (0.029)	-0.015 (0.720)
Ethnicity: Black/African American	-0.022* (0.067)	-0.017 (0.166)	-0.019 (0.590)
Hispanic	-0.007 (0.435)	-0.015 (0.134)	0.034 (0.183)
Northeast	-0.010 (0.607)	-0.016 (0.464)	0.006 (0.901)
Midwest	0.019 (0.272)	0.033* (0.091)	-0.051 (0.194)
South	-0.010 (0.585)	-0.010 (0.596)	-0.007 (0.866)
Household size	-0.036 (0.475)	-0.047 (0.399)	-0.041 (0.751)
Children in household (below 18)	-0.006 (0.745)	0.005 (0.806)	-0.039 (0.356)
Prior: Home price growth (%)	-0.426 (0.337)	-0.243 (0.597)	-0.719 (0.577)
Baseline monthly expenditures	4.030 (0.730)	-0.223 (0.986)	4.746 (0.862)
Log baseline monthly expenditures	0.012 (0.605)	0.004 (0.875)	0.004 (0.950)
<i>p</i> -value of joint <i>F</i> -test	0.926	0.579	0.560
Observations	2,516	2,053	463

Note: This table shows a test of balance for the main experiment. Columns 1–3 show differences in means between respondents assigned to the *high forecast* arm and respondents assigned to the *low forecast* arm with *p*-values of a *t*-test for differences in means in parentheses. “Female” is a binary indicator taking value one for female respondents. “Age” is the respondents’ numerical age. “Household income” is the total pre-tax household income from all sources (in US dollars, top-coded at \$150,000). “College degree of above” is a binary indicator for having completed a college degree. “Employed” is a binary indicator for being employed. “Northeast,” “Midwest” and “South” are binary region indicators. “Ethnicity: White” is a binary indicator for white respondents. “Ethnicity: Black/African American” is a binary indicator for Black/African American respondents. “Hispanic” is a binary indicator for respondents of Hispanic origin. “Household size” is the total number of individuals living in the respondent’s household. “Children in household (below 18)” is a binary indicator for the presence of at least one child below the age of 18 in the household. “Prior: Home price growth (%)” is the prior point belief about average annual home price growth over the next ten years. “Baseline monthly expenditures” are the average monthly expenditures (in \$) in the three months before our main study as recorded in the NielsenIQ data. “Log baseline monthly expenditures” is the log of baseline monthly expenditures. The *p*-values of the joint *F*-test are determined by regressing the treatment indicator on the vector of covariates. The *F*-test tests the joint hypothesis that none of the covariates predicts treatment assignment.

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

Table A.6: Treatment effects on beliefs: Follow-up survey

	Dependent variable: Expectation (in %)						
	(1) Home price growth	(2) Rental price growth	(3) Inflation rate	(4) Labor income growth	(5) Interest rate	(6) Real GDP growth	(7) Stock market return
High forecast	1.119*** (0.320)	0.467 (0.336)	0.449*** (0.165)	0.275 (0.327)	0.112* (0.067)	0.422** (0.171)	0.346 (0.240)
N	1,678	1,678	1,678	1,678	1,678	1,678	1,678
R ²	0.098	0.079	0.158	0.066	0.106	0.109	0.048
Mean in low forecast arm	7.647	7.926	4.122	5.482	1.668	4.167	6.390
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Note: This table presents regression estimates of the treatment effect of receiving a high forecast (6%) rather than a low forecast (1.5%) about average annual home price growth over the next ten years on beliefs about various outcomes measured in the follow-up survey of our main experiment. “High forecast” is a binary indicator taking value one for respondents assigned to the *high forecast* treatment arm. The dependent variables in Columns 1–7 are a respondent’s beliefs about the average annual home price growth, rental price growth, inflation, household labor income growth, savings account interest rate, real GDP growth and stock market return over the next ten years, respectively. Dependent variables in all specifications are winsorized at the 5th and the 95th percentiles, except for inflation and interest rate expectations, which are winsorized at the 95th percentile only. All regressions include the set of controls described in detail in Table 1. Robust standard errors are shown in parentheses.

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

Table A.7: 2SLS estimates of the effect of home price expectations on monthly scanner expenditures

	Dependent variable: Log expenditures		
	(1) All respondents	(2) Homeowners	(3) Renters
Expected home price growth (%)	-0.010 (0.009) [0.283]	-0.002 (0.011) [0.889]	-0.036** (0.018) [0.042]
N	17,612	14,371	3,241
Households	2,516	2,053	463
Household FEs	Yes	Yes	Yes
Month FEs	Yes	Yes	Yes
Estimation	IV	IV	IV

Note: This table presents two-stage least squares estimates of the effect of home price expectations on spending based on a two-way fixed effects model using data from the main experiment. The dependent variable is the log of monthly expenditures measured in the scanner data. All regressions include household and month fixed effects and include observations from the three months before and after a respondent participated in the baseline survey of our main experiment. “Expected home price growth (%)” varies at the respondent-month level and is equal to prior home price expectations for all months before a respondent participated in the baseline survey and equal to the posterior home price expectation as measured in the baseline survey for all other months. We instrument “Expected home price growth (%)” with the excluded binary indicator “High forecast x Post”, which is the interaction between a binary indicator taking value one for respondents in the *high forecast* treatment arm and a binary indicator taking value one in the month a respondent participated in the baseline survey of our main experiment and in all following months. We control for the interaction between prior home price expectations and a binary post-treatment indicator, which controls for differential time trends across individuals with different prior beliefs. Columns 1 uses all respondents, while Columns 2 and 3 focus on homeowners and renters, respectively. Robust standard errors clustered at the respondent level are shown in round parentheses, while p -values are shown in square brackets.

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

Table A.8: Treatment effects on scanner expenditures: Product category level dataset

	Dependent variable: Log expenditures					
	All respondents		Homeowners		Renters	
	(1)	(2)	(3)	(4)	(5)	(6)
High forecast x Post	-0.017 (0.012) [0.152]	-0.015 (0.012) [0.210]	-0.007 (0.013) [0.617]	0.000 (0.013) [0.987]	-0.065** (0.028) [0.021]	-0.067** (0.030) [0.026]
N	145,483	145,483	119,315	119,315	26,168	26,168
Households	2,516	2,516	2,053	2,053	463	463
R ²	0.528	0.535	0.527	0.536	0.524	0.553
Household FEs	Yes	Yes	Yes	Yes	Yes	Yes
Month FEs	Yes	Yes	Yes	Yes	Yes	Yes
Product category x Month FEs	Yes	Yes	Yes	Yes	Yes	Yes
DMA x Month FEs		Yes		Yes		Yes

Note: This table presents two-way fixed effects regression estimates of the treatment effect of receiving a high forecast (6%) rather than a low forecast (1.5%) about average annual home price growth over the next ten years on spending. The unit of observation is a household-month-product category. There are 10 product categories defined by NielsenIQ. The dependent variable is the log of monthly expenditures in a specific product category measured in the scanner data. “High forecast x Post” is the interaction between a binary indicator taking value one for respondents in the *high forecast* treatment arm and a binary indicator taking value one for the month a respondent participated in the baseline survey of our main experiment and for all following months. All regressions include household and month fixed effects and include observations from the three months before and the three months after a respondent participated in the baseline survey. We also include product category-specific time trends in all specifications. Columns 2, 4 and 6 include flexible time trends at the Designated Market Area (DMA) level. Observations are weighted by the expenditure share of the product category in the household’s total expenditure. Columns 1 and 2 present estimates on the full sample, Columns 3 and 4 present estimates for homeowners, and Columns 5 and 6 present estimates for renters. Robust standard errors clustered at the respondent level are shown in round parentheses, while p -values are shown in square brackets.

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

Table A.9: Treatment effects on scanner expenditures: Robustness

	Dependent variable: Log expenditures					
	(1)	(2)	(3)	(4)	(5)	(6)
	Baseline	Winsorized	Trimmed	No missing spending data before exit	Without fixed effects	Two-period DiD
Panel A: All respondents						
High forecast x Post	-0.014 (0.013)	-0.016 (0.013)	-0.019 (0.013)	-0.012 (0.013)	-0.014 (0.013)	-0.009 (0.022)
High forecast					0.012 (0.023)	
Post					0.030*** (0.009)	
N	17,612	17,612	15,862	16,527	17,612	5,032
Households	2,516	2,516	2,266	2,361	2,516	2,516
R ²	0.717	0.710	0.625	0.730	0.086	0.838
Household FEs	Yes	Yes	Yes	Yes		Yes
Month FEs	Yes	Yes	Yes	Yes		Yes
Controls					Yes	
Panel B: Homeowners						
High forecast x Post	-0.002 (0.014)	-0.003 (0.014)	-0.010 (0.015)	-0.000 (0.014)	-0.002 (0.014)	0.010 (0.025)
High forecast					0.013 (0.025)	
Post					0.025** (0.010)	
N	14,371	14,371	13,041	13,482	14,371	4,106
Households	2,053	2,053	1,863	1,926	2,053	2,053
R ²	0.712	0.704	0.620	0.723	0.080	0.829
Household FEs	Yes	Yes	Yes	Yes		Yes
Month FEs	Yes	Yes	Yes	Yes		Yes
Controls					Yes	
Panel C: Renters						
High forecast x Post	-0.071** (0.030)	-0.072** (0.030)	-0.066** (0.032)	-0.068** (0.029)	-0.071** (0.030)	-0.099** (0.047)
High forecast					-0.006 (0.057)	
Post					0.051** (0.020)	
N	3,241	3,241	2,821	3,045	3,241	926
Households	463	463	403	435	463	463
R ²	0.726	0.719	0.632	0.743	0.082	0.870
Household FEs	Yes	Yes	Yes	Yes		Yes
Month FEs	Yes	Yes	Yes	Yes		Yes
Controls					Yes	

Note: This table presents two-way fixed effects regression estimates of the treatment effect of receiving a high forecast (6%) rather than a low forecast (1.5%) about average annual home price growth over the next ten years on spending. Panel A, B, and C present estimates using all respondents, only homeowners, and only renters, respectively. The dependent variable is the log of monthly expenditures measured in the scanner data. “High forecast” is a binary indicator taking value one for respondents in the *high forecast* treatment arm, and zero otherwise. “Post” is a binary indicator taking value one in the month a respondent participated in the baseline survey and all following months, and zero otherwise. All regressions include observations from the three months before and the three months after a respondent participated in the baseline survey, except for Column 6, which uses data from October and November only. Column 2 presents estimates where the dependent variable is winsorized at the 95th percentile. Column 3 trims the sample at the 5th and 95th percentiles of the baseline distribution of monthly expenditures in the month before a respondent participated in the baseline survey of our main experiment. Columns 4 present estimates for the subset of respondents without any months of missing spending records (since 2019 and before dropping out of the panel), in addition to having non-missing spending data during our observation period. Column 5 presents estimates without household and month fixed effects, but instead includes the non-interacted “High forecast” and “Post” indicators as well as the set of controls described in detail in Table 1. Robust standard errors clustered at the respondent level are shown in parentheses.

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

Table A.10: Treatment effects on scanner expenditures: Robustness to time horizon

Time horizon:	Dependent variable: Log expenditures				
	(1) 2 months	(2) 3 months	(3) 4 months	(4) 5 months	(5) 6 months
Panel A: All respondents					
High forecast x Post	-0.011 (0.014)	-0.014 (0.013)	-0.017 (0.013)	-0.022* (0.013)	-0.024* (0.013)
N	15,096	17,612	20,064	22,347	24,810
Households	2,516	2,516	2,508	2,483	2,481
R ²	0.728	0.717	0.705	0.686	0.679
Household FEs	Yes	Yes	Yes	Yes	Yes
Month FEs	Yes	Yes	Yes	Yes	Yes
Panel B: Homeowners					
High forecast x Post	-0.002 (0.015)	-0.002 (0.014)	-0.005 (0.014)	-0.010 (0.014)	-0.012 (0.014)
N	12,318	14,371	16,360	18,225	20,230
Households	2,053	2,053	2,045	2,025	2,023
R ²	0.720	0.712	0.700	0.681	0.674
Household FEs	Yes	Yes	Yes	Yes	Yes
Month FEs	Yes	Yes	Yes	Yes	Yes
Panel C: Renters					
High forecast x Post	-0.055* (0.031)	-0.071** (0.030)	-0.074** (0.030)	-0.075** (0.030)	-0.068** (0.029)
N	2,778	3,241	3,704	4,122	4,580
Households	463	463	463	458	458
R ²	0.742	0.726	0.712	0.695	0.689
Household FEs	Yes	Yes	Yes	Yes	Yes
Month FEs	Yes	Yes	Yes	Yes	Yes

Note: This table presents two-way fixed effects regression estimates of the treatment effect of receiving a high forecast (6%) rather than a low forecast (1.5%) about average annual home price growth over the next ten years on spending. Panel A, B, and C present estimates using all respondents, only homeowners, and only renters, respectively. The dependent variable is the log of monthly expenditures measured in the scanner data. “High forecast” is a binary indicator taking value one for respondents in the *high forecast* treatment arm, and zero otherwise. “Post” is a binary indicator taking value one in the month a respondent participated in the baseline survey and all following months, and zero otherwise. In Column k , we use observations up to k months after our invention was administered in November 2019. All specifications focus on a balanced panel of households and a fixed baseline period as in our main specification in Table 2. Robust standard errors clustered at the respondent level are shown in parentheses.

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

Table A.11: Treatment effect on scanner expenditures: Food vs. non-food items

	Dependent variable: Log expenditures					
	All respondents		Homeowners		Renters	
	(1) Food	(2) Non-food	(3) Food	(4) Non-food	(5) Food	(6) Non-food
High forecast x Post	-0.017 (0.015)	-0.006 (0.024)	-0.009 (0.016)	0.014 (0.027)	-0.060* (0.034)	-0.098* (0.057)
N	17,612	17,612	14,371	14,371	3,241	3,241
Households	2,516	2,516	2,053	2,053	463	463
R ²	0.666	0.652	0.661	0.645	0.674	0.674
Household FEs	Yes	Yes	Yes	Yes	Yes	Yes
Month FEs	Yes	Yes	Yes	Yes	Yes	Yes

Note: This table presents two-way fixed effects regression estimates of the treatment effect of receiving a high forecast (6%) rather than a low forecast (1.5%) about average annual home price growth over the next ten years on spending on food and non-food items. The dependent variable in Columns 1, 3 and 5 is the log of monthly food expenditures measured in the scanner data. We construct food expenditures by aggregating spending from the following NielsenIQ product departments: Dry Grocery, Frozen Foods, Dairy, Deli, Packaged Meat, Fresh Produce, Alcohol, Magnet products. The dependent variable in Columns 2, 4 and 6 is the log of monthly non-food expenditures measured in the scanner data. We construct non-food expenditures by aggregating spending from the following NielsenIQ product departments: Health and Beauty Aids, Non-Food Grocery, General Merchandise. Appendix Table A.3 provides an overview of all product departments and example products for each department. “High forecast x Post” is the interaction between a binary indicator taking value one for respondents in the *high forecast* treatment arm and a binary indicator taking value one for the month a respondent participated in the baseline survey and for all following months. All regressions include household and month fixed effects and include observations from the three months before and the three months after a respondent participated in the baseline survey of our main experiment. Columns 1 and 2 use all respondents, Columns 3–4 are restricted to homeowners, and Columns 5–6 are restricted to renters. Robust standard errors clustered at the respondent level are shown in parentheses.

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

Table A.12: Dynamic treatment effects on monthly scanner expenditures

	Dependent variable: Log expenditures		
	(1) All respondents	(2) Homeowners	(3) Renters
Time since treatment			
Month 0	-0.018 (0.019)	-0.010 (0.021)	-0.060 (0.042)
Months 1-2	-0.013 (0.015)	-0.003 (0.016)	-0.067** (0.034)
Months 3-4	-0.026 (0.016)	-0.006 (0.018)	-0.104*** (0.039)
Months 5-6	-0.035* (0.019)	-0.029 (0.021)	-0.038 (0.042)
N	24,810	20,230	4,580
Households	2,481	2,023	458
R ²	0.679	0.674	0.690
Household FEs	Yes	Yes	Yes
Month FEs	Yes	Yes	Yes

Note: This table presents dynamic treatment effect estimates for the treatment of receiving a *high forecast* (6%) rather than a low forecast (1.5%) about average annual home price growth over the next ten years on spending. The dependent variable is the log of monthly expenditures measured in the scanner data. “Month 0” is a binary indicator taking value one for respondents in the *high forecast* treatment arm in the month the treatment was administered. “Month 1-2” is a binary indicator taking value one for respondents in the *high forecast* treatment arm in the months 1 and 2 after the treatment was administered. “Month 3-4” and “Month 5-6” are defined analogously. All regressions include household and month fixed effects and include observations from the three months before and up to six months after a respondent participated in the baseline survey. Column 1 and 2 present estimates for homeowners and renters, respectively. Robust standard errors clustered at the respondent level are shown in parentheses.

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

Table A.13: Robustness experiment: Summary statistics and test of balance

	General population:	Survey sample	Test of balance	
	Homeowners (ACS 2019)	(Mean/std.dev.)	High vs low forecast	Supply vs demand narrative
Female	0.514	0.490 (0.500)	-0.019 (0.260)	-0.020 (0.239)
Age	51.056	44.045 (13.806)	0.283 (0.552)	-0.047 (0.921)
Log income	11.329	11.175 (0.748)	0.028 (0.279)	-0.024 (0.346)
College degree	0.344	0.626 (0.484)	0.028* (0.094)	0.013 (0.438)
Employed	0.618	0.687 (0.464)	-0.014 (0.372)	-0.009 (0.593)
Ethnicity: White	0.794	0.794 (0.405)	-0.004 (0.753)	0.010 (0.466)
Ethnicity: Black/African American	0.088	0.086 (0.281)	-0.015 (0.128)	-0.003 (0.768)
Hispanic	0.130	0.086 (0.281)	-0.002 (0.866)	-0.011 (0.248)
Northeast	0.169	0.199 (0.399)	0.006 (0.646)	0.008 (0.552)
Midwest	0.221	0.224 (0.417)	-0.005 (0.736)	0.012 (0.405)
South	0.388	0.395 (0.489)	-0.014 (0.404)	-0.025 (0.144)
West	0.222	0.182 (0.386)	0.013 (0.344)	0.004 (0.736)
Prior: Home price growth (%)		11.798 (13.007)	0.110 (0.807)	-0.766* (0.088)
<i>p</i> -value of joint <i>F</i> -test			0.379	0.574
Observations		3,366	3,366	3,366

Note: This table presents the mean and the standard deviation and a test of balance for a range of background variables, in the robustness experiment. The first column presents the corresponding means in the general population of homeowners based on data from the 2019 American Community Survey (ACS). Column 2 presents the mean and standard deviation in the full sample (baseline survey). Columns 3 and 4 show differences in means between the groups indicated in the column header with *p*-values of a *t*-test for differences in means in parentheses. “Female” is a binary indicator taking value one for female respondents. “Age” is the respondents’ numerical age. “Log income” is the log of the midpoint of the respondent’s household income. “College degree” is a binary indicator for having completed a college degree. “Employed” is a binary indicator for being employed. “Ethnicity: White” is a binary indicator for white respondents. “Ethnicity: Black/African American” is a binary indicator for Black/African American respondents. “Hispanic” is a binary indicator for respondents of Hispanic origin. “Northeast,” “Midwest” and “South” are binary region indicators. “Prior: House price growth, next 10 years” is the prior point belief about the average annual home price growth rate over the next ten years. The *p*-values of the joint *F*-test are determined by regressing the treatment indicator on the vector of covariates. The *F*-test tests the joint hypothesis that none of the covariates predict treatment assignment.

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

Table A.14: Robustness experiment: Treatment effects on beliefs

	Dependent variable: Posterior beliefs (in %)				
	(1) Home price growth	(2) Rental price growth	(3) Interest rate	(4) Inflation	(5) Labor income growth
Panel A: Baseline survey					
High forecast	1.756*** (0.222)	1.639*** (0.267)	0.134* (0.079)	0.011 (0.110)	0.809*** (0.217)
N	3,365	3,365	3,363	3,363	3,362
Mean in low forecast arm	6.841	8.977	2.931	4.729	6.078
Controls	Yes	Yes	Yes	Yes	Yes
Panel B: Baseline survey					
High forecast	1.572*** (0.309)	1.518*** (0.379)	0.096 (0.114)	-0.159 (0.157)	0.794*** (0.303)
Supply narrative	-0.037 (0.320)	-0.157 (0.383)	-0.067 (0.111)	-0.173 (0.158)	0.223 (0.296)
High forecast x Supply narrative	0.375 (0.441)	0.243 (0.533)	0.075 (0.157)	0.340 (0.220)	0.035 (0.435)
N	3,365	3,365	3,363	3,363	3,362
Mean in low forecast arm	6.841	8.977	2.931	4.729	6.078
Controls	Yes	Yes	Yes	Yes	Yes
Panel C: Follow-up					
High forecast	1.076** (0.460)	1.177** (0.488)	0.035 (0.104)	0.161 (0.164)	0.875** (0.342)
N	2,804	2,804	2,794	2,794	2,794
Mean in low forecast arm	13.528	14.868	3.248	5.979	8.322
Controls	Yes	Yes	Yes	Yes	Yes

Note: This table presents regression estimates of the treatment effects of receiving a high forecast (6%) rather than a low forecast (2%) about average annual home price growth over the next ten years on homeowners' beliefs in the robustness experiment. Panel A and B use data from the baseline survey of our robustness experiment, while Panel C uses data from the follow-up survey of our robustness experiment. "High forecast" is a binary indicator taking value one for respondents assigned to the *high forecast* treatment arm instead of the *low forecast* treatment arm. "Supply narrative" is a binary indicator taking value one for respondents assigned to the *supply narrative* treatment arm instead of the *demand narrative* treatment arm. The dependent variables are beliefs about the average annual home price growth, rental price growth, interest rate, inflation, and household labor income growth rate over the next ten years, respectively. The dependent variables in all specifications are winsorized at the 5th and 95th percentiles, except for inflation and interest rates, which are winsorized at the 95th percentile only. All regressions include the standard set of control variables. Robust standard errors are shown in parentheses.

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

Table A.15: Robustness experiment: Treatment effects on spending

	Dependent variable:								
	Spending on major items (binary)								(9) Log restaurant spending
	(1) Any category	(2) House or apartment	(3) Motor vehicle	(4) Household appliances	(5) Electronic equipment	(6) Luxury items	(7) Machinery & equipment	(8) Major vacation	
High forecast	-0.019 (-1.05)	0.001 (0.11)	0.006 (0.70)	-0.008 (-0.58)	0.011 (0.67)	-0.005 (-0.44)	0.004 (0.24)	-0.001 (-0.12)	-0.038 (-1.14)
N	2,811	2,811	2,811	2,811	2,811	2,811	2,811	2,811	2,811
R ²	0.093	0.014	0.013	0.028	0.083	0.067	0.041	0.037	0.233
Mean in low forecast arm	0.613	0.025	0.045	0.163	0.311	0.113	0.229	0.116	5.090
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Note: This table presents regression estimates of the treatment effects of receiving a high forecast (6%) rather than a low forecast (2%) about average annual home price growth over the next ten years on homeowners' spending as measured in the follow-up survey of the robustness experiment. "High forecast" is a binary indicator taking value one for respondents assigned to the *high forecast* treatment arm. The dependent variables in Columns 1–8 are binary indicators for whether the respondent had non-zero spending in the category indicated by the column header over the past four weeks. The dependent variable in Column 9 is the log of total spending on restaurants and food outside the home. All regressions include the standard set of control variables. Robust standard errors are shown in parentheses.

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

Table A.16: Treatment effects on monthly scanner expenditures: Heterogeneity by retirement age

	Dependent variable: Log expenditures		
	(1) All respondents	(2) Homeowners	(3) Renters
Panel A: Below retirement age			
High forecast x Post	-0.029** (0.014)	-0.014 (0.016)	-0.089*** (0.033)
N	14,189	11,382	2,807
Households	2,027	1,626	401
R ²	0.720	0.716	0.724
Household FEs	Yes	Yes	Yes
Month FEs	Yes	Yes	Yes
Panel B: At least retirement age			
High forecast x Post	0.046 (0.030)	0.044 (0.032)	0.053 (0.066)
N	3,423	2,989	434
Households	489	427	62
R ²	0.704	0.697	0.741
Household FEs	Yes	Yes	Yes
Month FEs	Yes	Yes	Yes

Note: This table presents two-way fixed effects regression estimates of the treatment effect of receiving a high forecast (6%) rather than a low forecast (1.5%) about average annual home price growth over the next ten years on spending for different subgroups. The dependent variable is the log of monthly expenditures measured in the scanner data. “High forecast x Post” is the interaction between a binary indicator taking value one for respondents in the *high forecast* treatment arm and a binary indicator taking value one for the month a respondent participated in the baseline survey and for all following months, and zero otherwise. All regressions include household and month fixed effects and include observations from the three months before and the three months after a respondent participated in the baseline survey. Column 1 uses the full sample, while Columns 2 and 3 are restricted to homeowners and renters, respectively. Panel A focuses on the subset of respondents below age 65, while Panel B uses respondents aged 65 or older. Robust standard errors clustered at the respondent level are shown in parentheses.

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

Table A.17: Robustness experiment: Heterogeneity in treatment effects

	Dependent variable: Any spending on major items (binary)			
	(1)	Plans to sell and buy		
		(2)	(3)	(4)
	No plan to sell	Cheaper home	Equally expensive home	More expensive home
High forecast	0.015 (0.023)	0.027 (0.082)	-0.010 (0.055)	-0.116*** (0.039)
N	1,721	166	284	489
R ²	0.089	0.075	0.118	0.088
Mean in low forecast arm	0.561	0.539	0.697	0.787
Controls	Yes	Yes	Yes	Yes

Note: This table presents regression estimates of the treatment effects of receiving a high forecast (6%) rather than a low forecast (2%) about average annual home price growth over the next ten years on respondents' spending as measured in the follow-up survey of the robustness experiment for different subgroups of homeowners. The dependent variable is a dummy for whether a respondent bought any major items over the past four weeks. "High forecast" is a binary indicator taking value one for respondents assigned to the *high forecast* treatment arm. Column 1 is restricted to respondents who do not plan to sell, while Columns 2, 3 and 4 are restricted to respondents who plan to sell and plan to buy a cheaper, equally expensive, or more expensive home compared to their current home, respectively. All regressions include the standard set of control variables. Robust standard errors are shown in parentheses.

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

Table A.18: Moving plans experiment: Summary statistics and test of balance

	General population (ACS 2019)	Survey sample (Mean/std.dev.)	Test of balance (High vs low forecast)
Female	0.513	0.488 (0.500)	-0.023 (0.303)
Age	47.779	41.478 (13.076)	0.265 (0.651)
Log income	11.110	11.099 (0.765)	-0.007 (0.847)
College degree	0.306	0.573 (0.495)	-0.060*** (0.007)
Employed	0.620	0.684 (0.465)	0.010 (0.618)
Northeast	0.174	0.156 (0.363)	-0.001 (0.966)
Midwest	0.208	0.199 (0.399)	0.031* (0.078)
South	0.380	0.421 (0.494)	-0.003 (0.886)
West	0.238	0.224 (0.417)	-0.028 (0.140)
Household size	2.772	2.825 (1.466)	-0.033 (0.611)
Homeowner	0.657	0.536 (0.499)	-0.001 (0.967)
Prior home price growth (%)		10.929 (11.196)	0.070 (0.889)
<i>p</i> -value of joint <i>F</i> -test			0.192
Observations		2,000	2,000

Note: This table presents summary statistics and a test of balance for the moving plans experiment from September 2024. The first column presents the corresponding means in the general population based on data from the 2019 American Community Survey (ACS). Column 2 presents the mean and standard deviation in the full sample. Column 3 shows differences in means across treatment arms with *p*-values of a *t*-test for differences in means in parentheses. “Female” is a binary indicator taking value one for female respondents. “Age” is the respondents’ numerical age. “Log income” is the log of the midpoint of the respondent’s household income. “College degree” is a binary indicator for having completed a college degree. “Employed” is a binary indicator for being employed. “Northeast,” “Midwest,” “South” and “West” are binary region indicators. “Homeowner” is a dummy for homeowners. “Prior: House price growth, next 10 years” is the prior point belief about the average annual home price growth rate over the next ten years. The *p*-values of the joint *F*-test are determined by regressing the treatment indicator on the vector of covariates. The *F*-test tests the joint hypothesis that none of the covariates predict treatment assignment.

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

Table A.19: Moving plans experiment: Treatment effects on home price expectations and expectations about future housing

	Dependent variable:						
	Home price expectations		Properties of next home			Views on housing	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Mean (%)	Std. dev. (%)	Relative rooms	Relative sq. ft.	Relative quality	Housing attractive investment	Relative value of housing to non-housing
Panel A: All respondents							
High forecast	1.646*** (0.151)	0.143 (0.162)	0.052 (0.041)	0.070* (0.041)	0.006 (0.042)	0.021 (0.045)	0.049 (0.044)
N	2,000	2,000	2,000	2,000	2,000	2,000	2,000
R ²	0.107	0.102	0.097	0.102	0.056	0.023	0.023
Mean in low forecast arm	3.948	5.101	-0.000	0.000	0.000	0.000	0.000
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Panel B: Homeowners							
High forecast	1.618*** (0.207)	-0.113 (0.224)	-0.032 (0.055)	-0.014 (0.055)	-0.062 (0.054)	-0.056 (0.061)	0.071 (0.057)
N	1,072	1,072	1,072	1,072	1,072	1,072	1,072
R ²	0.086	0.136	0.134	0.115	0.055	0.019	0.008
Mean in low forecast arm	3.850	5.309	-0.090	-0.105	-0.005	0.052	0.082
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Panel C: Renters							
High forecast	1.713*** (0.219)	0.406* (0.233)	0.145** (0.062)	0.169*** (0.062)	0.083 (0.064)	0.111* (0.067)	0.024 (0.068)
N	928	928	928	928	928	928	928
R ²	0.139	0.075	0.041	0.058	0.063	0.033	0.026
Mean in low forecast arm	4.061	4.859	0.104	0.122	0.006	-0.060	-0.095
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Note: This table presents regression estimates of the treatment effect of receiving a *high forecast* (6%) rather than a low forecast (2%) about average annual home price growth over the next ten years on home price expectations, using data from the moving plans experiment. The dependent variables in Columns 1 and 2 are the mean and standard deviation of a respondent's subjective probability distribution over average annual home price growth over the next ten years. The dependent variables in Columns 3–5 are the changes in the number of rooms, square feet and quality of the next (rental) home compared to the respondents' current home, elicited on a 5-point scale and z-scored using the mean and standard deviation in the *low forecast* arm. The dependent variable in Column 6 is the attractiveness of housing as an investment (5-point scale, z-scored). The dependent variable in Column 7 is the relative value of housing compared to the value of spending on non-housing goods and services (5-point scale, z-scored). The dependent variables are oriented such that higher values correspond to better housing properties (Columns 3–5) and more favorable views on housing (Columns 6–7). Panel A uses the full sample, while Panels B and C are restricted to homeowners and renters, respectively. All regressions control for gender, age, log household income, prior home price expectations, full-time employment indicators, having a college degree or above. The regressions in Panel A also control for homeownership. Robust standard errors are shown in parentheses.

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

Table A.20: Mechanism survey: Summary statistics

	General population	Mechanism survey		
	(ACS 2019)	All respondents	Homeowners	Renters
Age	47.779	38.488 (13.431)	42.605 (13.157)	33.821 (12.195)
Female	0.513	0.495 (0.500)	0.479 (0.501)	0.513 (0.501)
College degree	0.306	0.695 (0.460)	0.741 (0.439)	0.645 (0.479)
Log income	11.110	11.000 (0.797)	11.227 (0.678)	10.737 (0.846)
Plan to buy		0.499 (0.501)	0.335 (0.473)	0.684 (0.466)
Plan to sell		0.217 (0.413)	0.335 (0.473)	0.085 (0.280)
Observations		498	263	234

Note: This table presents the mean and standard deviation of a range of background variables for the full sample and separately for homeowners and renters, respectively, in the mechanism survey. The first column presents the corresponding means in the general population based on data from the 2019 American Community Survey (ACS). “Age” is the respondents’ numerical age. “Female” is a binary indicator taking value one for female respondents. “College degree” is a binary indicator for having completed a college degree. “Log income” is the log of the midpoint of the respondent’s household income bracket. “Plan to buy” is a binary indicator taking value one for respondents who plan to buy a home in the next ten years. “Plan to sell” is a binary indicator taking value one for respondents who plan to sell a home in the next ten years.

Table A.21: Mechanism survey: Coding scheme for open-ended responses with examples

Category	Explanation	Example
wealth effects	Changes in the value of housing currently owned by the respondent's household	"If home prices increase by 6% per year over the next 10 years, then that would be a much bigger jump in my home value compared to if home prices were to increase only 1.5% per year over the next 10 years. Since my home is fully paid off, this larger rate of increase would result in much greater equity in my home. If I were to sell my home and move to a different location, I would net a much larger profit from the proceeds of the sale."
Income effects (cost of buying)	Changes in the cost of buying a home	"Buying a home will be significantly more expensive in the future. I would be negatively affected as buying a new home would cost a lot more in 10 years than it does now."; "This is because the predicted increase in home price will mean that more money would be needed to purchase a house. This same increase might not reflect on my household income."
Income effects (rental prices)	Changes in the rental prices of homes	"It would worsen for me because I do not yet own any form of real estate in my own name and rent would only continue rising."; "We live in a rented apartment. Landlord will surely increase the rent and this cause will hurt our economic situation."
Collateral effects	Changes in the ease of borrowing money against my home equity	"I own investment properties. Even though I plan to never sale them, I would be able to borrow more against them if I needed/wanted to."
Endogenous adjustments to housing	Endogenous up-/downsizing, buying/selling, or changes in timing, e.g., due to substitution effects, the investment channel, or purchase timing considerations.	"I would hope that my home's value would grow further over those 10 years at 6% rather than 1.5%. I could possibly sell if off and downsize."
Home price growth irrelevant	Home price growth irrelevant b/c not planning to buy or sell or to move	"For the time being, I plan on staying in my house for the remainder of my life. So what happens with home prices is not of much concern to me. And as long as I stay in my home, my economic situation will not be harshly affected."; "We do not plan to move out of the house we live in any time soon."; "I don't plan on moving so wouldn't really be affected. If I did sell, I would make more, but buying would cost more."
Inflation	Inflation and changes in the overall level of prices	"Typically, when the cost of housing is increasing, it is increasing in tandem with other goods and services. A jump from 1.5% to 6% could be due to demand, but it is also likely due to inflation."
Household income	Changes in my household's overall income	"Home prices have to be affordable to someone so if prices are increasing. I expect incomes to increase as well."
Interest rates	Changes in interest rates	"I predict that my situation would get worse because I currently do not own a home and am looking to buy when I can. This means it will be harder for me to buy because prices are increasing. This also means, interest rates could be getting higher, making it harder to pay off a new home when I do buy one."

Note: This table provides an overview of the different categories included in our coding scheme for the open-ended responses collected in the mechanism survey, along with example responses.

Table A.22: Mechanism survey: Open-ended responses predict considerations elicited with a structured question format

	Dependent variable: Selected the mechanism in in structured survey question (binary)						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Wealth effects	Income effects (cost of buying)	Income effects (rental prices)	Collateral effects	Inflation	Household income	Interest rates
Wealth effects	0.47*** (0.04)	-0.13*** (0.05)	-0.12*** (0.04)	0.13*** (0.04)	-0.25*** (0.05)	-0.25*** (0.05)	-0.25*** (0.05)
Income effects (cost of buying)	-0.13*** (0.05)	0.38*** (0.03)	0.08* (0.05)	0.08* (0.04)	0.08 (0.05)	-0.07 (0.05)	0.08 (0.05)
Income effects (rental prices)	-0.13 (0.08)	0.06 (0.08)	0.70*** (0.03)	-0.14*** (0.04)	-0.03 (0.11)	-0.17* (0.10)	-0.06 (0.10)
Collateral effects	-0.14 (0.18)	-0.26 (0.17)	0.19 (0.17)	0.76*** (0.04)	-0.12 (0.17)	-0.25* (0.14)	-0.18 (0.14)
Inflation	-0.14* (0.08)	-0.14* (0.08)	-0.03 (0.08)	-0.03 (0.06)	0.37*** (0.05)	0.16* (0.08)	0.03 (0.09)
Household income	-0.05 (0.12)	-0.12 (0.14)	0.10 (0.14)	0.08 (0.12)	0.01 (0.14)	0.50*** (0.04)	0.05 (0.13)
Interest rates	-0.15 (0.17)	0.18* (0.09)	0.04 (0.28)	0.10 (0.23)	0.14 (0.30)	0.24 (0.31)	0.53*** (0.07)
N	467	467	467	467	467	467	467
R ²	0.256	0.215	0.166	0.101	0.123	0.102	0.086

Note: This table presents regression estimates of the (partial) correlations between indicating a specific mechanism in the structured question and mentioning different mechanisms in the open-ended question, based on data from the mechanism experiment. The dependent variables are binary indicators taking value one if a respondent selects a particular mechanism (indicated by the column header) in the structured question, and zero otherwise. “Wealth effects” is a binary indicator taking value one for respondents who mention changes in the value of their currently owned home in their responses to the open-ended question on how an increase in home price expectations would affect their household’s economic outlook. “Income effects (cost of buying)”, “Income effects (rental prices)”, “Collateral effects”, “Inflation”, “Household income” and “Interest rates” are analogously defined binary indicators (see Table A.21 for details about these codes). Robust standard errors are shown in parentheses.

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

C Additional analyses

C.1 Learning rates

This appendix presents regression estimates of the learning rate in our main experiment and examines whether updating from the provided information is consistent with Bayesian learning.

In a first step, we provide formal estimates of the learning rate in our experiment, adapting the regression framework discussed in Haaland et al. (2023). Specifically, we construct a “Shock” variable as the difference between the expert forecast about home price growth that the respondent was assigned to and the respondent’s prior expected home price growth:

$$\text{Shock}_i = \begin{cases} 6 - \text{prior}_i & \text{if High Forecast}_i = 1 \\ 1.5 - \text{prior}_i & \text{if High Forecast}_i = 0 \end{cases} \quad (2)$$

where High Forecast_i is an indicator taking value one for individuals who received a forecast suggesting high future home price growth, and value zero for respondents receiving the forecast suggesting low future home price growth. We next define an “Updating” variable that captures the difference between respondents’ post-treatment and pre-treatment home price expectations.

To quantify the learning rate — the weight assigned to the expert forecast —, we estimate the following equation:

$$\text{Updating}_i = \alpha_0 + \alpha_1 \text{Shock}_i + \alpha_2 \text{Prior}_i + \Pi^T \mathbf{X}_i + \varepsilon_i \quad (3)$$

where ε_i is an idiosyncratic error term. We control for prior home price expectations to partial out the mechanical correlation between shock and updating that arises from their joint dependence on the prior belief. If respondents are Bayesian with normally distributed prior beliefs and a quadratic loss function, they should follow a linear learning rule that assigns a weight of α_1 to new information from the expert forecast (Cavallo et al., 2017), which lies between 0 and 1.

Table C.1 shows the results from this regression. Based on the posterior home price expectations in the baseline survey, we estimate an average learning rate of 0.308 (Column 1), meaning that respondents assign a weight of about one third to the new information and a weight of two thirds to their prior belief. If we instead construct the updating variable based on the post-treatment home price expectations elicited in the follow-up survey one month later, we estimate a slightly lower learning rate of 0.244 (Column 3). Our estimates are thus consistent with the first prediction of Bayesian updating that learning rates should lie between 0 and 1.

In a second step, we examine another prediction of Bayesian learning, namely that the learning rate should be higher among respondents that are less confident in their pre-treatment beliefs, as this likely reflects a more dispersed prior. In our baseline survey, we elicited respon-

dents' confidence in their prior beliefs on a 5-point categorical response scale. We construct a "high confidence" variable that takes value one for respondents that report being "very" or "extremely confident" in their prior beliefs, and zero otherwise. Columns 2 and 4 of Table C.1 show that there is no statistically significant difference in learning rates between respondents with high confidence and those with low confidence in their stated prior beliefs. The absence of a pronounced heterogeneity in learning rates by prior confidence is not unusual in information provision experiments. For example, Armona et al. (2019) similarly find no statistically significant heterogeneity by prior confidence in the updating of home price beliefs in response to information. Potential explanations for this lack of heterogeneity in learning rates include (i) measurement error in prior confidence, (ii) differential perceived precision of expert forecasts, or (iii) non-Bayesian learning rules.

Table C.1: Learning rates

	Dependent variable: Updating			
	Main experiment		Follow-up	
	(1)	(2)	(3)	(4)
Shock	0.308*** (0.042)	0.321*** (0.057)	0.244*** (0.071)	0.232** (0.093)
Prior	-0.617*** (0.044)	-0.605*** (0.059)	-0.539*** (0.075)	-0.573*** (0.098)
High confidence		-0.181 (0.407)		-0.430 (0.683)
Shock $\times$ High confidence		-0.030 (0.084)		0.029 (0.143)
Prior $\times$ High confidence		-0.030 (0.087)		0.089 (0.152)
N	2,516	2,516	1,678	1,678
R ²	0.720	0.721	0.474	0.474
Mean in low forecast arm	-3.900	-3.900	-0.641	-0.641
Controls	Yes	Yes	Yes	Yes

Note: This table presents OLS estimates of the learning rate from the professional forecasts shown to respondents in the main experiment. The dependent variable in columns 1–2 is updating in the main survey, while columns 3–4 use updating in the follow-up survey as the dependent variable. Updating is defined as the difference between the posterior expected annual home price growth and the prior expected annual home price growth as measured in the main survey. "Shock" is the difference between the professional forecast shown to respondents in the main experiment and the prior expected annual home price growth as measured in the main survey. "High confidence" is a dummy taking value one for respondents that are "very" or "extremely confident" in their prior estimate of the annual home price growth rate on a 5-point scale from 1 (not at all confident) to 5 (extremely confident). "Prior" is the prior expected annual home price growth as measured in the main survey. All regressions include the set of controls described in detail in Table 1. Robust standard errors clustered at the respondent level are shown in parentheses.

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

C.2 Measurement of expectations

In the baseline survey of our main experiment, we elicit respondents' subjective probability distribution over different potential realizations of the average growth rate of the price of a typical home in the US over the next ten years (Manski, 2004). Specifically, respondents assign probabilities to eight bins and we use a midpoint formula to derive the mean and standard deviation of the implied distribution. In this section, we (i) provide descriptive evidence that respondents exert high effort when reporting posterior beliefs, (ii) show that our treatment effects on home price expectations are robust to alternative methods of deriving moments of the belief distribution from the reported probability distribution, and (iii) demonstrate robustness to the number of bins used in the belief elicitation.

Descriptives The average and median respondents assign positive mass to five out of eight bins, with 91.1% of respondents assigning mass to at least two bins. At the 25th percentile, respondents assign mass to three bins. At the 75th percentile, respondents report a full prior using all the eight available bins. Moreover, only 13 respondents (0.5%) assign full mass to the bin “more than 20%” and nobody assigns full mass to the “less than -20%” bin. These descriptive statistics suggest that respondents are highly engaged and exert high effort when answering the post-treatment question about their home price expectations.

Construction of moments In our main analysis, we use a midpoint formula to construct the mean and standard deviation from respondents' stated post-treatment probability distribution. To examine the robustness of our results, we derive bins using the methodology of the Survey of Consumer Expectations (Armantier et al., 2017). Specifically, we fit a generalized beta distribution to respondents' stated beliefs and use the first two moments implied by the fitted distribution. The correlation between the moments derived from the midpoint formula and the moments derived from fitting generalized beta distributions is 0.95 for the first two moments. Columns 1 and 2 of Table C.2 present the first-stage effects of receiving the high forecast on the mean and standard deviation of respondents' posterior distribution over future home price growth, as recovered from fitting generalized beta distributions. The estimates are virtually identical to the ones reported in Table 1. We also probe the robustness of our null result on respondents' uncertainty about future home prices. Column 3 of Table C.2 shows that the treatment effects on uncertainty as constructed using the midpoint formula are unchanged if we exclude respondents with degenerate posterior beliefs. In Column 4, we assign degenerate posterior beliefs the maximum theoretical standard deviation based on the width of the bin that the respondent assigned 100% mass to (rather than assuming that the standard deviation is zero as done by the midpoint formula). We obtain identical results.

Number of bins We next show that the treatment effects on post-treatment home price expectations are robust to increasing the number of bins used in the elicitation of respondents' subjective

probability distribution. In the moving plans experiment conducted in September 2024 with a sample of Prolific respondents, we replicate the first part of our main experiment. Specifically, we elicit prior beliefs and provide expert forecasts using the instructions from the baseline survey of our main experiment. We subsequently elicit home price expectations using 14 bins instead of the 8 bins used in our main experiment, but keep the belief elicitation otherwise identical. Appendix D.6 provides the key instructions and the definition of each bin. The higher number of bins allows us to reduce the width of individual bins relative to the baseline experiment, providing a potentially more precise estimate of respondents' subjective probability distribution. In practice, there is a trade-off as it is cognitively more demanding to report a more fine-grained probability distribution, which may on net increase measurement error. Columns 1 and 2 of Appendix Table A.19 show treatment effects on the first two moments of respondents' subjective distribution, using a specification that is analogous to our main specification in Table 1. We find that both homeowners (Panel B) and renters (Panel C) hold home price expectations that are 1.6 to 1.7 percentage points higher in the *high forecast* compared to the *low forecast* treatment arm. The magnitude of the treatment effects implies a learning rate of about one third, which closely matches the weight respondents assign to the expert forecast in our main experiment. We also find little evidence that the treatments differentially shift respondents' uncertainty about future home price growth as measured by the standard deviation of their posterior subjective distribution (Column 2). While uncertainty is somewhat higher among renters in the high than among renters in the low forecast arm (Panel C), the effect is an order of magnitude smaller than the effect on the mean of the belief distribution and only marginally statistically significant at the 10% level ($p = 0.081$). Among homeowners, the estimated treatment effect on uncertainty is small and statistically insignificant ($p = 0.613$). Taken together, this robustness experiment shows that the first-stage treatment effects on renters' and homeowners' home price expectations are largely robust to the number of bins used to elicit home price expectations.

Table C.2: Robustness: Treatment effects on beliefs about future home price growth

	Dependent variable: Expected home price growth			
	Generalized beta distribution		Non-parametric moment	
	(1)	(2)	(3)	(4)
	Mean of distribution (%)	Std. dev. of distribution (%)	Std. dev. excl. degenerate posterior (%)	Std. dev. with max. value for degenerate posterior (%)
Panel A: All respondents				
High forecast	1.514*** (0.213)	0.067 (0.175)	0.048 (0.221)	0.133 (0.211)
N	2,512	2,512	2,292	2,516
R ²	0.038	0.140	0.145	0.136
Mean in low forecast arm	3.741	5.736	8.611	8.053
Controls	Yes	Yes	Yes	Yes
Panel B: Homeowners				
High forecast	1.371*** (0.230)	0.008 (0.190)	-0.001 (0.241)	0.080 (0.230)
N	2,049	2,049	1,869	2,053
R ²	0.033	0.146	0.156	0.147
Mean in low forecast arm	3.852	5.599	8.417	7.881
Controls	Yes	Yes	Yes	Yes
Panel C: Renters				
High forecast	2.157*** (0.547)	0.381 (0.441)	0.305 (0.552)	0.434 (0.533)
N	463	463	423	463
R ²	0.074	0.128	0.116	0.110
Mean in low forecast arm	3.321	6.255	9.353	8.707
Controls	Yes	Yes	Yes	Yes

Note: This table presents regression estimates of the treatment effect of receiving a *high forecast* (6%) rather than a low forecast (1.5%) about average annual home price growth over the next ten years on home price expectations, using data from the baseline survey of our main experiment. The dependent variables in Columns 1 and 2 are the mean and standard deviation of a generalized beta distribution fitted to respondent's subjective probability distribution over average annual home price growth over the next ten years. The dependent variable in Column 3 is the nonparametric estimate of the standard deviation (analogous to Table 1), excluding respondents who report a degenerate posterior with probability mass assigned only to one bin. The standard deviation in Column 4 is calculated as in Table 1, but setting the standard deviation to the theoretical maximum of $(b - a)/2$ for respondents with degenerate priors that assign mass only to a single bin $[a, b]$. Panel A uses the full sample, while Panels B and C are restricted to homeowners and renters, respectively. All regressions control for gender, age, log household income, prior home price expectations, household size and indicators for employment, having a college degree or above, race, ethnicity, region, and children. The regressions in Panel A also control for homeownership. Robust standard errors are shown in parentheses.

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

C.3 Distance of expectations to expert forecasts

This appendix presents additional evidence on how the prior home price expectations in the baseline survey of our main experiment compare to expert forecasts. This allows us to shed some light on the individual factors that correlate with more accurate home price expectation in the sense of being closer to the commonly-used benchmark of expert forecasts. In particular, we use the average forecast of the average annual home price growth rate over the next ten years made by the 51 experts who participated in our special module included in the October 2019 wave of the World Economic Survey (WES), an expert survey on macroeconomic forecasts. This average forecast was 3.83% at the time we conducted our baseline survey in 2019. We then use the absolute deviation of respondents' prior home price expectations from the average expert forecast as a measure of accuracy.

Table C.3 presents results from regressing absolute deviations on a set of demographic variables in the full sample (Column 1) and separately for homeowners (Column 2) and renters (Column 3). Older respondents hold less accurate home price expectations, while respondents with higher household income hold prior beliefs that are more aligned with expert forecasts. Higher educational attainment, as proxied by a college degree, is associated with expectations being closer to expert forecasts among homeowners, but not among renters. Homeownership status in itself does not play a significant role. These patterns on correlates of home price expectations are broadly consistent with previous literature (Kuchler et al., 2023).

Table C.3: Correlates of the distance of expectations to expert forecasts

	Dependent variable: Absolute deviation from expert forecasts		
	(1) All respondents	(2) Homeowners	(3) Renters
Age	0.058*** (0.014)	0.044*** (0.016)	0.119*** (0.033)
Log income	-1.773*** (0.248)	-1.688*** (0.269)	-1.877*** (0.632)
College degree or above	-0.673** (0.301)	-0.964*** (0.320)	0.834 (0.874)
Fulltime employment	0.207 (0.298)	0.241 (0.316)	-0.148 (0.865)
Ethnicity: White	-1.035* (0.559)	-0.802 (0.588)	-1.895 (1.404)
Ethnicity: Black/African American	1.487* (0.779)	1.775** (0.884)	0.039 (1.648)
Hispanic	2.575*** (0.717)	2.325*** (0.763)	3.419* (1.756)
Northeast	-0.376 (0.498)	-0.250 (0.540)	-0.247 (1.169)
Midwest	-0.292 (0.517)	0.214 (0.572)	-2.375** (1.156)
South	0.588 (0.533)	0.817 (0.584)	-0.199 (1.244)
Household size	0.246 (0.165)	0.129 (0.172)	0.573 (0.455)
Children in household (below 18)	0.393 (0.472)	0.246 (0.495)	1.485 (1.337)
Baseline monthly expenditures	-0.001 (0.001)	-0.001 (0.001)	-0.003 (0.002)
Homeowner	-0.129 (0.431)		
N	2,516	2,053	463
R ²	0.063	0.058	0.097
Mean dep. var.	5.741	5.548	6.600

Note: This table presents regression estimates of the correlates of the distance of prior home price expectations to expert forecasts, using data from the baseline survey of our main experiment (see Table A.1 for an overview of data collections). The dependent variable in all specifications is the absolute distance between respondents' prior point forecasts of the average annual home price growth rate in the US over the next ten years and the average forecast of this quantity by 51 experts who regularly participates in the World Economic Survey (WES), an expert survey on macroeconomic forecasts. Column 1 uses the full sample, while Columns 2 and 3 present estimates for homeowners and renters, respectively. Robust standard errors are shown in parentheses.

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

C.4 Cross-learning

In this appendix, we provide further discussion of cross-learning, among others studying it separately for owners and renters.

Cross-learning is a potential mechanism that plausibly operates in any information provision experiment (Haaland et al., 2023). Specifically, receiving information about one variable might shift survey respondents' beliefs about other variables. For example, Coibion et al. (2024) find that information about inflation also leads to belief revisions about GDP growth. In our case, when receiving expert forecasts about home price growth, respondents might also update their beliefs about other macroeconomic or personal economic outcomes. On the one hand, cross-learning can be thought of as a natural by-product of belief changes about a given variable when respondents view different variables as being correlated with each other. On the other hand, cross-learning can complicate the interpretation of downstream effects of induced belief changes on other outcomes, such as spending decisions. We address cross-learning using two complementary strategies.

First, we deliberately design the baseline survey of our main experiment in a way that minimizes the scope for cross-learning, following best practices in the literature (Haaland et al., 2023). In particular, we use an active control group design, in which *all* respondents receive new information. Compared to an alternative design — where control group respondents do not receive any information —, our design has the advantage that cross-learning triggered by the mere *presence* of new information is ruled out by design. A second design feature aimed at mitigating cross-learning is that we provide all respondents with the same expert forecast about the future rate of inflation over the next ten years, thus fixing beliefs about an important other macroeconomic variable to the extent possible.

Second, we elicit a battery of relevant expectations about macroeconomic and personal outcomes in the follow-up of our main experiment. This approach allows us to get an impression of the potential degree of cross-learning for a select set of variables. As discussed in Section 2.1, we find some evidence of cross-learning, although its economic importance appears limited.

In Appendix Table C.4, we provide additional evidence on cross-learning, focusing separately on owners and renters. Given the reduced sample size in the follow-up and the noisy nature of the outcome measures, such subsample analyses are necessarily less reliable. We therefore present two versions of our regressions that reduce the influence of outliers in different ways: one through winsorization (odd-numbered columns, as in the rest of our paper), one through trimming (even-numbered columns). Panel A focuses on homeowners and Panel B on renters. As in our full sample, we observe some positive updating about future inflation when receiving the high home price growth forecast (Columns 5 and 6). Although these spillovers are statistically significant in three out of four cases, they are of smaller size than the updating about future home prices. As discussed in Section 2.1, inflation expectations shape consumption decisions mainly

through two opposing channels: expected future real income (income effects) and expected future real interest rates (intertemporal substitution). Changes in inflation expectations thus have to be viewed in connection with changes in expectations about nominal income and nominal interest rates. We observe some positive updating about both of these variables, which in two out of eight cases reaches statistical significance (Columns 7-10). The net effects on expectations about real income and real interest rates are close to muted. This suggests that cross-learning about inflation, income, or interest rates does not have important implications for consumption responses to our treatment. Similarly, we detect only modest and mostly insignificant updating about real GDP growth (Columns 11 and 12) and stock returns (Columns 13 and 14).

Taken together, cross-learning is unlikely to affect the main conclusions of our analysis. This notion is further supported by our findings (i) that respondents in our mechanism survey (discussed in Section 4) rarely refer to non-housing variables when prompted to write about the implications of an increase in home price expectations for their economic outlook, and (ii) that our robustness experiment (presented in Section 2.2.3) yields similar results on the effects of home price expectations on homeowners' spending as our main experiment – despite a different nature of cross-learning. In general, we view cross-learning and ways of dealing with it as a topic that deserves more attention in the literature using information provision experiments.

Table C.4: Subsample analysis of treatment effects on beliefs: Follow-up survey

	Dependent variable: Expectation (in %)													
	Home price growth		Rental price growth		Inflation rate		Labor income growth		Interest rate		Real GDP growth		Stock market return	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Panel A: Homeowners														
High forecast	1.007*** (0.353)	0.792** (0.323)	0.437 (0.368)	0.661** (0.336)	0.367** (0.180)	0.250* (0.152)	0.255 (0.352)	0.418 (0.291)	0.035 (0.073)	0.068 (0.067)	0.460** (0.186)	0.266* (0.158)	0.291 (0.260)	0.241 (0.233)
N	1,358	1,263	1,358	1,305	1,358	1,308	1,358	1,262	1,358	1,302	1,358	1,254	1,358	1,253
R ²	0.099	0.091	0.074	0.062	0.143	0.115	0.042	0.049	0.091	0.053	0.099	0.070	0.041	0.033
Mean in low forecast arm	7.647	7.119	7.926	6.936	4.122	3.746	5.482	4.607	1.668	1.501	4.167	3.923	6.390	6.187
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Winsorizing	Yes		Yes		Yes		Yes		Yes		Yes		Yes	
Trimming		Yes		Yes		Yes		Yes		Yes		Yes		Yes
Panel B: Renters														
High forecast	1.534* (0.787)	2.008*** (0.710)	0.594 (0.862)	0.848 (0.754)	0.811** (0.406)	0.466 (0.362)	0.395 (0.867)	1.320* (0.771)	0.410** (0.173)	0.266 (0.167)	0.381 (0.425)	0.173 (0.357)	0.643 (0.629)	-0.038 (0.536)
N	320	288	320	293	320	302	320	297	320	295	320	277	320	278
R ²	0.142	0.146	0.135	0.079	0.272	0.154	0.153	0.166	0.201	0.128	0.192	0.190	0.106	0.118
Mean in low forecast arm	7.647	7.119	7.926	6.936	4.122	3.746	5.482	4.607	1.668	1.501	4.167	3.923	6.390	6.187
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Winsorizing	Yes		Yes		Yes		Yes		Yes		Yes		Yes	
Trimming		Yes		Yes		Yes		Yes		Yes		Yes		Yes

Note: This table presents regression estimates of the treatment effect of receiving a high forecast (6%) rather than a low forecast (1.5%) about average annual home price growth over the next ten years on beliefs about various outcomes measured in the follow-up survey of our main experiment. “High forecast” is a binary indicator taking value one for respondents assigned to the *high forecast* treatment arm. The dependent variables are a respondent’s beliefs about the average annual home price growth (Column 1 and 2), rental price growth (Column 3 and 4), inflation (Column 5 and 6), household labor income growth (Column 7 and 8), savings account interest rates (Column 9 and 10), real GDP growth (Column 11 and 12) and stock market return (Column 13 and 14) over the next ten years, respectively. We winsorize the dependent variables in odd columns and trim the sample in even columns. We winsorize or trim at the 5th and the 95th percentiles of the dependent variables in all specifications, except for inflation and interest rate expectations, where the sample is trimmed at the 95th percentile only. All regressions include the set of controls described in detail in Table 1. Robust standard errors are shown in parentheses.

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

C.5 Comparison to related literature

We interpret the magnitude of our estimated effects of home price expectations on renters' spending in the context of previous literature.

Effects of realized home price growth We first compare the elasticity of renters' spending to future home prices implied by our estimates to the elasticity of spending to *realized* home prices measured in other studies. We shift respondents' beliefs about home price growth over the next ten years. We therefore calculate an elasticity by dividing the percent difference in spending across treatment arms by the percent difference in the implied expected home value in ten years.

Our estimated elasticity of renters' spending is -0.34 , which we obtain by dividing the 7.1% difference in spending (Column 3 of Table 2) by the 21% difference in expected home prices in ten years implied by the posterior expected growth rates of 4.3% and 6.3% in the *high forecast* and the *low forecast* arm (Panel C of Table 1). Only few existing studies calculate an elasticity of renters' spending to realized home price changes. Attanasio et al. (2009) estimate a positive elasticity of 0.133 in survey data from the UK, while Stroebe and Vavra (2019) estimate a large elasticity of 0.408 using NielsenIQ data. The evidence in Stroebe and Vavra (2019) suggests that such changes mostly reflect a pass-through of local house prices to local retail prices. By contrast, our exercise isolates variation in expectations that is orthogonal to local conditions. Another benchmark are homeowners' responses to realized home price changes. Vestman et al. (2023) review estimated elasticities across 13 studies, ranging from 0 to 0.3. Smaller elasticities of homeowners' spending are plausible given that positive wealth effects and negative income effects from higher housing costs should partially offset each other for this group. Against the backdrop of these studies, our estimated elasticity for renters is relatively large. In Section 3.3, we present a back-of-the-envelope calculation suggesting that our estimated effect size for renters is plausible after carefully accounting for the main mechanisms at play.

Effects of other macroeconomic expectations Next, we compare our estimated effect for renters to the effects of other macroeconomic expectations on spending estimated in previous studies. We focus on two experimental studies, as estimates from correlational studies vary widely and are harder to interpret due to confounding factors. As highlighted in Section 2, renters reduce their spending by 3.6% for a one p.p increase in expected long-run home price growth. In a field experiment with NielsenIQ panelists, Coibion et al. (2022) find that a one p.p. increase in inflation expectations increases spending as measured in the scanner data by about 0.85% to 0.95%. In a similar setting, Coibion et al. (2021a) detect a short-run increase in expenditures measured in scanner data by 2.9% in response to an exogenous increase in the expected real interest rate by one p.p. Direct comparisons are challenging given differences in (i) the mechanisms operating for beliefs about different variables and (ii) reference horizons for expectations (ten years vs. one year). Keeping these caveats in mind, our estimates appear comparable to the effects of other macroeconomic expectations on spending.

C.6 Evidence on optimization frictions

We conduct another pre-registered auxiliary survey to provide evidence on optimization frictions in housing decisions.¹ Such frictions could attenuate endogenous adjustments to housing in response to changes in (expected) home prices operating through substitution effects, an investment motive, or purchase timing considerations, as studied in Section 3.2. We focus on current owners, as this allows us to ask retrospective questions on frictions they encountered when purchasing their current home.

Sample We conducted this survey with 500 homeowners recruited from Prolific in September 2024. Summary statistics are shown in Table C.5 and the main survey instructions are available in Appendix D.7.

Design We elicit homeowners’ difficulty of finding a home, their flexibility of adjusting the move-in date, and the moving costs they incurred when they purchased their current home on 5-point categorical response scales. For each of these three types of optimization frictions, we elicit the main underlying drivers using multiple choice questions.

Results Figure C.1 provides an overview of the responses. Half of all homeowners faced difficulties in finding a suitable home (Panel A), mostly due to tight housing markets (41.2%, Panel B). Moreover, 50% of homeowners had no more than “some flexibility” regarding their move-in date (Panel C). They mostly cite the point in time when the new home became available as a factor constraining their move-in date (38.2%, Panel D). Lastly, 72.2% of homeowners report that it was at least “somewhat costly” in terms of time and money to move (Panel E), reflecting utility setup fees (36.2%, Panel F) or fees for real estate agents (23.8%). Thus, optimization frictions seem to play a major role in housing decisions, which could limit endogenous adjustments to housing in response to changes in (expected) home price growth.

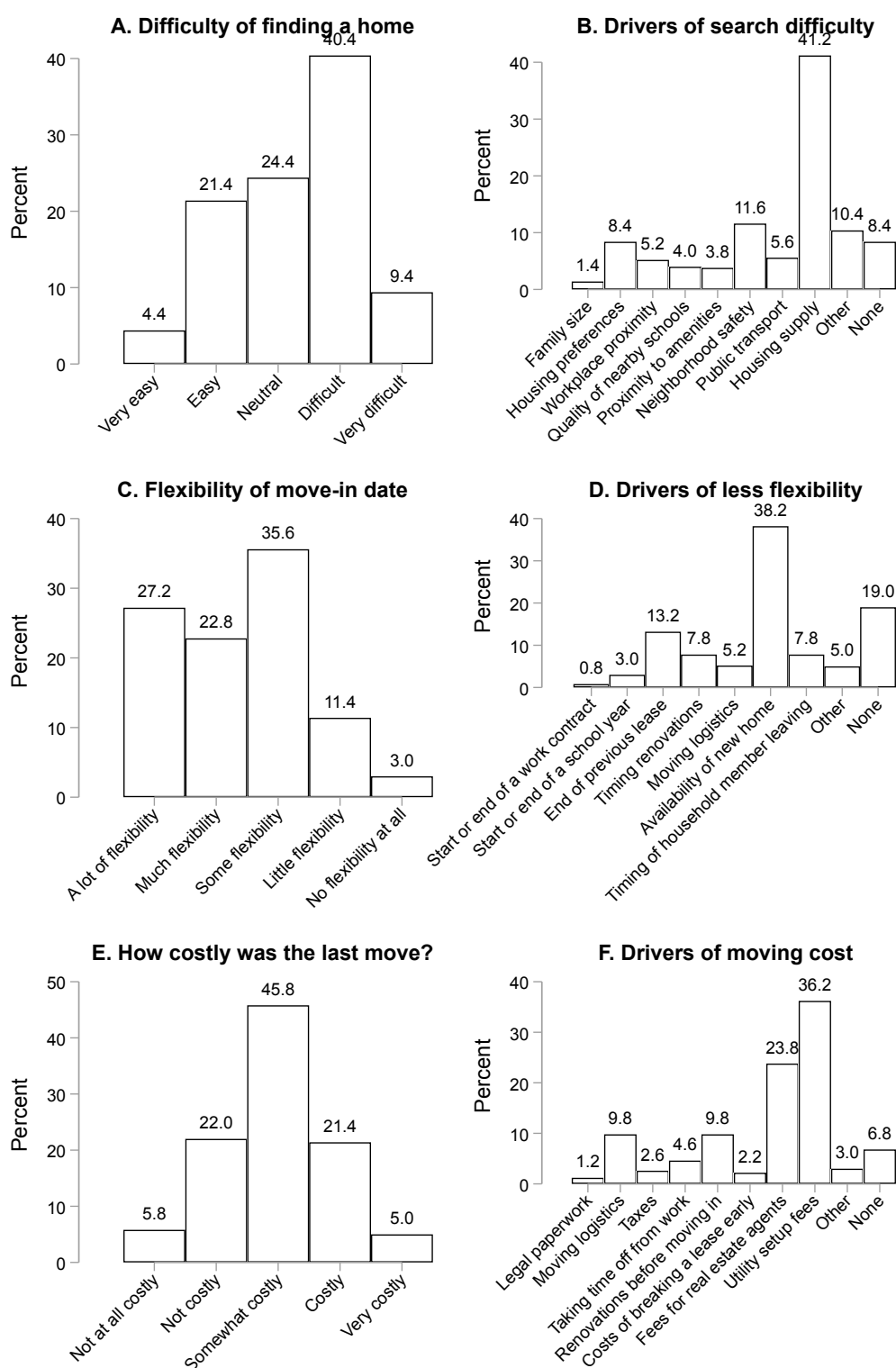
¹The pre-registration is available here: <https://aspredicted.org/925x-r9h4.pdf>

Table C.5: Optimization frictions survey: Summary statistics

	General population: Homeowners (ACS 2019)	Survey sample (Mean/std.dev.)
Female	0.514	0.496 (0.500)
Age	51.056	45.102 (12.195)
Log income	11.329	11.341 (0.706)
College degree	0.344	0.634 (0.482)
Employed	0.618	0.684 (0.465)
Northeast	0.169	0.198 (0.399)
Midwest	0.221	0.212 (0.409)
South	0.388	0.404 (0.491)
West	0.222	0.186 (0.389)
Household size	2.941	3.010 (1.458)
Observations		500

Note: This table presents summary statistics for the optimization frictions survey from September 2024 with a sample of 500 homeowners. The first column presents the corresponding means for homeowners in the general population based on data from the 2019 American Community Survey (ACS). Column 2 presents the mean and standard deviation in the full sample. “Female” is a binary indicator taking value one for female respondents. “Age” is the respondents’ numerical age. “Log income” is the log of the midpoint of the respondent’s household income. “College degree” is a binary indicator for having completed a college degree. “Employed” is a binary indicator for being employed. “Northeast,” “Midwest,” “South” and “West” are binary region indicators.

Figure C.1: Optimization frictions in the housing market



Note: This figure presents evidence on optimization frictions among homeowners, using data from the optimization frictions survey ($n = 500$, see Table A.1 for an overview of data collections).

C.7 Additional heterogeneity analyses

In this appendix, we examine additional potential dimensions of heterogeneity in treatment effects.

We first examine heterogeneity by the presence of children. The NielsenIQ dataset tracks the number of children below the age of 18 that live in the same household as the respondent. We compare the spending response of households with some children (Panel A of Table C.6) with the spending response of households without any children (Panel B of Table C.6). We find no statistically significant heterogeneity in treatment effects on household spending. Next, we examine heterogeneity by household income. Panels C and D of Table C.6 show that we obtain very similar treatment effects on spending based on whether a household has above or below median income in our sample. The absence of heterogeneity in treatment effects could reflect that both dimensions – the presence of children and household income – may only be weakly related to households' plans of either upscaling or downscaling their housing.

Table C.6: Treatment effects on expenditures: Additional heterogeneity analyses

	Dependent variable: Log expenditures		
	(1) All respondents	(2) Homeowners	(3) Renters
Panel A: No children			
High forecast x Post	-0.012 (0.015)	-0.000 (0.016)	-0.069** (0.034)
N	13,454	11,102	2,352
Households	1,922	1,586	336
R ²	0.717	0.710	0.734
Household FEs	Yes	Yes	Yes
Month FEs	Yes	Yes	Yes
Panel B: Some children			
High forecast x Post	-0.022 (0.027)	-0.009 (0.030)	-0.076 (0.066)
N	4,158	3,269	889
Households	594	467	127
R ²	0.702	0.704	0.688
Household FEs	Yes	Yes	Yes
Month FEs	Yes	Yes	Yes
Panel C: Below median income			
High forecast x Post	-0.017 (0.018)	0.004 (0.021)	-0.073** (0.036)
N	9,163	6,748	2,415
Households	1,309	964	345
R ²	0.710	0.709	0.706
Household FEs	Yes	Yes	Yes
Month FEs	Yes	Yes	Yes
Panel D: Above median income			
High forecast x Post	-0.012 (0.018)	-0.007 (0.019)	-0.070 (0.056)
N	8,449	7,623	826
Households	1,207	1,089	118
R ²	0.716	0.707	0.766
Household FEs	Yes	Yes	Yes
Month FEs	Yes	Yes	Yes

Note: This table presents regression estimates of the treatment effect of receiving a high forecast (6%) rather than a low forecast (1.5%) about average annual home price growth over the next ten years on home price expectations for different subgroups in the baseline survey of our main experiment. The dependent variables are the mean and standard deviation of a respondent's subjective probability distribution over average annual home price growth over the next ten years (Columns 1 and 2) and a respondent's z-scored agreement with the statement that "US home prices will increase strongly over the next ten years" (Column 3). "High forecast" is a binary indicator taking value one for respondents assigned to the *high forecast* treatment arm. "Plans to move" is a binary indicator for those who plan to move to a different home. Panel A and Panel B are restricted to respondents without children and with children, respectively. Panel C and Panel D are restricted to respondents with below median and above median income, respectively. All regressions include the set of controls described in detail in Table 1. Robust standard errors are shown in parentheses.

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

C.8 Mechanism survey: Considerations and spending responses

In this appendix, we examine how different considerations raised in the open-ended question in our mechanism survey presented in Section 4 are related to respondents' reported spending responses to the hypothetical increase in home price expectations. Figure C.2 provides evidence on the relationship between different considerations and the tendency to report a worsening of the expected future economic situation of the household or to report a reduction in current spending. It displays coefficient estimates from multivariate regressions of spending and expectation responses on dummy variables indicating the different considerations as well as a set of control variables. We focus our discussion on the effects of considerations that frequently appear in the open-ended responses.

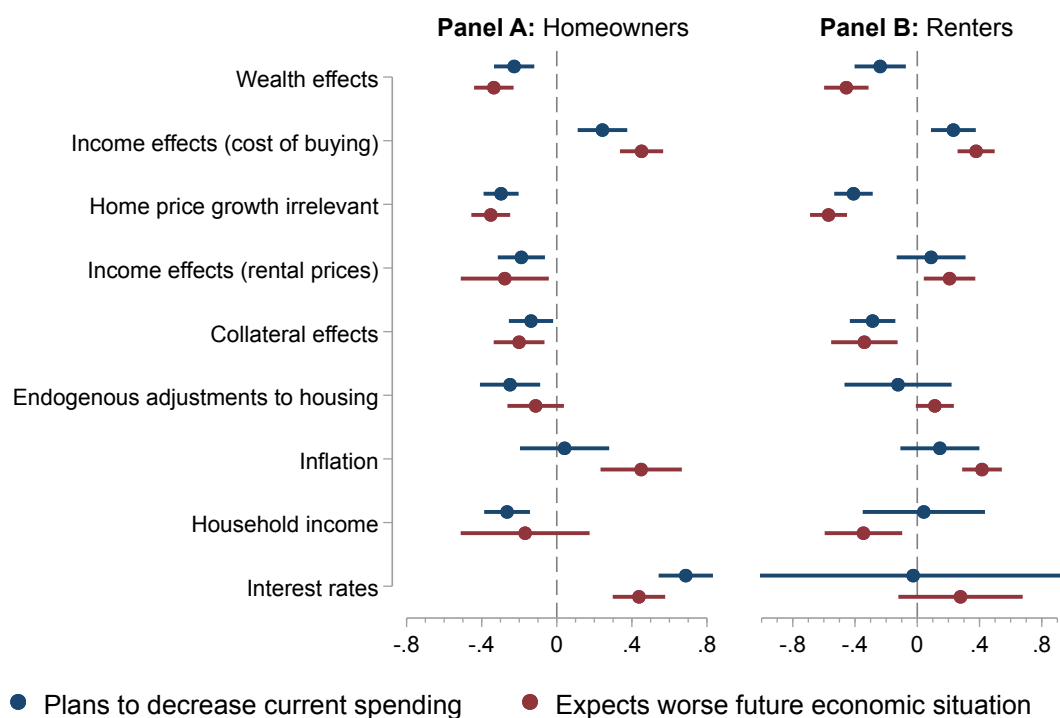
As shown in Panel A, among owners, considerations about changes in their own housing wealth are associated with a lower tendency to reduce spending ($p < 0.01$), while considerations about an increased cost of home purchases are associated with a higher tendency to reduce spending ($p < 0.01$). This is consistent with the idea that homeowners' muted spending responses to changes in home price expectations partially reflect offsetting wealth and income effects. Homeowners who mention that changes in home prices would be irrelevant to them are less likely to plan spending cuts ($p < 0.01$), suggesting that muted consumption responses are often due to homeowners viewing increases in their housing wealth as "paper gains". Panel B highlights that, among renters, especially those mentioning higher costs of purchasing a home tend to plan spending cuts ($p < 0.01$). Renters mentioning future rental prices are more likely to reduce spending, but the relationship is noisily measured ($p = 0.429$). Together, these patterns point to income effects as the key channel behind consumption responses among renters. Considerations about inflation are not significantly related to spending responses in either group, providing further evidence against an important role for cross-learning in driving spending responses in our main experiment. For both groups, the patterns for changes in respondents' economic outlook are broadly consistent with the patterns for spending.

To what extent can differences in considerations account for differences in spending responses between owners and renters? We regress a dummy variable indicating whether a respondent reports spending cuts on a homeowner dummy, and step-by-step add dummy variables for mentioning different mechanisms. We focus on the three considerations that are most important in predicting spending responses: income effects from changes in the cost of purchasing a home, wealth effects from changes in own housing wealth, and reporting that home price changes would be irrelevant for one's economic situation. These considerations have comparable effects on the spending responses of owners and renters, making a "horse race" between a homeowner dummy and considerations straightforward to interpret. As shown in Table C.7, the coefficient estimate on the homeowner dummy shrinks by 80% and is no longer statistically significant once dummy variables for these three types of considerations are included (Columns 1 and 5). This exercise shows that differences in considerations can explain a sizable share of the difference in spending

responses between owners and renters.

Overall, the relationship between respondents' considerations and their planned consumption responses is consistent with the mechanism evidence from the field experiment: while renters reduce their spending due to higher expected costs of purchasing a home, homeowners do not respond, either because they do not plan to sell their home or because effects from higher proceeds of future home sales and higher costs of replacement homes offset each other. The evidence from our additional experiment therefore confirms the central roles of wealth and income effects in the spending response to home price expectations.

Figure C.2: Mechanism survey: Open-ended responses are correlated with planned behaviors and economic outlook



Note: This figure shows coefficient estimates from multivariate regressions of expectation and spending adjustments to an increase in beliefs about average annual home price growth over the next ten years from 1.5% to 6% on measures of reasoning, based on data from the mechanism survey. The dependent variables are binary indicators taking value one for respondents who report a worsened future economic outlook for their household and for respondents who would reduce their current household spending as a result of an increase in home price expectations. The independent variables are indicators for whether a respondent mentions specific mechanisms in their response to the open-ended question on how higher home prices would affect their economic outlook for their household in a specific way. Panel A shows results for homeowners, while Panel B presents estimates for renters. All regressions control for age, gender, college education, and log household income. 95% confidence intervals derived from robust standard errors are shown.

Table C.7: Mechanism survey: Considerations explain differences in planned spending responses to changes in home price expectations between homeowners and renters

	Dependent variable: Planned decrease in current spending (binary)				
	(1)	(2)	(3)	(4)	(5)
Homeowner	-0.253*** (0.040)	-0.175*** (0.044)	-0.194*** (0.041)	-0.135*** (0.043)	-0.051 (0.045)
Wealth effects		-0.201*** (0.040)		-0.164*** (0.039)	-0.245*** (0.042)
Income effects (cost of buying)			0.271*** (0.048)	0.249*** (0.048)	0.216*** (0.047)
Home price growth irrelevant					-0.308*** (0.038)
Constant	0.432*** (0.032)	0.451*** (0.032)	0.321*** (0.036)	0.345*** (0.037)	0.383*** (0.037)
Explained homeowner effect:		31%	23%	47%	80%
N	497	497	497	497	497
R ²	0.076	0.109	0.145	0.167	0.217

Note: This table presents regression estimates of the effect of being a homeowner and of considerations on spending responses based on data from the mechanism survey. The dependent variable is a binary indicator taking value one for respondents who plan to decrease their current household spending in response to higher home price expectations, and zero otherwise. “Homeowner” is a binary indicator for respondents who own the home they are living in. “Wealth effects” is a binary indicator taking value one for respondents who mention changes in the value of their currently owned home in their responses to the open-ended question on how an increase in home price expectations would affect their household’s economic outlook. “Income effects (cost of buying)” and “Home price growth irrelevant” are analogously defined binary indicators (see Table A.21 for details about these codes). Robust standard errors are shown in parentheses.

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

D Survey instructions

This section contains the key survey instructions for our different data collections. Appendix Table A.1 provides an overview and further details about the data collections.

D.1 Main experiment: Baseline survey (November 2019)

Moving intentions

What is the percent chance that your household will move to a different home within the next ten years? ___ percent.

[Page break]

If your household moves to a different home within the next ten years, do you think it will move to a cheaper or to a more expensive home?

- My household would move to a cheaper home
- My household would move to an equally expensive home
- My household would move to a more expensive home

Prior beliefs

We would now like you to think about the value of a typical home in the US.

What do you expect the average annual growth rate of the value of a typical home in the US to be over the next ten years?

Note: This average annual growth rate of home prices is the change in value, in percent, that you expect each year on average over the next ten years.

___ percent per year, over the next ten years.

[Page break]

How confident are you about your answer to the question about home prices that you were just asked?

- Extremely confident
- Very confident
- Somewhat confident
- Not very confident
- Not at all confident

Information treatment

On the next slide, we will provide you with information on the view of a professional forecaster on the average growth rate of the value of a typical home in the US over the next ten years.

We would like to ask you to take a moment to review the information carefully.

Note: The information will be shown to you only once and you will not be able to come back to it.

[Respondents are randomly assigned in equal proportion to either the “high forecast” or the “low forecast” treatment arm at this stage in the survey.]

[Page break]

[Shown only to respondents in the “high forecast” treatment arm.]

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 percent.

In the case where home prices increase by 6 percent in each of the next ten years, this would mean that a home worth \$100,000 today will be worth about \$179,085 in ten years from now.

[Page break]

[Shown only to respondents in the “low forecast” treatment arm.]

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 1.5 percent.

In the case where home prices increase by 1.5 percent in each of the next ten years, this would mean that a home worth \$100,000 today will be worth about \$116,054 in ten years from now.

[Page break]

[Shown to all respondents. The instructions in the remainder of the survey are identical across treatment arms from now on.]

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.

Qualitative posterior

To what extent do you agree with the following statements?

Rent on homes/apartments in the US will increase strongly over the next ten years.

- Strongly agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Strongly disagree

US home prices will increase strongly over the next ten years.

- Strongly agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Strongly disagree

[Page break]

How do you think that the total net wealth of your household will change over the next ten years?

- Increase very strongly
- Increase strongly
- Increase somewhat
- Neither increase nor decrease
- Decrease somewhat
- Decrease strongly
- Decrease very strongly

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...

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

Total: *[automatically calculated]* percent

Perceived constraints

Assume that your household wanted to increase its spending to finance a vacation that costs \$1,000. How difficult would it be for your household to come up with money to finance this vacation...

...currently?

- Very difficult
- Somewhat difficult
- Neither easy nor difficult
- Somewhat easy
- Very easy

...in ten years from now?

- Very difficult
- Somewhat difficult
- Neither easy nor difficult
- Somewhat easy
- Very easy

[Page break]

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?

- Very difficult
- Somewhat difficult
- Neither easy nor difficult
- Somewhat easy
- Very easy

...in ten years from now?

- Very difficult

- Somewhat difficult
- Neither easy nor difficult
- Somewhat easy
- Very easy

Additional background characteristics

What is your year of birth? [Drop-down list]

[Page break]

Do you own or rent your current main residence?

- Owner
- Renter
- Other

D.2 Main experiment: Follow-up survey (December 2019)

Durable spending

What was your household's total spending on purchases of durable goods over the last four weeks?

Durable goods are goods that last in time, including for instance cars, electronics, kitchen appliances, furniture, house maintenance, jewelries, etc.

Please exclude purchases of houses, apartments, etc.

Please provide an answer in dollars.

- ☐ My household did not buy any durables over the last four weeks.
- ☐ \$ ____

Economic expectations

Now we would like to ask you about your views on the development of different economic indicators over the next ten years.

Over the next ten years, what do you think will be

- ☐ ... the average annual interest rate on a savings account: ____ percent.
- ☐ ... the average annual inflation rate: ____ percent.
- ☐ ... the average annual change in home prices: ____ percent.
- ☐ ... the average annual change in your total household labor income: ____ percent.
- ☐ ... the average annual return of the US stock market: ____ percent.
- ☐ ... the average annual growth rate of US real (inflation-adjusted) GDP: ____ percent.
- ☐ ... the average annual change in rent on homes/apartments: ____ percent.

Long-run plans

The next questions are about your expectations regarding your household's intended behavior over the next five years.

[Page break]

Over the next five years, does your household plan to search for a home to buy? Please include main and second homes, and any other real estate. [Yes/No]

[Page break]

Over the next five years, does your household plan to sell any home your household owns? Please include main and second homes, and any other real estate owned by your household. [Yes/No]

D.3 Robustness experiment: Screener survey (August 2023)

Do you own or rent your current main residence?

- Own
- Rent
- Other

Do you own any other homes or apartments that you are not living in yourself? [Yes / No]

Does your household plan to buy a home within the next ten years? [Yes / No]

Only for respondents who plan to buy a home:

Does your household plan to buy a home that is more expensive, equally expensive, or less expensive than your household's current main residence?

- We plan to buy a more expensive home
- We plan to buy an equally expensive home
- We plan to buy a less expensive home

Only for respondents who own their home:

Does your household plan to sell your current main residence over the next ten years? [Yes / No]

D.4 Robustness experiment: Baseline survey (August 2023)

Prior beliefs

We would now like you to think about the value of a typical home in the US.

What do you expect the average annual growth rate of the value of a typical home in the US to be over the next ten years?

Note: This average annual growth rate of home prices is the change in value, in percent, that you expect each year on average over the next ten years.

[Text entry box]

[Page break]

How confident are you about your answer to the question about home prices that you were just asked?

- Extremely confident
- Very confident
- Somewhat confident
- Not very confident
- Not at all confident

Information treatment

[Respondents are randomly assigned in equal proportion to the “high forecast” or the “low forecast” treatment arm, and the “supply rationale” or the “demand rationale” treatment arm at this stage in the survey.]

[Shown only to respondents in the “high forecast” and “supply narrative” treatment:]

We would like to provide you with a forecast of home price growth from an expert who regularly participates in the Economic Expert 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 percent. The expert cited housing supply constraints (e.g., regulation or the current housing stock) as a main factor underlying their forecast.

In the case where home prices increase by 6 percent in each of the next ten years, this would mean that a home worth \$100,000 today will be worth about \$179,085 in ten years from now.

[Shown only to respondents in the “high forecast” and “demand narrative” treatment:]

We would like to provide you with a forecast of home price growth from an expert who regularly participates in the Economic Expert 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 percent. The expert cited demographic trends in the US (e.g., age structure or population growth) as a main factor underlying their forecast.

In the case where home prices increase by 6 percent in each of the next ten years, this would mean that a home worth \$100,000 today will be worth about \$179,085 in ten years from now.

[Shown only to respondents in the “low forecast” and “supply narrative” treatment:]

We would like to provide you with a forecast of home price growth from an expert who regularly participates in the Economic Expert 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 2 percent. The expert cited housing supply constraints (e.g., regulation or the current housing stock) as a main factor underlying their forecast.

In the case where home prices increase by 2 percent in each of the next ten years, this would mean that a home worth \$100,000 today will be worth about \$121,899 in ten years from now.

[Shown only to respondents in the “low forecast” and “demand narrative” treatment:]

We would like to provide you with a forecast of home price growth from an expert who regularly participates in the Economic Expert 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 2 percent. The expert cited demographic trends in the US (e.g., age structure or population growth) as a main factor underlying their forecast.

In the case where home prices increase by 2 percent in each of the next ten years, this would mean that a home worth \$100,000 today will be worth about \$121,899 in ten years from now.

[Shown to all respondents. The instructions in the remainder of the survey are identical across treatment arms from now on.]

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 percent.

Qualitative posterior

To what extent do you agree with the following statements?

Rent on homes/apartments in the US will increase strongly over the next ten years.

- Strongly agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Strongly disagree

US home prices will increase strongly over the next ten years.

- Strongly agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Strongly disagree

How do you think that the total net wealth of your household will change over the next ten years?

- Increase very strongly
- Increase strongly
- Increase somewhat
- Neither increase nor decrease
- Decrease somewhat
- Decrease strongly
- Decrease very strongly

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

- | | |
|--|----------------|
| • Scenario 1: ... more than 20 percent. | _____ percent. |
| • Scenario 2: ... between 10 and 20 percent. | _____ percent. |
| • Scenario 3: ... between 5 and 10 percent. | _____ percent. |
| • Scenario 4: ... between 0 and 5 percent. | _____ percent. |
| • Scenario 5: ... between -5 and 0 percent. | _____ percent. |
| • Scenario 6: ... between -10 and -5 percent. | _____ percent. |
| • Scenario 7: ... between -20 and -10 percent. | _____ percent. |
| • Scenario 8: ... less than -20 percent. | _____ percent. |

Total: *[automatically calculated]* percent

[Page break]

Now we would like to ask you about your views on the development of different economic indicators in the US over the next ten years.

Over the next ten years, what do you think will be the average annual change in home prices: _____ percent.

Over the next ten years, what do you think will be the average annual change in rent on homes/apartments: _____ percent.

[Page break]

Over the next ten years, what do you think will be the average annual interest rate on a savings account: ____ percent.

Over the next ten years, what do you think will be the average annual inflation rate: ____ percent.

Over the next ten years, what do you think will be the average annual change in your total household labor income after taxes and deductions: ____ percent.

D.5 Robustness experiment: Follow-up survey (September 2023)

Durable spending

Over the last four weeks, did your household purchase any of the following goods? Please select all that apply.

- House or apartment:
- Car or other vehicle
- Major household appliances or furniture (e.g., refrigerator, sofa)
- Electronic equipment (e.g., smartphone, TV, laptop)
- Major vacation
- Luxury item (e.g., watch, jewelry)
- Machinery, tools, or sport equipment
- None of the above

[Page break]

Over the last four weeks, what was your household's total spending on each of the following categories of goods?

- House or apartment: \$ ____
- Car or other vehicle: \$ ____
- Major household appliances or furniture (e.g., refrigerator, sofa): \$ ____
- Electronic equipment (e.g., smartphone, TV, laptop): \$ ____
- Major vacation: \$ ____
- Luxury item (e.g., watch, jewelry): \$ ____
- Machinery, tools, or sport equipment: \$ ____
- None of the above

[Note: Only durable goods categories that respondents selected on the previous survey page are presented in the above list.]

[Page break]

Over the last four weeks, did your household make any home improvements? [Yes/No]

[Page break]

Over the last four weeks, what was your household's total spending on restaurant visits and food consumed out of home? [Drop-down list]

[Page break]

Over the last four weeks, has your household taken out additional debt against your home equity? [Yes/No]

Over the next twelve months, does your household plan to take out additional debt against your home equity? [Yes/No]

Beliefs

Now we would like to ask you about your views on the development of different economic indicators in the US over the next ten years.

Over the next ten years, what do you think will be the average annual change in home prices: ____ percent.

Over the next ten years, what do you think will be the average annual change in rent on homes/apartments: ____ percent.

[Page break]

Over the next ten years, what do you think will be the average annual interest rate on a savings account: ____ percent.

Over the next ten years, what do you think will be the average annual inflation rate: ____ percent.

Over the next ten years, what do you think will be the average annual change in your total household labor income after taxes and deductions: ____ percent.

D.6 Moving plans experiment (September 2024)

Prior beliefs

We would now like you to think about the value of a typical home in the US.

What do you expect the average annual growth rate of the value of a typical home in the US to be over the next ten years?

Note: This average annual growth rate of home prices is the change in value, in percent, that you expect each year on average over the next ten years.

[Text entry box]

[Page break]

How confident are you about your answer to the question about home prices that you were just asked?

- Extremely confident
- Very confident
- Somewhat confident
- Not very confident
- Not at all confident

Information treatment

[Respondents are randomly assigned in equal proportion to the “high forecast” or the “low forecast” treatment arm.]

[Shown only to respondents in the “high forecast” treatment:]

We would like to provide you with a forecast of home price growth from an expert who regularly participates in the Economic Expert 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 percent.

In the case where home prices increase by 6 percent in each of the next ten years, this would mean that a home worth \$100,000 today will be worth about \$179,085 in ten years from now.

[Shown only to respondents in the “low forecast” treatment:]

We would like to provide you with a forecast of home price growth from an expert who regularly participates in the Economic Expert 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 2 percent.

In the case where home prices increase by 2 percent in each of the next ten years, this would mean that a home worth \$100,000 today will be worth about \$121,899 in ten years from now.

[Shown to all respondents. The instructions in the remainder of the survey are identical across treatment arms from now on.]

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 percent.

Posterior home price expectations

In this question we present you with 14 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 14 scenarios have to sum up to 100 percent.

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

- | | |
|--|----------------|
| • Scenario 1: ... more than 20 percent. | _____ percent. |
| • Scenario 2: ... between 15 and 20 percent. | _____ percent. |
| • Scenario 3: ... between 10 and 15 percent. | _____ percent. |
| • Scenario 4: ... between 7.5 and 10 percent. | _____ percent. |
| • Scenario 5: ... between 5 and 7.5 percent. | _____ percent. |
| • Scenario 6: ... between 2.5 and 5 percent. | _____ percent. |
| • Scenario 7: ... between 0 and 2.5 percent. | _____ percent. |
| • Scenario 8: ... between 0 and -2.5 percent. | _____ percent. |
| • Scenario 9: ... between -2.5 and -5 percent. | _____ percent. |
| • Scenario 10: ... between -5 and -7.5 percent. | _____ percent. |
| • Scenario 11: ... between -7.5 and -10 percent. | _____ percent. |
| • Scenario 12: ... between -10 and -15 percent. | _____ percent. |
| • Scenario 13: ... between -15 and -20 percent. | _____ percent. |
| • Scenario 14: ... less than -20 percent. | _____ percent. |

Total: *[automatically calculated]* percent

Moving plans: Homeowners

[Questions below are shown only to homeowners. We ask separate questions for each time horizon shown in brackets.]

What is the likelihood (in percent) that you will sell your home and buy a new home within the next *[12 months, 3 years, 5 years, 10 years]*?

[Text entry box]

What is the likelihood (in percent) that you will sell your home and move to a rental home within the next *[12 months, 3 years, 5 years, 10 years]*?

[Text entry box]

What is the likelihood (in percent) that you will buy a second home or apartment as an investment within the next 5 years?

[Text entry box]

Moving plans: Renters

[Questions below are shown only to renters. We ask separate questions for each time horizon shown in brackets.]

What is the likelihood (in percent) that you will buy a home to live in within the next *[12 months, 3 years, 5 years, 10 years]*?

[Text entry box]

What is the likelihood (in percent) that you will move to a new rental home within the next *[12 months, 3 years, 5 years, 10 years]*?

[Text entry box]

Moving plans: All respondents

[Questions below are shown to all respondents.]

In case you move in the next 5 years, would you expect your new home to have fewer or more rooms than your current home?

- A lot fewer rooms
- Somewhat fewer rooms
- The same number of rooms
- Somewhat more rooms
- Many more rooms

In case you move in the next 5 years, would you expect your new home to have fewer or more square feet than your current home?

- A lot fewer square feet
- Somewhat fewer square feet
- The same number of square feet
- Somewhat more square feet
- Many more square feet

In case you move in the next 5 years, would you expect your new home to have higher or lower quality than your current home?

- A lot lower quality
- Somewhat lower quality
- Same quality
- Somewhat higher quality
- A lot higher quality

How attractive do you perceive housing to be as an investment?

- Not attractive at all
- Slightly attractive
- Neutral
- Moderately attractive
- Extremely attractive

In 5 years from now, do you expect spending on housing (e.g., rent, mortgages, home improvements) to provide more, the same, or less value compared to spending on non-housing goods and services (e.g., food, entertainment, travel)?

- Housing will provide significantly more value

- Housing will provide slightly more value
- Housing and non-housing consumption will provide about the same value
- Non-housing goods and services will provide slightly more value
- Non-housing goods and services will provide significantly more value

D.7 Optimization frictions survey (September 2024)

We will now ask you some questions about housing search. Think about the time when you moved into your current home.

How difficult was it to find a home that fits your size, location, and budget preferences?

- Very difficult
- Difficult
- Neutral
- Easy
- Very easy

Which of the following factors made it more difficult for you to find a suitable home? Please tick all that apply.

- The size of my family
- My specific housing preferences (e.g., garden, pool, home layout)
- Proximity to workplace
- Quality of nearby schools
- Proximity to amenities such as parks, stores and restaurants
- Neighborhood safety
- Availability of public transport
- Limited availability of homes
- Other: ____
- None of the above

[Page break]

How much flexibility did you have with your move-in date?

- A lot of flexibility
- Much flexibility
- Some flexibility
- Little flexibility
- No flexibility at all

Which of the following factors made you less flexible regarding the move-in date? Please tick all that apply.

- Start or end of a work contract
- Start or end of a school year
- End of previous lease
- Timing of renovations
- Availability of movers or moving company
- Availability of the new home
- Timing of a household member leaving the home
- Other: ____
- None of the above

[Page break]

Think about the financial and time costs involved in your last move.

- Very costly
- Costly
- Somewhat costly
- Not costly
- Not at all costly

Which of the following factors made the process more costly in terms of time and money? Please tick all that apply.

- Legal paperwork
- Moving logistics
- Taxes
- Taking time off from work
- Renovations or repairs before moving in
- Costs associated with breaking a lease early
- Fees for real estate agents or brokers
- Utility setup fees (electricity, internet, etc.)
- Other: ____
- None of the above

D.8 Mechanism survey (November 2022)

Imagine 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?

- My household's future economic situation would improve because of this change.
- My household's future economic situation would be unaffected by this change.
- My household's future economic situation would worsen because of this change.

Please explain why. Respond in full sentences. [Open-text box]

[Page break]

Which of the following factors did you consider when thinking about how the change in your expectations about future home prices would affect your expectations about your household's future economic situation? Please click on all factors that apply.

- Changes in the value of housing currently owned by my household
- Changes in the rent of homes
- Changes in the costs of buying a home
- Changes in the ease of borrowing money against my home equity
- Changes in my household's overall income
- Changes in interest rates
- Changes in inflation
- None of the above

[Note: Item order randomized, except for "None of the above"]

[Page break]

Please think again about the previous scenario. Imagine 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 household's current spending on consumption goods and services?

- My household would spend more because of this change.
- My household spending would be unaffected by this change.
- My household would spend less because of this change.

[Page break]

Do you own the place you are currently living in? [Yes/No]

Do you intend to buy a home in the next 10 years? [Yes/No]

Do you intend to sell a home in the next 10 years? [Yes/No]