

# Selective Inattention\*

Pierfrancesco Mei<sup>†</sup>      Tim de Silva<sup>‡</sup>

October 14, 2024

Preliminary draft – please do not circulate

## Abstract

This paper studies how durable decisions, such as purchasing a home or car, affect how households acquire information about macroeconomic variables and subsequently form their expectations. Using a newly-designed survey of U.S. consumers, we show that households concentrate the timing and frequency of their information acquisition about macroeconomic variables around the time period in which they make durables purchases. These patterns in information acquisition generate *selective inattention*, in which households that make durables adjustments hold beliefs that are around 35% more accurate than those of non-adjusters. To assess the macroeconomic implications of selective inattention, we build an incomplete markets model of non-durable and durable consumption where households acquire information dynamically about interest rates. After calibrating the parameters governing information acquisition using survey data, we study how selective inattention affects the response of the economy to changes in interest rates. Like a model with exogenous information, selective inattention dampens the response of non-durable consumption to interest rates. However, unlike a model with exogenous information, a model with selective inattention generates responses of durable consumption that are almost as large as the full information case. In sum, our results suggest that the beliefs of decision-makers, in addition to average beliefs, matter for the propagation of macroeconomic shocks.

*Keywords:* Rational inattention, durable goods, interest rates, monetary policy.

---

\*We thank Adrien Auclert, Philippe Andrade, Peter Andre, Adrien Bilal, John Campbell, Gabriel Chodorow-Reich, Xavier Gabaix, Adam Guren, Sam Hanson, Spencer Kwon, Kenneth Rogoff, Chris Roth, Karthik Sastry, Andrei Shleifer, Stefanie Stantcheva, Jeremy Stein, Ludwig Straub, Adi Sunderam, Jenny Tang, and seminar participants at Harvard and the Federal Reserve Bank of Boston for helpful comments. The study received IRB Approval from Harvard University under Protocol IRB24-0771. We acknowledge financial support from the Michael S. Chae Macro Policy Fund and the Molly and Domenic Ferrante Fund.

<sup>†</sup>Harvard, [pierfrancescomei@g.harvard.edu](mailto:pierfrancescomei@g.harvard.edu), [pierfrancescomei.com](http://pierfrancescomei.com).

<sup>‡</sup>Stanford GSB and SIEPR, [tdesilva@stanford.edu](mailto:tdesilva@stanford.edu), [timdesilva.me](http://timdesilva.me).

# 1 Introduction

Economic choices are often made in the face of substantial uncertainty, forcing decision-makers to learn and form expectations about the decision-relevant variables. However, many of the important economic decisions in individuals’ lifetimes occur infrequently, such as buying a house or changing jobs. As a result, individuals are only incentivized to form accurate expectations of many economic variables over the relatively short periods in which they are “decision-makers”. A salient example is an individual who is considering buying her first house. Two important variables for this decision are mortgage rates and house prices, both of which the individual likely had little incentive to be informed about before her decision-making.

In this paper, we quantify the empirical relevance of *selective inattention* and study its macroeconomic consequences. Selective inattention refers to the idea that agents in the economy selectively update their expectations about *aggregate* variables only during the short windows in which they make consequential *individual* decisions for which these aggregate variables are relevant. We view selective inattention as a special case of general theories of rational inattention ([Maćkowiak, Matějka and Wiederholt \(2023\)](#)), which stresses the tight connection between large infrequent decisions and the dynamics of individuals’ information acquisition processes. This paper studies selective inattention in the context of households’ durable spending choices, such as buying a house or car. We view these choices as a natural laboratory to study this mechanism because these choices are important at the microeconomic-level, since they occur relatively infrequently and are difficult to reverse, but also at the macroeconomic-level, as durables spending comprises most of the variation in household consumption behavior over the business cycle ([Berger and Vavra \(2015\)](#); [McKay and Wieland \(2021\)](#)).

This paper makes two main contributions. First, we design and conduct a new survey of U.S. households to investigate how individuals acquire information about the economy as they approach a home or car purchase. Our custom survey improves on existing ones, such as the NY Fed Survey of Consumer Expectations, by allowing us to more precisely identify a respondent’s proximity to the purchase and providing additional insights into the demand for macroeconomic information. We find that the intensity of information acquisition about macroeconomic variables—particularly interest rates—increases significantly as households approach a home or car purchase. This heightened information acquisition leads to more accurate beliefs about current and future interest rates. Addi-

tionally, a series of new questions in our survey reveals that, in most cases, households first consider making a durable purchase before they begin gathering information. Our second contribution is to embed selective inattention into a canonical incomplete markets model of lumpy durable adjustments ([Berger and Vavra \(2015\)](#); [McKay and Wieland \(2021\)](#)). Our model features endogenous information acquisition about stochastic interest rates in the spirit of models of rational inattention. After calibrating the parameters governing information acquisition to match our micro-evidence of individuals' beliefs and demand for information around durables adjustment, we use the model as a laboratory to study how selective inattention affects responses to changes in interest rates. Our main finding is that a model with selective inattention generates responses in non-durable and durable consumption that differ from two other leading cases: a full information case and a case with exogenous information frictions. Like a model with exogenous information, we find that selective inattention dampens the response of non-durable consumption to interest rates. However, unlike a model with exogenous information, a model with selective inattention generates responses of durable consumption that are almost as large as the full information case. The combination of these results is driven by the tight connection between durables adjustments and beliefs that arise endogenously in our model: individuals making durables adjustments have the largest incentive to pay attention to interest rates, and hence have more accurate beliefs than the average agent when making durables adjustments.

**Related literature.** On the empirical side, our paper is related to the vast literature that studies how household form expectations and how this affects their decisions, as recently surveyed in [Weber, D'Acunto, Gorodnichenko and Coibion \(2022\)](#); [D'Acunto, Malmendier and Weber \(2023\)](#); [D'Acunto and Weber \(2024\)](#). We are also connected to the literature studying information acquisition in field settings as reviewed in [Capozza, Haaland, Roth and Wohlfart \(2021\)](#). This literature uses surveys to investigate how households and firms collect and process macroeconomic information, with a focus on the frequency and the type of information that they gather ([Coibion, Gorodnichenko and Kumar \(2018\)](#); [Link, Peichl, Roth and Wohlfart \(2023\)](#); [Mikosch, Roth, Sarferaz and Wohlfart \(2024\)](#)). We are not aware of empirical papers which focus on the connection between durable adjustments, expectations formation, and information acquisition. In the context of firms, [Yang \(2022\)](#) and [Afrouzi \(2023\)](#) study how idiosyncratic characteristics, for instance the level of competition, affect attention to aggregate economic conditions.

Our theory framework builds on the literature on durable spending in incomplete markets models. Our benchmark is the canonical model of [Berger and Vavra \(2015\)](#), further developed in [Berger, Guerrieri, Lorenzoni and Vavra \(2018\)](#) to study housing market dynamics, in [McKay and Wieland \(2021, 2022\)](#) to study monetary policy, in [Gavazza and Lanteri \(2021\)](#) to study credit shocks, and in [Cui, Zwick and Berger \(2017\)](#); [Beraja and Zorzi \(2024\)](#) to study fiscal policies in the form of durable subsidies and cash transfers. Our main innovation is the addition of a dynamic endogenous information acquisition problem grounded in the rational inattention tradition ([Sims \(2003\)](#); [Maćkowiak, Matějka and Wiederholt \(2023\)](#)). [Afrouzi, Flynn and Yang \(2024\)](#) and [Ahn, Xie and Yang \(2024\)](#) study the effect of rationally inattentive firms and households in dynamic macroeconomic models. Our micro-foundation for the optimal information acquisition process differs from theirs as our model generates gradual, as opposed to discrete, learning through a convex information cost. The effect of different assumptions over the information cost functions adopted in dynamic rational inattention problems is discussed in [Zhong \(2022\)](#); [Hebert and Woodford \(2023\)](#).

The rest of the paper is organized as follows. In Section [2](#), we discuss our new survey and the main empirical evidence in support of selective inattention. Section [3](#) develops the quantitative model, describes how we discipline the information acquisition problem with our micro evidence, and shows how interest rate shocks propagate under selective inattention. Section [4](#) briefly concludes.

## 2 Measuring selective inattention

### 2.1 Survey overview

We design and implement a novel survey to investigate whether U.S. households become more informed about macroeconomic conditions as they approach major durable goods decisions. We focus on respondents who are renting their primary home in order to explore how households acquire economic information before making their largest durable investment – buying a home.

Our survey has four main objectives. First, we seek to accurately identify renters’ decision-making status by determining how close they expect to be from their first home purchase. We supplement this by gathering information on the distance from other significant decisions, such as auto purchases and financial or housing-related investments beyond

their primary residence. Second, we collect direct measures of information acquisition related to key economic variables. Specifically, we inquire about the amount of information respondents have recently gathered on selected economic indicators, as well as their demand for additional expert information. This approach follows recent elicitation strategies used in [Coibion, Gorodnichenko and Kumar \(2018\)](#), [Roth, Settele and Wohlfart \(2022\)](#), and [Mikosch, Roth, Sarferaz and Wohlfart \(2024\)](#). Third, we assess respondents’ macroeconomic awareness by eliciting a series of nowcasts and forecasts, which provide a quantitative measure of their accuracy and knowledge. These measures allow us to benchmark our results against data from existing household surveys, such as the NY Fed Survey of Consumer Expectations. Finally, our survey helps inform our quantitative model by investigating the underlying motivations that drive households to consider large durable decisions.

## 2.2 Sample

**Sample targeting.** We conduct our survey through the leading survey provider Lucid Marketplace.<sup>1</sup> We target U.S. renters between the ages of 25 and 65 who are in the labor force at the time of the survey.

To focus specifically on renters, we implement two initial screening questions. First, respondents must be currently renting their primary residence, and have never owned a primary residence before. The second criterion ensures that we exclude individuals who have previously owned a home but have reverted to renting, as these respondents are likely to be more informed about the housing market from previous experience. Additionally, we apply a filter to ensure respondents play an active role in their household’s economic and financial decisions.<sup>2</sup> Since we are interested in those who make decisions, either independently or jointly, we exclude less-involved individuals, as their incentives to pay attention to the economic environment are low and likely insensitive to the choices made by the household.

While the data collection is still ongoing, we aim to achieve a sample that is representative of the U.S. renter population across key dimensions such as income, age, gender, and

---

<sup>1</sup>Lucid Marketplace is a platform that grants researchers access to multiple suppliers of survey takers—such as panels, communities, groups—hence pooling the respondents provided by each supplier. Respondents receive an incentive (cash or other rewards) for completing the survey.

<sup>2</sup>We exclude individuals who report minimal involvement in such decisions, following question 46 from the core module of the NY Fed Survey of Consumer Expectations (SCE). In the SCE data, 5–10% of renters report minimal involvement.

race. These characteristics are benchmarked to match the demographic composition of renters in the NY Fed SCE data, ensuring a sample that is reflective of the broader renter population.

**Data quality.** The median and average survey completion times are 12 and 15 minutes, respectively. We exclude the 5% of respondents who finish the survey either too quickly or too slowly. To ensure data quality, we implement several additional checks. First, we use an attention check at the start of the survey, following [Stantcheva \(2024\)](#), to screen out respondents who fail to meet basic attention criteria. A second attention check is placed midway through the survey to reinforce the screening process.

Additionally, we employ a bot-detection software to monitor survey completion patterns and flag potential automated responses. The software assigns a probability score to each respondent, and we retain only those flagged as human with a likelihood of over 90%, which accounts for roughly 95% of the total sample. The small fraction of respondents falling below this threshold typically still score above 50% likelihood, reflecting the effectiveness of our initial filters. We also include an internal control mechanism to prevent respondents from completing the survey multiple times.

## 2.3 Survey structure

We now provide a detailed overview of the key sections of the questionnaire. The survey includes one main randomization: half of the respondents are presented with the “Macroeconomic Knowledge” and “Information Acquisition” sections first, followed by the “Distance from home purchase” section. The other half of the respondents see these sections in the reverse order. Our results are not influenced by the order in which these blocks are shown.

**Distance from home purchase.** In this block, we delve into the decision-making process behind the first-home purchase. We first ask renters when they plan to buy their first home, with options ranging from less than one year to never. This elicitation follows a similar structure to the purchase timing question included in the Housing module of the NY Fed SCE since February 2022. We also inquire whether they plan to finance the purchase with a mortgage or buy it with cash. We find that around 10% of respondents plan to buy with cash, which is consistent with the current data on first-home transactions

in the U.S.

In the second step, we focus on respondents who plan to buy a house at some point in the future, and ask whether they have undertaken any of the following four actions: searching for a home, gathering information about mortgages, obtaining information from banks about financing options, and preparing their personal finances for the purchase. These four questions aim to provide a proxy for the preliminary actions households might take in preparation for a purchase. These questions are especially important as we flag as “planners” those respondents who have taken at least one action in preparation for the home purchase. We will shortly explain how we use this classification when eliciting the decision windows ahead of durable adjustments.

The third part of this block is only shown to respondents who plan to buy within the next two years. Here, we aim to carefully identify the main actions agents might have already taken towards the purchase. Specifically, we ask how close they are to applying for mortgage pre-approval or pre-qualification (if they seek to obtain one), whether they are already working with a real estate agent to search for a home, and how close they are to applying for a mortgage. For respondents who have already applied for or obtained a mortgage, we ask whether the mortgage is fixed or adjustable, and the amount requested. We conclude by asking for their best estimate of when they expect to close on their purchase, allowing them to provide a finer estimate than the bracketed one given at the beginning of this block.

We are not aware of any existing household survey that offers information on the decision-making process towards a home purchase with this level of detail. The answers from this block allow us to not only estimate how “distant” the respondent expects to be from the purchase, but also track the specific actions taken by the time of the interview.

**Distance from car purchases and non-durable decisions.** Buying a house is the most significant financial decision for most households. It also constitutes the largest and most infrequent adjustment in a household’s durable stock. However, other durable purchases and financial decisions can also influence people’s incentives to obtain macroeconomic information. To account for this, we include a set of questions to track whether respondents have recently (i) bought a car or motor vehicle, (ii) made real estate investments other than their primary residence (e.g., business-related properties or second homes), or (iii) made significant financial investments. For (i) and (ii), we also check whether these decisions resulted in the origination of loans or mortgages. Additionally, we ask about plans to



undertake any of these actions in the future, by eliciting the expected distance from these purchases and investments.

**Information acquisition.** This block consists of three parts. In the first part, we elicit how frequently respondents obtained information about mortgage and auto loan rates, inflation, and home and car prices over the last three months. For each variable, they can choose multiple options ranging from daily to never, using a format similar to the one designed by Mikosch, Roth, Sarferaz and Wohlfart (2024) for a similar information acquisition study. This question aims to capture a broad notion of information acquisition that includes both active and passive information obtained by the respondent. We are also interested in whether respondents have been actively searching for information about these variables more frequently than usual. Therefore, we include a follow-up question asking whether, in the previous three months, they actively searched for information about each of the three variables more, less, or the same as usual.

We also consider a variant of this set of questions, where we ask instead when was the last time that the respondent actively searched for information about the same five variables. This version allows to obtain a proxy for the updating frequency that extends beyond the three months prior to the interview.

While the first part focuses on past information acquisition behavior, the second part delves into the demand for additional economic information. We design a simple hypothetical question asking respondents if they would be interested in accessing expert reports from professional economists and forecasts on the U.S. economy. They can choose between being uninterested in any additional information or selecting one or more variables they would like to know more about. This elicitation of the demand for macro information is a simplified and adapted version<sup>3</sup> of the one developed in Roth, Settele and Wohlfart (2022). Respondents can select from a list of approximately ten macro variables, chosen based on the variables most commonly targeted by professional forecasters.

If respondents select either mortgage rates, auto loan rates, 1-year Treasury Bill rates or inflation, we ask what type of information regarding these variables they would be most interested in. They can choose multiple options from a list that includes the current level of the variables, their expected value 1- and 3-years ahead, the uncertainty surrounding

---

<sup>3</sup>As in that paper, we do not elicit willingness to pay (WTP) for information, although this might be feasible. Besides the additional burden of eliciting WTP, the hypothetical scenario we describe refers to expert reports, such as the Philadelphia Fed Survey of Professional Forecasters, which can be accessed for free and relatively easily online. This would make the elicitation of WTP somewhat misleading.



their future value, and their past value over the past 5 years. These questions provide us with insights into the type of macro information people search for, helping us inform the theoretical model of endogenous information acquisition.

**Macroeconomic knowledge.** We obtain nowcasts for three variables: the average mortgage rate on a 30-year fixed-rate mortgage, inflation, and the interest rate on a 1-year Treasury Bill. The elicitation closely follows the NY Fed SCE structure. The mortgage rate is our main outcome of interest, while inflation and the T-Bill rate should provide additional measures of general macroeconomic attention.

We then ask for 1-year ahead forecasts of the mortgage rate as density forecasts using a scenario-based elicitation. The latter follows the recent methodology proposed by [Boctor, Coibion, Gorodnichenko and Weber \(2024\)](#) and is based on [Bloom, Davis, Foster, Lucking, Ohlmacher and Saporta-Eksten \(2020\)](#), which substitutes bin-based density forecasts with the elicitation of point forecasts and associated subjective probabilities for three scenarios (low, medium, and high realizations of the forecasted variable). We refer to these papers for more technical details, but the main advantage is making the elicitation more compact and reducing priming. The scenario-based forecasts also provide a measure of the subjective uncertainty associated with the forecast.

The nowcasts and forecasts about mortgage rates—referring to the average rate for a new 30-year fixed-rate mortgage in the U.S.—might be influenced by the rates respondents think they would obtain. To control for this, we include a short question that sequentially asks whether the respondent thinks they would qualify for a 30-year fixed-rate mortgage if they applied today, and if so, at what rate. Around 25% of respondents think they would qualify at the time of the interview, and reassuringly, the reported likelihood is strongly related to the reported distance from purchase.

**Attention windows.** As an input into our quantitative model, we are interested in estimating how long before finalizing a durable adjustment households start pay attention to the economy. To this end, respondents are first asked which macroeconomic variables they would pay attention to while planning to buy a house. If the respondent is previously identified as a planner in the survey, we ask this respondent based on the current planning experience. Otherwise, the question is asked as an hypothetical scenario. A list of approximately ten macroeconomic variables is presented. If mortgage rates from the list are selected, we then elicit how long before the purchase respondents start pay more

attention to interest rates.

We also present an identical question to each respondent – in this case in hypothetical format for everyone – focusing on car purchases. Also in this scenario, we first ask about the variables that the respondent would search for more information about ahead of a purchase, and then for auto loan rates only we elicit the attention window.

**Financial situation.** This block provides a snapshot of the financial position of the respondent’s household by asking a series of detailed questions on assets and liabilities. The elicitation follows a simplified and more compact version of the one used in the Survey of Consumer Finances. We collect information on four categories of assets using brackets: short-term savings (e.g., checking accounts), other financial assets that can be easily liquidated (e.g., stocks), financial assets that cannot be easily liquidated (e.g., retirement accounts), and non-financial assets (e.g., cars). Each category is carefully described with a comprehensive list of the assets included.

We have two questions on liabilities: one for credit card debts and other consumer loans, and one for outstanding mortgages and auto loans. Additionally, we ask for estimates of the monthly rent payment as well as any monthly payments towards the repayment of mortgages, car loans, or student loans. We conclude this section with a question about the highest credit score in the respondent’s household, using identical brackets to those in the NY Fed SCE.

**Background characteristics.** We use this block to obtain any additional background information about the respondent that was not included in the opening block or the financial situation block. The opening block is the first part of the survey shown to respondents and is designed to filter out respondents who do not meet our sampling criteria and to target quotas. Questions in that block include the respondent’s age, gender, total household <sup>4</sup> income in 2023, household size, employment status, and race.

In this final block, respondents report their ZIP code, education level and field of study. We also added two questions specifically tailored to the context of this survey. The first asks whether the size of the respondent’s household has recently changed or will soon change (increasing or decreasing). The second asks whether the household has recently moved or plans to move in the near future, for instance, due to a job relocation. Both

---

<sup>4</sup>The first time we introduce the concept of “household” in the survey, we provide its definition according to the US Census Bureau.

questions are designed to obtain additional information on two dimensions—changes in household composition and moving plans—that are often associated with changes in housing status as well as other durables purchases.

Before concluding, respondents must answer two short questions aimed at measuring their numerical ability. Given the nature of our questionnaire, we selected two questions from the larger set included in the NY Fed SCE<sup>5</sup> that specifically relate to reasoning with percentages and understanding real versus nominal returns. These questions jointly provide information on respondents’ ability to reason with numbers, as well as an additional attention check.

## **2.4 Main results**

We focus on three key outcomes. First, we examine whether the intensity and frequency of macroeconomic information acquisition increase as households approach their durable goods adjustments. To investigate this, we leverage our elicited measures of the expected time until home and car purchases. Second, we explore whether heightened information acquisition translates into more accurate macroeconomic expectations. Specifically, we assess whether macroeconomic attention – measured through nowcast and forecast errors – varies with the proximity to a purchase, comparing our findings to similar estimates from the NY Fed’s Survey of Consumer Expectations (SCE). Third, we investigate the drivers behind the observed correlation between information acquisition and anticipated durable adjustments. Our evidence supports the notion that households first decide to pursue a durable adjustment and then turn their attention to economic conditions. This finding underpins the modeling choices discussed in Section 3.

### **2.4.1 Result 1: information acquisition increases closer to durable choices**

We investigate how households acquire economic information as they approach durable adjustments, with a focus on home purchases. To our knowledge, no other household surveys provide direct evidence on the relationship between information acquisition and the expected timing of durable adjustments.

We begin by categorizing renters into three groups based on their expected time to purchasing a home. Those planning to buy within the next two years are defined as Current Decision-Makers (DM), those with plans to buy in 3 to 5 years are classified as Future DM,

---

<sup>5</sup>These questions follow the original formulation in [Lusardi and Mitchell \(2011\)](#).

and renters expecting to buy beyond five years are categorized as Non-DM. Our results hold when using alternative thresholds to identify these groups.

We start by examining two primary outcomes: (i) the frequency with which respondents acquired information about macroeconomic variables over the past three months, and (ii) whether they actively sought more information than usual during that period. These outcomes capture different aspects of the information acquisition process. The first outcome reflects both active and passive information gathering, while the second focuses specifically on active information-seeking behavior. By distinguishing between these two dimensions, we aim to identify respondents who consistently stay informed about the economy versus those who engage in more temporary, decision-driven information searches.

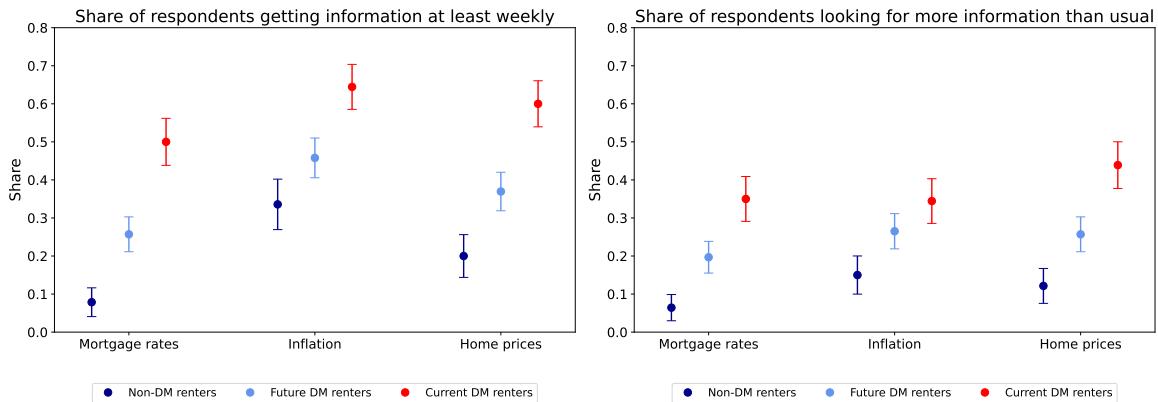


Figure 1: Distance from the home purchase and intensity of information acquisition.

Figure 1 demonstrates that the intensity of information acquisition increases steadily as respondents report being closer to a purchase. We focus on two key variables related to housing decisions – mortgage rates, home prices – and inflation. The left panel shows the proportion of respondents in each group who check information on these variables at least weekly. The right panel highlights the share of respondents who actively sought more information than usual about each variable. Both metrics indicate that households substantially increase their information gathering as they near a home purchase. Figure A1 provides an alternative perspective, displaying the average time since the last active search for information on each variable across the three groups. Current DMs have updated their information far more recently than other respondents, suggesting greater engagement with economic data. Figures A2 and A3 present analogous indicators of information acquisition in relation to the expected timing of car purchases. Here, we

focus on two variables central to car buying decisions – auto loan rates and car prices. As with housing, information acquisition intensifies as households approach a car purchase. We test the relation between information acquisition and expected distance from the adjustment more formally in a set of regressions based on the following specification:

$$Macro\ Information_{it} = \beta \cdot Home\ Distance_{it} + \gamma_1 \cdot X_{it} + \gamma_2 \cdot Z_{it} + \lambda_t + \epsilon_{it} \quad (1)$$

In Panel A of Table 1 the outcome *Macro Information<sub>it</sub>* represents the probability of checking information about the variable at least weekly, while in Panel B it measures the probability of seeking more information than usual. The variable *Home Distance<sub>it</sub>* is based on the renter classification outlined earlier, with Non-DM renters serving as the baseline group. The vector of controls *X<sub>it</sub>* includes a range of respondent characteristics: income, employment status, education, net assets, age, gender, household decision-making role, and numerical ability. We further control for factors that may influence respondents' incentives to pay attention to the economy by including a vector *Z<sub>it</sub>*, which accounts for recent or planned significant financial decisions. These include two indicators: one measuring whether the respondent has recently made important financial decisions (such as significant changes in savings or asset allocations beyond real estate<sup>6</sup>), and the other capturing whether they are planning to do so. Additionally, we control for other housing decisions aside from primary home purchases. Given that the survey was conducted over several weeks, we also incorporate a time fixed effect  $\lambda_t$  to account for changes in the economic environment (e.g., major news events that could influence economic expectations) during the survey period.

---

<sup>6</sup>We carefully explain in the questionnaire that by relevant financial decisions we mean significant changes in the allocation of savings and financial assets other than real estate.

<b>Panel A: Probability of obtaining information weekly</b>			
	(1)	(2)	(3)
	Mortgage rates	Inflation	Home prices
Future DM (2-5 yrs)	0.13*** (0.04)	0.08 (0.05)	0.11** (0.05)
Current DM (<2 yrs)	0.33*** (0.05)	0.24*** (0.06)	0.30*** (0.05)
Constant	0.28*** (0.09)	0.37*** (0.11)	0.36*** (0.11)
Observations	566	566	566
$R^2$	0.25	0.13	0.18
Controls	Yes	Yes	Yes

<b>Panel B: Probability of obtaining more information than usual</b>			
	(1)	(2)	(3)
	Mortgage rates	Inflation	Home prices
Future DM (2-5 yrs)	0.11** (0.04)	0.09** (0.05)	0.12** (0.05)
Current DM (<2 yrs)	0.24*** (0.05)	0.17*** (0.05)	0.30*** (0.05)
Constant	0.05 (0.09)	0.01 (0.10)	0.10 (0.10)
Observations	566	566	566
$R^2$	0.13	0.09	0.14
Controls	Yes	Yes	Yes

Table 1: Information acquisition intensifies closer to home choices.

After controlling for respondents' characteristics and other relevant decisions, our findings remain consistent: proximity to a home purchase is strongly associated with increased intensity of information acquisition. We extend this analysis in Table B1 by examining the time since the last active search for information, and in Table B2 by considering the demand for additional expert information. Tables B3, B4, and B5 report the results from identical regressions, but considering the expected distance from car purchases as the main explanatory variable. Across all cases, the results align with the insights provided by the earlier figures, further reinforcing the connection between approaching durable goods decisions and heightened economic information-gathering.

### 2.4.2 Result 2: macroeconomic accuracy increases closer to durable choices

A natural question that arises is whether the increased intensity and frequency of information acquisition translates into more accurate nowcasts and forecasts of macroeconomic variables. Several factors may weaken this relationship. Survey-based measures of household beliefs are often noisy due to reporting errors, rounding, and the challenges inherent in eliciting precise quantitative estimates (D’Acunto and Weber (2024)). Additionally, imperfect recall can make it difficult for respondents to accurately report their beliefs, even if they have recently acquired relevant information. Furthermore, individuals may seek and receive different information based on variations in their sources or specific needs. For example, a person with a high credit score may access different information about interest rates compared to someone with a lower credit score, leading to heterogeneous outcomes in their forecasts.

We use four indicators to assess macroeconomic accuracy. For mortgage rates, we evaluate nowcasting performance by calculating the absolute difference between respondents’ estimates and the latest available release of the average 30-year fixed-rate mortgage interest rate from Freddie Mac’s Primary Mortgage Market Survey. The accuracy of the 1-year ahead mortgage rate forecast is assessed by the absolute distance from Fannie Mae’s latest 1-year ahead forecast, with respondents’ predictions elicited for the medium-rate case in a scenario format. For inflation, we measure nowcasting accuracy based on the difference between respondents’ estimates and the most recent realization of the headline Consumer Price Index (CPI).<sup>7</sup> Finally, for the 1-year Treasury Bill (T-Bill) rate, we assess accuracy by comparing respondents’ estimates with the average market rate across the trading days during the week the survey was conducted.

We run a set of regressions using a specification similar to that employed in equation 1. Specifically, we estimate:

$$Macro\ Inattention_{it} = \beta \cdot Home\ Distance_{it} + \gamma_1 \cdot X_{it} + \gamma_2 \cdot Z_{it} + \lambda_t + \epsilon_{it} \quad (2)$$

where  $Macro\ Inattention_{it}$  is one of our four indicators of macroeconomic accuracy. The distance variable  $Home\ Distance_{it}$  and the set of controls included in  $X_{it}$  and  $Z_{it}$  are identical<sup>8</sup> to the specification in equation 1. To handle outliers, we winsorize the largest 1% errors.

---

<sup>7</sup>We also use headline Personal Consumption Expenditures (PCE) inflation, finding similar results.

<sup>8</sup>The only additional control is the self-reported eligibility for a 30-year fixed-rate mortgage at the time of the interview, as a respondent’s perception of the market mortgage rate is likely influenced by the interest rate they believe they qualify for based on their credit profile.



<b>Panel A: New household survey</b>		
	(1)	(2)
	Nowcast error rates	Forecast error rates
Future DM (2-5 yrs)	-1.30 (1.37)	-1.79 (1.42)
Current DM (<2 yrs)	-3.64** (1.52)	-4.87*** (1.64)
Observations	676	676
$R^2$	0.25	0.25
Controls	Yes	Yes
Mean(median) in baseline = 9.1(4.6)%		

<b>Panel B: NY Fed Survey of Consumer Expectations</b>		
	(1)	(2)
	Nowcast error rates	Forecast error rates
Future DM	-0.63 (0.54)	-0.66 (0.55)
Current DM	-2.61*** (0.57)	-2.86*** (0.57)
Observations	8839	8839
$R^2$	0.14	0.15
Controls	Yes	Yes
Mean(median) in baseline = 4.7(1.6)%		

Table 2: Macroeconomic accuracy increases closer to home choices.

Panel A of Table 2 presents the estimated  $\beta$  coefficients from our survey, where the outcome variables are the absolute nowcast error and forecast error for mortgage rates. The results indicate that respondents closer to a home purchase hold significantly more accurate beliefs about mortgage rates. For comparison, Panel B shows results from similar regressions estimated using the NY Fed Survey of Consumer Expectations. The specifications largely mirror equation 2, with the key difference being the definition of the  $Home\ Distance_{it}$  indicator. In the NY Fed data, renters are categorized into three groups: (i) non-decision-making (non-DM) renters, who report a zero probability of owning a primary residence in the future; (ii) future DM renters, who report a positive probability of future homeownership; and (iii) current DM renters, who have applied for a mortgage within the past 12 months and report a positive likelihood of owning a home.

This classification method is designed to conservatively distinguish renters with no imme-

diate incentives to follow economic conditions (the non-DMs), from those with potential incentives (the future DMs), and from those who have recently taken concrete steps toward homeownership (the current DMs). One limitation of the NY Fed data is the inability to precisely measure respondents' expected distance from purchasing a home, a gap that motivated the design of our own survey. Despite this limitation, we also find that respondents in the NY Fed data who are closer to a housing adjustment according to our indicator exhibit more accurate macroeconomic beliefs.

### **2.4.3 Result 3: from durable choices to information acquisition**

Our previous results indicate that households expecting to make a large durable adjustment in the near future acquire more macroeconomic information, leading to more accurate beliefs. We interpret this as evidence that idiosyncratic factors – such as changes in a household's financial situation or life events (e.g., changes in family composition) – increase the likelihood of a durable stock adjustment. As households prepare for these adjustments, they gather more information on aggregate, decision-relevant variables, like interest rates. In other words, households are generally inattentive to aggregate conditions but selectively seek out information when it becomes necessary.

An alternative interpretation suggests that households infrequently become informed about variables like interest rates, which in turn motivates them to consider a durable adjustment. This view aligns with sticky information models, such as [Mankiw and Reis \(2002\)](#). However, we argue that our interpretation—where information acquisition is driven by proximity to durable adjustments—better explains the observed connection between information acquisition and the timing of durable adjustments for four key reasons.

First, Result 1 indicates that the intensity of information acquisition – proxied by various elicited variables – increases steadily and consistently as households approach a durable adjustment. This gradual rise in information gathering begins well before households expect to finalize their purchase, suggesting that such decisions are contemplated far in advance.

Second, we included a targeted question in our survey to identify when respondents are most likely to seek information about interest rates. Figure [A4](#) presents the share of respondents selecting each option. Our findings show that households predominantly seek out interest rate information when planning durable adjustments, indicating that they recognize the importance of tracking these variables when making such decisions.

Third, to complement the previous question, we included an additional survey question asking respondents which macroeconomic variables they would seek more information about than usual when planning a durable adjustment. We distinguish between home and car purchases. For home purchases, the question is posed to respondents currently considering a home purchase, as previously identified in the survey. Renters who are not planning a purchase are asked to consider a hypothetical scenario in which they begin to do so. In the case of car purchases, all respondents are asked to consider a generic situation, which could relate to either a past or future purchase.

Figures A5 and A6 show the shares of respondents selecting each variable in the list, separately for home and car purchases. We find that respondents primarily focus on information about interest rates – whether mortgage rates for home purchases or auto loan rates for car purchases – and the relative prices of these goods. This evidence suggests that agents concentrate their attention on a few key variables, particularly rates and prices, when preparing for durable adjustments.

Fourth, within a subset of our sample, we directly investigate the reasons that motivate renters to consider purchasing a primary residence. Renters currently planning to buy a home are asked to rank seven potential motivations, which include: renting being too expensive, favorable interest rates, favorable home prices, job security enabling the purchase, financial stability enabling the purchase, changes in household composition, and a move or location change. Renters who are not currently planning to buy are asked the same question in a hypothetical context.

Figure A7 shows the share of respondents selecting each option as their primary reason for considering a home purchase.<sup>9</sup> 'Renting being too expensive' tops the list, indicating that a key driver behind the decision to buy is the desire to reduce rent expenditures. Interestingly, favorable interest rates and home prices are the least frequently chosen reasons. This suggests that the alternative interpretation – that favorable rates encourage durable adjustments – plays a relatively minor role. Instead, motivations related to a household's idiosyncratic circumstances, such as financial stability or changes in family composition, seem to be more influential, aligning with our main interpretation of Results 1 and 2.

---

<sup>9</sup>Figure A7 is based on a subsample of the total respondents. We are currently collecting additional responses in an ongoing survey wave.

## 2.5 Takeaways from the empirical evidence

The evidence from the new survey supports our selective inattention theory: households are generally inattentive to the economy, but not as they move closer to durable adjustments. These decisions are infrequent and consequential for households, which explain why they have an incentive to acquire information about the economic variables that matter for the choice. In particular, learning about interest rates is on top of households' mind when they approach those decisions. In Section 3, we study how to incorporate selective inattention to interest rates in a benchmark durable adjustment model.

## 3 Durable Adjustments Model with Selective Inattention

We build a model to study the macroeconomic implications of the interplay between durable choices and information acquisition. Our durable adjustment model builds on the canonical model of [Berger and Vavra \(2015\)](#), with the addition of match quality shocks as in [McKay and Wieland \(2021\)](#), and of a dynamic rational inattention problem as in [Afrouzi and Yang \(2021\)](#) and [Afrouzi, Flynn and Yang \(2024\)](#). We keep the core part of the durable adjustment model as close as possible to the benchmarks in the literature ([Berger and Vavra \(2015\)](#); [McKay and Wieland \(2021, 2022\)](#); [Beraja and Zorzi \(2024\)](#)) in order to highlight the effects of selective inattention. In doing so, we align with these papers, and focus on a broad notion of durables that encompasses both housing and cars.

We are interested in two main innovations introduced by our framework. First, as in every standard rational inattention problem, agents in the model are inattentive, but can endogenously acquire information about uncertain states subject to some cost. The interaction of rational inattention with infrequent, large decisions at the individual level – the durable adjustments – generate selective inattention: households are generally inattentive, *except* at the time when they have to adjust their durable stock. Second, we ask how this mechanism affects the propagation of interest rate shocks. In particular, we are interested in how selective inattention alters the propagation relative to the other two leading benchmark in the literature: full information, and exogenous information acquisition.

### 3.1 Model setup

**Household problem.** In our model, households choose to allocate resources to non-durables, durables and risky savings, facing adjustments and maintenance costs on their durable holdings. We opt for a state-dependent (S,s)-type adjustment model (Caplin and Leahy (2010)) in order to fully capture the interaction between endogenous durable adjustments and endogenous information acquisition. We also allow for inframarginal adjustments by including shock to the quality of the match between a households and its current durable stock. This helps obtain more realistic durable elasticities to interest rate changes, a point extensively discussed in House (2014) and McKay and Wieland (2021). As in Berger and Vavra (2015) households face idiosyncratic income risk, but are also subject to interest rate risk.

We complement the core durable adjustment block with the information acquisition part. We find it plausible to assume that agents are perfectly informed about current individual income, as in other models with information frictions such as McKay and Wieland (2021) and Auclert, Rognlie and Straub (2020). The information friction is restricted to the interest rate which in the model captures the return on the short-term risky asset. To match the empirical insights presented in Section 2, we introduce a learning problem that is able to capture the fact that agents are poorly informed not only about future rates, but also about their current value. Our key friction is that agents do not observe the current rate  $r$  with precision, which in turn cascades to forecasts that at all horizons deviate from full information rational expectations. For tractability, we assume that agents observe imperfectly the current rate  $r$ , but use the correct parameters to iterate forward the process and obtain the forecasts.

The fact that agents in the model are imperfectly informed about the current rate, and can learn about it, is also consistent with another piece of evidence from our survey of U.S. households. As described in section 2.2, we elicit the type of information that respondents would like to obtain from experts such as economists and professional forecasters. Figure 2 shows that, among those who would like to access additional information about mortgage rates, the main concern is learning more about the current rate.

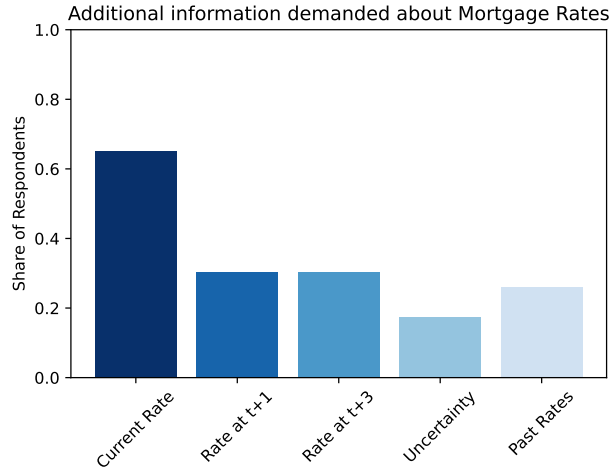


Figure 2: Type of information that renters would obtain from experts.

The agent in the model enters each period knowing her current level of liquid assets  $b$  and durables  $d$  – both chosen in the previous period –, as well as current idiosyncratic income  $y$ , and having prior mean  $\mu$  and variance  $\Sigma$  about the current rate  $r$  formed in the previous period. She can obtain an additional Gaussian signal  $s$  about the current rate  $r$  paying a cost that is a function  $g(\cdot)$  of Shannon’s mutual information  $I$ . The information acquisition setup is similar to [Afrouzi and Yang \(2021\)](#) and [Afrouzi, Flynn and Yang \(2024\)](#), where firms choose the optimal amount of information about the productivity process to inform their pricing decision subject to nominal rigidities.

There is a subtle distinction between what we are doing and those papers. They start with a general rational inattention (RI) problem that places no restrictions on the space of signals that could be acquired, but appeal to a quadratic objective as a second-order approximation of the underlying optimization problem. In our setup, it is not feasible to obtain an analytical quadratic approximation for the consumption-saving problem with durable adjustments. As a result, we are instead restricting the information acquisition problem to the specific case of Gaussian signals about the current rate. We can think of our solution as an approximation: just like [Afrouzi and Yang \(2021\)](#) and [Afrouzi, Flynn and Yang \(2024\)](#) appeal to a quadratic objective as a second-order approximation, we can appeal to our parametric assumptions on the information acquisition problem as an approximation.

**Recursive formulation.** We now present the model in recursive form. Each time period  $t$  – which in the model corresponds to one quarter – can be broken into two stages. In

the first stage agents solve the optimal information acquisition problem anticipating the subsequent durable adjustment. In the second, they solve the durable adjustment problem given their updated beliefs.

Moving backwards, in the second stage, individuals choose nondurables  $c$  and durables  $d'$  – subject to adjustment and maintenance costs captured by the function  $A(d, d')$  – using subjective beliefs about the interest rate  $r$  that are a function of their prior mean and variance,  $\mu$  and  $\Sigma$ , as well as of the signal they receive,  $r + \sqrt{\Sigma_s}s$ . Utility is derived from consuming nondurables  $c$  and a service flow from durables  $s' = qd'$ , where  $q$  determines whether the existing durable stock is a good match for the household. To form their beliefs, they perform a Bayesian update given these parameters, making this a standard filtering problem with Kalman gain  $G$ . In other words, agents solve the consumption-saving problem with durables adjustment holding potentially biased beliefs about current and future interest rates. Since the current interest rate  $r$  also determines the borrowing, we assume the borrowing constraint must be satisfied under objective and agents' subjective beliefs. This second stage problem can be represented recursively as follows:

$$\mathbf{c}, \mathbf{d}' = \arg \max_{c>0, d'>0} \frac{(c^\nu (s')^{1-\nu})^{1-\gamma}}{1-\gamma} + \beta \mathbf{E}_{\eta, \epsilon} V(b' + \Delta_b, d', r' + \Delta_r, y', \mu', \Sigma',)$$

$$c + b' = y + \exp(r)b - (d' - (1 - \delta)d) - A(d, \mathbf{d}')$$

$$b' + \min\{\Delta_b, 0\} \geq 0$$

$$r' = (1 - \rho_r)\bar{r} + \rho_r r + \eta, \quad \eta \sim N(0, \sigma_\eta^2)$$

$$\log y' = \rho \log y + \epsilon, \quad \epsilon \sim N(0, \sigma_\epsilon^2)$$

$$A(d, d') = \begin{cases} F_d(1 - \delta)p_d d + F_t why & \text{if } d' \neq (1 - \delta(1 - \chi))d \\ 0 & \text{else} \end{cases}$$

$$G = \frac{\Sigma}{\Sigma + \Sigma_s}$$

$$\tilde{E}(r) = (1 - G)\mu + G(r + \sqrt{\Sigma_s}s), \quad s \sim N(0, 1)$$

$$\mu' = (1 - \rho_r)\bar{r} + \rho_r \tilde{E}(r)$$

$$\Sigma' = \rho_r^2 \Sigma (1 - G) + \sigma_\eta^2$$

$$\Delta_b = b(\exp(\tilde{E}(r)) - \exp(r))$$



$$\Delta_r = \rho_r(\tilde{E}(r) - r)$$

We omit for now a careful explanation of all the equations and variables in the recursive formulation. We will return to this in the next iteration.

In the first stage, individuals choose the optimal precision of the signal they receive,  $\Sigma_s$ , taking into account the problem they will solve in the second stage. The value function associated with the first stage is given by:

$$V(b, d, r, y, \mu, \Sigma) = \max_{\Sigma_s} \mathbb{E}_s \left[ \frac{(\mathbf{c}^\nu (\mathbf{d}')^{1-\nu})^{1-\gamma}}{1-\gamma} + \beta \mathbb{E}_{\eta, \epsilon} V(b', \mathbf{d}', r', y', \mu', \Sigma') \right] + g \left( \log \left( \frac{\Sigma_s}{\Sigma + \Sigma_s} \right) \right)$$

In other words, households evaluate the expected value associated with each signal, taking into account that in the second stage they will have to act based on the signal they receive. In assessing each signal, they still face the uncertainty as the realization of the signal is stochastic and can only be taken as given in the second stage.

Households face the following trade-off when acquiring the signal. The benefit of choosing a more precise signal comes from the fact that the choice variables  $c$ ,  $d'$  and  $b$  of the consumption-saving problem in the second-stage, which are made to maximize *subjective* utility, are more likely to maximize *objective* utility when  $\Sigma_s$  is low. Agents want to minimize the wedge between the choices taken under subjective utility and those that would be taken under objective utility. The cost of choosing a more precise signal is a monotonic function  $g(\cdot)$  of the reduction in uncertainty between the posterior and prior distribution over  $r$ , as is standard in the rational inattention literature. We do not restrict  $g(\cdot)$  to be a linear cost function. As we discuss in section 3.2, the choice of the cost function is key to replicate in the model the information acquisition patterns that we observe in the data.

**Calibration.** We calibrate the parameters for the durable adjustment part of the model following the quarterly calibration for the U.S. economy in [Berger and Vavra \(2015\)](#). The process for the interest rate  $r$  is calibrated to the time series of the real Fed Funds rate following a similar procedure to [McKay and Wieland \(2021, 2022\)](#). We leave for the next iteration a more detailed calibration section.

### 3.2 Endogenous information acquisition

We discipline the information acquisition problem in our model using the empirical evidence on selective inattention presented in Section 2. We compare two specifications of the information cost function  $g(\cdot)$  that generate alternative information acquisition strategies, though both consistent with selective inattention.

**Linear information cost.** The benchmark case we consider is a cost function that is linear in mutual information,  $g(\omega, I) = \omega \cdot I$ . This is the standard assumption in the rational inattention literature, especially in the context of applications to dynamic macroeconomic models (Maćkowiak, Matějka and Wiederholt (2023)). We calibrate the parameter  $\omega$  to match the difference in the average nowcast errors<sup>10</sup> for mortgage rates between two groups in the NY Fed SCE data: renters who are potential buyers (Future DMs), and renters who are about to finalize the home purchase (Current DMs). In order to compare the model- and the data-implied moments, we simulate a panel of households from our model and compute the nowcast errors in the periods before and after a durable adjustment. In particular, we match the average nowcast errors of Current DMs from the data to the nowcast errors that households make in the quarter when they are adjusting their durable stock in the model. We match instead the errors of Future DMs to the average errors that households in the model make in the 7 quarters prior to the durable adjustment. The choice of this window follows the estimated window from our survey. With a linear cost, agents only acquire information in the same quarter  $t$  when they make a durable adjustment. This is reminiscent of the finding in Afrouzi, Flynn and Yang (2024): in their context, firms only acquire information when they are resetting their prices, a pattern that is consistent with data from New Zealand firms. This preference for “discrete learning” within the model can be interpreted as follows. The cost of imperfectly observing interest rates is relatively small, except when households have to adjust their durable stock. This follows from the fact that the durable decision cannot be easily reversed due to the adjustment costs. This implies that agents in the model postpone their information acquisition to the exact quarter when the adjustment takes place. All the information prior to the decision would become stale as  $r$  keeps fluctuating, discouraging

---

<sup>10</sup>More specifically, we target the difference in the ratios of nowcast errors to current mortgage rates. This ensures that we are normalizing the errors across different survey collections. In section ??, our analysis focuses on nowcast errors. We can recover the ratio that we target in the model by simply computing the ratio of nowcast errors to the current rate in each period in which the survey is conducted.

any learning ahead of the adjustment. This pattern is partially inconsistent with our empirical evidence, as we observe that households exhibit gradual learning about interest rates on path towards durable purchases. This motivates the extension to a convex cost case.

**Convex information cost.** We model a preference for “gradual learning” (Zhong (2022); Hebert and Woodford (2023)) by considering a convex information cost that we parametrize as  $g(\omega, \kappa, I) = \omega \cdot I^\kappa$  – with the parameter  $\kappa$  controlling the curvature of the function relative to mutual information.

While choosing their optimal information acquisition strategy under convex costs, agents trade-off two forces. As the cost becomes more convex, they start to gradually acquire information about interest rates ahead of the quarter  $t$  in which they adjust their durable stock. This preference for smoothing the learning process comes from optimally avoiding to pay a very large information cost at the time of the adjustment. Key for this mechanism is the fact that in our (S,s)-type model agents anticipate their drift towards the adjustment thresholds, and start preparing for their durable decision. However, as agents optimally smooth their information acquisition, they not only take into account the convexity of the cost, but also the persistence of the underlying interest rate process. As the persistence  $\rho_r$  declines, agents postpone their learning to closer to the adjustment period as they internalize that information rapidly becomes stale.

We calibrate the curvature parameter  $\kappa$  by matching the start of the increase in the Kalman gains ahead of the durable adjustment in the model to the attention window estimated in the data. In particular, Kalman gains start increasing – thereby signaling gradual information acquisition – 7 quarters ahead of the adjustment.

### 3.3 Interest rate shocks under selective inattention

We use our calibrated model to study how selective inattention affects the propagation of a shock to interest rates. Starting from a stationary distribution, we study one-time, unanticipated shocks to the level of the interest rate that gradually phase out. While our model does not feature a monetary authority directly controlling  $r$ , we interpret our shocks as akin to innovations to the real interest rate in response to monetary policy changes.

**Computing impulse responses in the model.** To generate impulse responses to an interest rate shock, we adopt the following three steps. First, a panel of individuals is simulated for enough burn-in periods to obtain a stationary distribution of the aggregate variables in the model. Each individual is subject to an idiosyncratic income history and an idiosyncratic interest rate path. We choose to give individuals different paths of interest rates in order to avoid the dependency of our results on a particular path of aggregate interest rates. These paths of the income and interest rate processes follow the calibration described in section 3.1. Figure A8 shows how the adjustment hazard and the intensity of information acquisition – measured through the Kalman gains – vary as a function of the durable gap in the simulated model.

Second, from the steady-state, we simulate two alternative paths. In one, the baseline scenario, we keep simulating the path for the interest rate using the same process that led to the steady-state distribution. In the second, the counterfactual, we add on top of the baseline scenario an impact 25bp interest rate change – alternatively, a hike or a cut. We follow McKay and Wieland (2021) in modeling a shock based the estimated impulse response of the real rate to a Romer and Romer (2004); Wieland and Yang (2016) monetary policy shock. For both paths we recover for each variable the distance from its steady-state value. Third, impulse responses for the variables in the model are computed through the difference in their steady-state deviations under the two scenarios.

**Assumptions over the information acquisition process.** We are interested in how the propagation of interest rate shocks is affected by different information acquisition strategies. We compare two leading benchmarks in the literature – full information and exogenous information acquisition – with the endogenous acquisition case under selective inattention.

The full information benchmark can be recovered by simply getting rid of the information cost. By setting  $\omega = 0$ , we obtain a frictionless benchmark where agents are perfectly informed about current interest rates (i.e. the average nowcast error is zero), and form unbiased forecast for future rates based on the correct process for  $r$ . This case replicates<sup>11</sup> how an interest rate shock would propagate in Berger and Vavra (2015) – though their paper does not specifically study a shock of this kind.

We then consider the case with exogenous information acquisition. We model exogenous

---

<sup>11</sup>The only difference is that for now we abstract from aggregate income fluctuations. This would not change the main takeaways and we are working on an extension of the model that will allow for that.

information by fixing the Kalman gain to 0.14 in each period  $t$  and agent  $i$ . This allows to recover an average level of information rigidity consistent with the one estimated in [Coibion and Gorodnichenko \(2012\)](#). Exogenous information in the form of sticky expectations is commonly used in the literature ([Carroll, Crawley, Slacalek, Tokuoka and White \(2020\)](#); [Auclert, Rognlie and Straub \(2020\)](#); [McKay and Wieland \(2021\)](#)) to generate a delayed, hump-shaped response to aggregate shocks. Unlike under selective inattention, exogenous information breaks the connection between learning and durable adjustments. Households have biased beliefs about interest rates, and the bias is not affected by the distance from the durable adjustment.

Lastly, we consider our leading case with endogenous information acquisition which, as discussed in section 3.2, generate selective inattention to interest rates. We separately study the cases with linear and convex costs.

**Main results.** Figure 3 shows the impulse responses for the average interest rate nowcast, non-durable consumption and durable expenditures in the model in response to an annualized 25bps rate cut, comparing the three different information acquisition scenarios. We model a 25bps impact shock to the real interest rate to be consistent with the magnitude of the shock studied in [McKay and Wieland \(2021\)](#).

The left panel in Figure 3 shows how nowcasts respond to the shock to interest rates. Under full information, these nowcasts correspond to the true realization, so the average nowcast error is zero. Under exogenous information, nowcasts responds sluggishly to the shock because the shock is not observed, which generates large forecast errors. These nowcast errors are relatively persistent. With respect to average expectations, our endogenous information case is close to the exogenous information case.

The center and right panels in Figure 3 illustrate the key results from the model. The center panel shows that selective inattention substantially dampens the response of non-durable consumption to monetary policy, almost as much as in the exogenous information case. This dampening follows from the fact that the interest rate increase is only partially observed, just as in the exogenous information case in prior literature ([Carroll, Crawley, Slacalek, Tokuoka and White \(2020\)](#); [Auclert, Rognlie and Straub \(2020\)](#); [McKay and Wieland \(2021\)](#)). However, although non-durable consumption in a model with selective inattention behaves similarly to the exogenous case, the right panel shows that the durables response is entirely different. In particular, with selective inattention, the increase in durables expenditure is almost as large as in the full information case.

These impulse responses capture the essence of selective inattention. With selective inattention, average beliefs are sluggish as under exogenous information acquisition. However, durable expenditures are almost as elastic as under full information. A model with exogenous information would predict a very low elasticity of durable demand to rate changes, a result inconsistent with the large body evidence pointing to a high durable sensitivity (Berger and Vavra (2014); Sterk and Tenreyro (2018); McKay and Wieland (2021)).

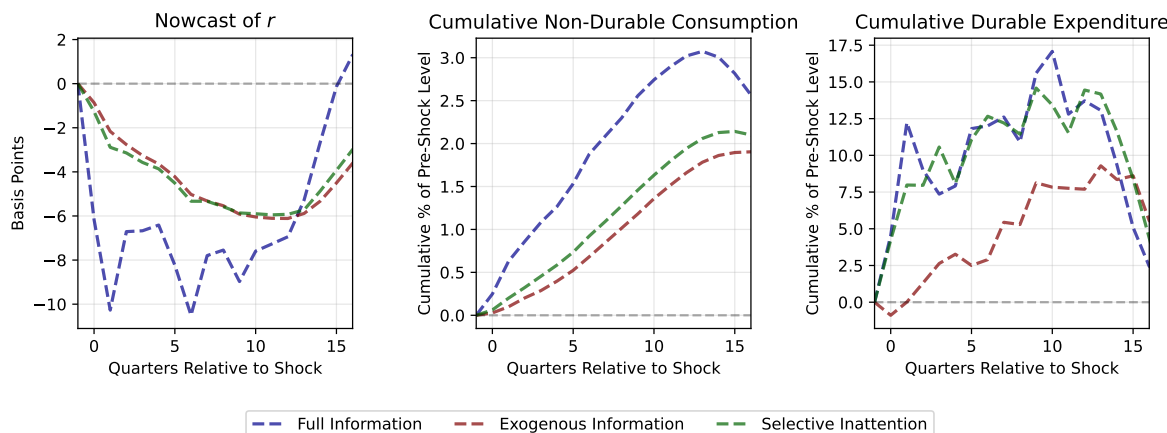


Figure 3: Impulse responses functions following an annualized 25bps rate cut.

The fact that the selective inattention model generates a dampened response of non-durable consumption to monetary policy, but has very little effect on the response of durable consumption, is driven by the tight connection between durables adjustments and beliefs that arise endogenously in our model. Although the beliefs of most agents respond slowly, agents close to their durable adjustment thresholds have the largest incentives to acquire information about  $r$ , meaning they have more accurate beliefs.

## 4 Conclusion

We design and conduct a new survey to show that U.S. households' attention to the economy is related to their durable spending decisions. Households are on average very inattentive to the economy, but gradually acquire information about decision-relevant variables, such as interest rates, as they move closer to home purchases and other durable adjustments. This is reflected in more accurate nowcasts and forecasts, as well as in greater demand for economic information. Our evidence not only rejects frameworks with full

information, but also models with exogenous information that do not account for the tight connection between lumpy durable adjustments and information acquisition.

To study the macroeconomic implications of selective inattention, we augment a canonical fixed-cost model of durable consumption model with a dynamic rational inattention problem. The model is calibrated to match our micro-evidence on smooth information acquisition, and can be used as a laboratory to study the propagation of interest rate shocks. We show that our model is able to replicate two patterns that are hard to jointly reconcile in existing models: a high average level of household inattention to the economy, and an aggregate durables demand that is very elastic to interest rate changes.



## Bibliography

- Afrouzi, Hassan.** 2023. "Strategic Inattention, Inflation Dynamics, and the Non-Neutrality of Money." National Bureau of Economic Research Working Paper 31796. [2](#)
- Afrouzi, Hassan, and Choongryul Yang.** 2021. "Dynamic Rational Inattention and the Phillips Curve." CESifo CESifo Working Paper Series 8840. [18](#), [20](#)
- Afrouzi, Hassan, Joel P Flynn, and Choongryul Yang.** 2024. "What Can Measured Beliefs Tell Us About Monetary Non-Neutrality?" National Bureau of Economic Research Working Paper 32541. [3](#), [18](#), [20](#), [23](#)
- Ahn, Hie Joo, Shihan Xie, and Choongryul Yang.** 2024. "Effects of monetary policy on household expectations: The role of homeownership." *Journal of Monetary Economics*, 103599. [3](#)
- Auclert, Adrien, Matthew Rognlie, and Ludwig Straub.** 2020. "Micro Jumps, Macro Humps: Monetary Policy and Business Cycles in an Estimated HANK Model." *NBER Working Paper*. [19](#), [26](#)
- Beraja, Martin, and Nathan Zorzi.** 2024. "Durables and Size-Dependence in the Marginal Propensity to Spend." National Bureau of Economic Research Working Paper 32080. [3](#), [18](#)
- Berger, David, and Joseph Vavra.** 2014. "Measuring How Fiscal Shocks Affect Durable Spending in Recessions and Expansions." *American Economic Review*, 104(5): 112â15. [27](#)
- Berger, David, and Joseph Vavra.** 2015. "Consumption Dynamics During Recessions." *Econometrica*, 83(1): 101–154. [1](#), [2](#), [3](#), [18](#), [19](#), [22](#), [25](#)
- Berger, David, Veronica Guerrieri, Guido Lorenzoni, and Joseph Vavra.** 2018. "House Prices and Consumer Spending." *The Review of Economic Studies*, 85(3): 1502–1542. [3](#)
- Bloom, Nicholas, Steven J Davis, Lucia Foster, Brian Lucking, Scott Ohlmacher, and Itay Saporta-Eksten.** 2020. "Business-Level Expectations and Uncertainty." National Bureau of Economic Research Working Paper 28259. [8](#)
- Boctor, Valerie R, Olivier Coibion, Yuriy Gorodnichenko, and Michael Weber.** 2024. "On Eliciting Subjective Probability Distributions of Expectations." National Bureau of Economic Research Working Paper 32406. [8](#)
- Caplin, Andrew, and John Leahy.** 2010. "Economic Theory and the World of Practice: A Celebration of the ( S , s ) Model." *Journal of Economic Perspectives*, 24(1): 183–202. [19](#)
- Capozza, Francesco, Ingar Haaland, Christopher Roth, and Johannes Wohlfart.** 2021. "Studying Information Acquisition in the Field: A Practical Guide and Review." University of Bonn and University of Cologne, Germany ECONtribute Discussion Papers Series 124. [2](#)
- Carroll, Christopher D., Edmund Crawley, Jiri Slacalek, Kiichi Tokuoka, and Matthew N White.** 2020. "Sticky Expectations and Consumption Dynamics." *American Economic Journal: Macroeconomics*, 12(3): 40–76. [26](#)
- Coibion, Olivier, and Yuriy Gorodnichenko.** 2012. "What Can Survey Forecasts Tell Us about Information Rigidities?" *Journal of Political Economy*, 120(1): 116–159. [26](#)

- Coibion, Olivier, Yuriy Gorodnichenko, and Saten Kumar.** 2018. "How Do Firms Form Their Expectations? New Survey Evidence." *American Economic Review*, 108(9): 2671–2713. 2, 4
- Cui, Tom, Eric Zwick, and David Berger.** 2017. "Stimulating Durable Spending: Theory and Evidence." 3
- D'Acunto, Francesco, and Michael Weber.** 2024. "Why Survey-Based Subjective Expectations Are Meaningful and Important." *Annual Review of Economics*, , (Accepted). 2, 14
- D'Acunto, Francesco, Ulrike Malmendier, and Michael Weber.** 2023. "What Do the Data Tell Us about Inflation Expectations?" In *Handbook of Economic Expectations*. 133–161. Elsevier. 2
- Gavazza, Alessandro, and Andrea Lanteri.** 2021. "Credit Shocks and Equilibrium Dynamics in Consumer Durable Goods Markets." *The Review of Economic Studies*, 88(6): 2935–2969. 3
- Hebert, Benjamin, and Michael Woodford.** 2023. "Rational inattention when decisions take time." *Journal of Economic Theory*, 208(C). 3, 24
- House, Christopher L.** 2014. "Fixed Costs and Long-Lived Investments." *Journal of Monetary Economics*, 68(1): 86–100. 19
- Link, Sebastian, Andreas Peichl, Christopher Roth, and Johannes Wohlfart.** 2023. "Attention to the Macroeconomy." *SSRN Electronic Journal*. 2
- Lusardi, Annamaria, and Olivia S. Mitchell.** 2011. "Financial Literacy and Retirement Planning in the United States." *Journal of Pension Economics and Finance*, 10(4): 509–525. 10
- Maćkowiak, Bartosz, Filip Matějka, and Mirko Wiederholt.** 2023. "Rational Inattention: A Review." *Journal of Economic Literature*, 61(1): 226–273. 1, 3, 23
- Mankiw, N. Gregory, and Ricardo Reis.** 2002. "Sticky Information versus Sticky Prices: A Proposal to Replace the New Keynesian Phillips Curve." *The Quarterly Journal of Economics*, 117(4): 1295–1328. 16
- McKay, Alisdair, and Johannes F. Wieland.** 2021. "Lumpy Durable Consumption Demand and the Limited Ammunition of Monetary Policy." *Econometrica*, 89(6): 2717–2749. 1, 2, 3, 18, 19, 22, 25, 26, 27
- McKay, Alisdair, and Johannes F. Wieland.** 2022. "Forward Guidance and Durable Goods Demand." *American Economic Review: Insights*, 4(1): 106–122. 3, 18, 22
- Mikosch, Heiner, Christopher Roth, Samad Sarferaz, and Johannes Wohlfart.** 2024. "Uncertainty and Information Acquisition: Evidence from Firms and Households." *American Economic Journal: Macroeconomics*, 16(2): 375–405. 2, 4, 7
- Romer, Christina D., and David H. Romer.** 2004. "A New Measure of Monetary Shocks: Derivation and Implications." *American Economic Review*, 94(4): 1055–1084. 25
- Roth, Christopher, Sonja Settele, and Johannes Wohlfart.** 2022. "Risk Exposure and Acquisition of Macroeconomic Information." *American Economic Review: Insights*, 4(1): 34–53. 4, 7

- Sims, Christopher A.** 2003. "Implications of Rational Inattention." *Journal of Monetary Economics*, 50(3): 665–690. [3](#)
- Stantcheva, Stefanie.** 2024. "Why Do We Dislike Inflation?" *Brookings Papers on Economic Activity*. [5](#)
- Sterk, Vincent, and Silvana Tenreyro.** 2018. "The Transmission of Monetary Policy through Redistributions and Durable Purchases." *Journal of Monetary Economics*, 99: 124–137. [27](#)
- Weber, Michael, Francesco D'Acunto, Yuriy Gorodnichenko, and Olivier Coibion.** 2022. "The Subjective Inflation Expectations of Households and Firms: Measurement, Determinants, and Implications." *Journal of Economic Perspectives*, 36(3): 157–184. [2](#)
- Wieland, Johannes F, and Mu-Jeung Yang.** 2016. "Financial Dampening." National Bureau of Economic Research Working Paper 22141. [25](#)
- Yang, Choongryul.** 2022. "Rational inattention, menu costs, and multi-product firms: Micro evidence and aggregate implications." *Journal of Monetary Economics*, 128: 105–123. [2](#)
- Zhong, Weijie.** 2022. "Optimal Dynamic Information Acquisition." *Econometrica*, 90(4): 1537–1582. [3](#), [24](#)

## A Additional Figures

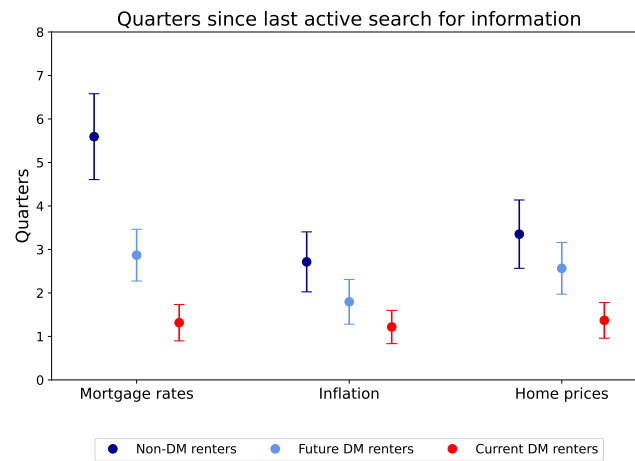


Figure A1: Distance from the home purchase and intensity of information acquisition.

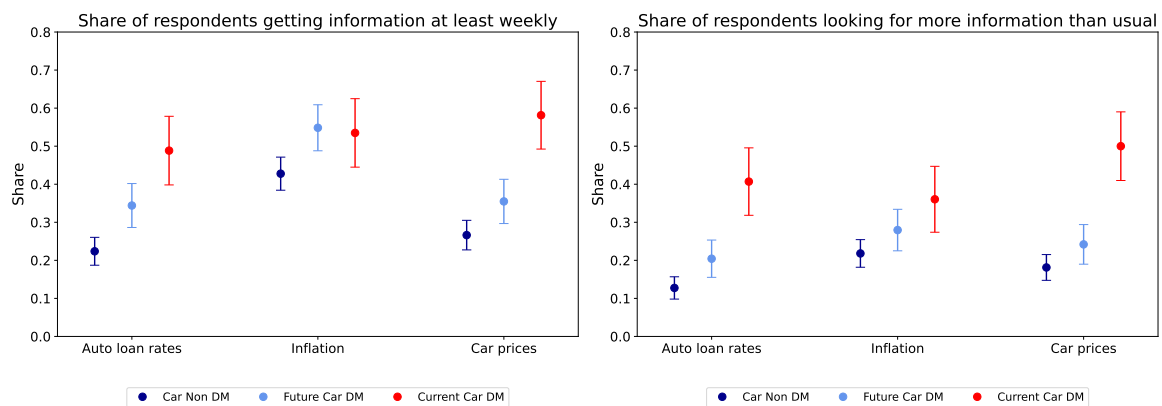


Figure A2: Distance from the car purchase and intensity of information acquisition.

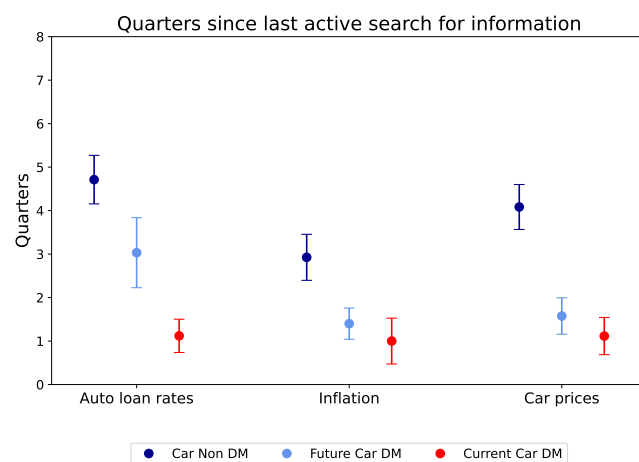


Figure A3: Distance from the car purchase and intensity of information acquisition.

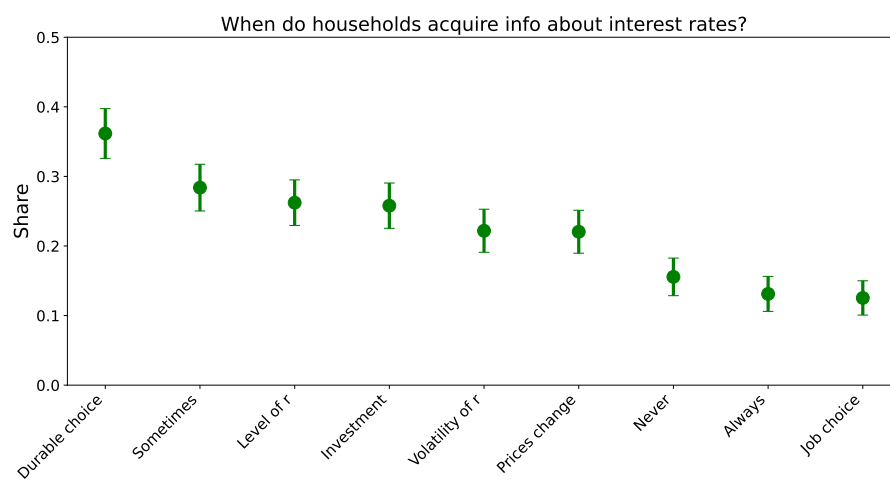


Figure A4: Circumstances when households acquire information about interest rates.

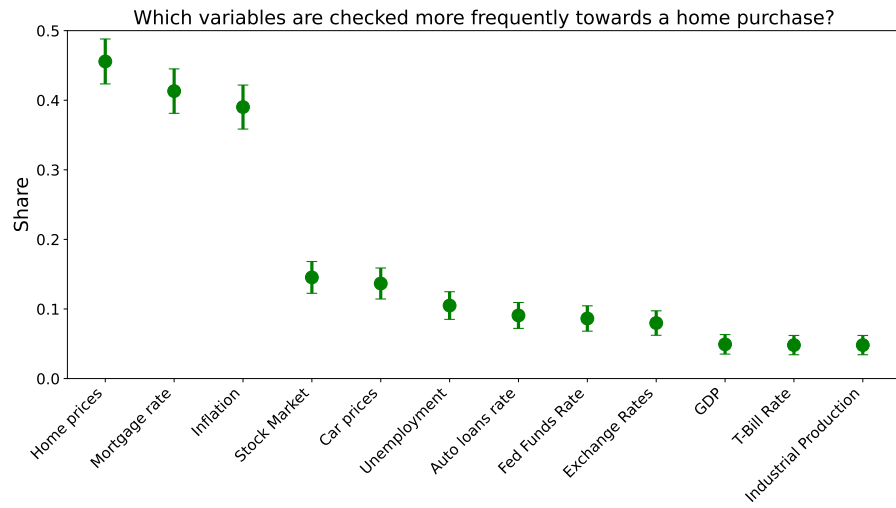


Figure A5: Economic variables checked before a home purchase.

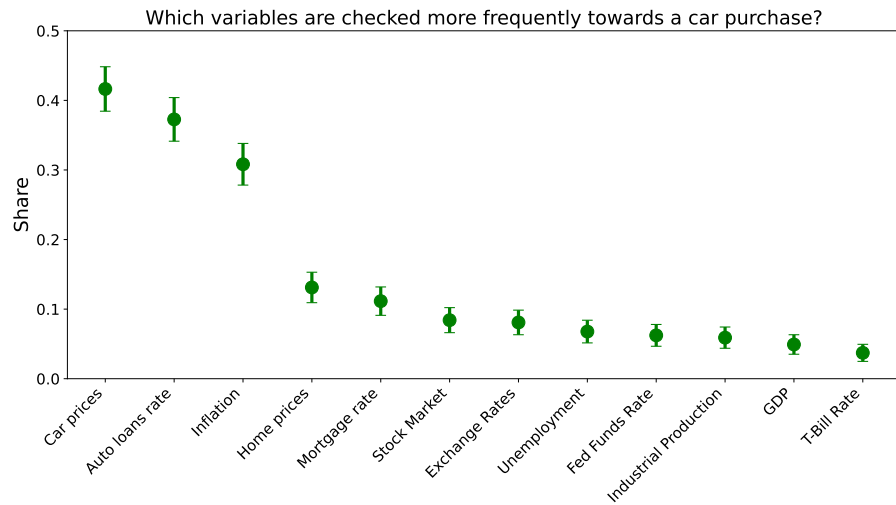


Figure A6: Economic variables checked before a car purchase.

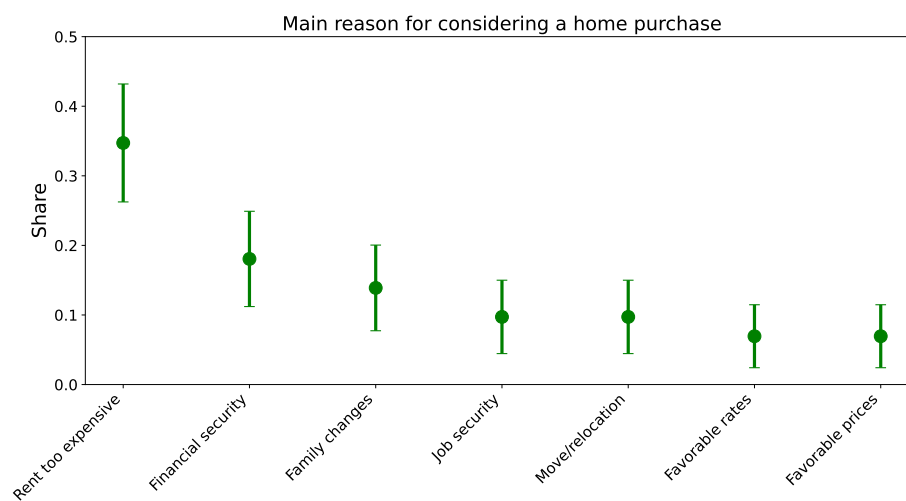


Figure A7: Drivers of a home purchase.

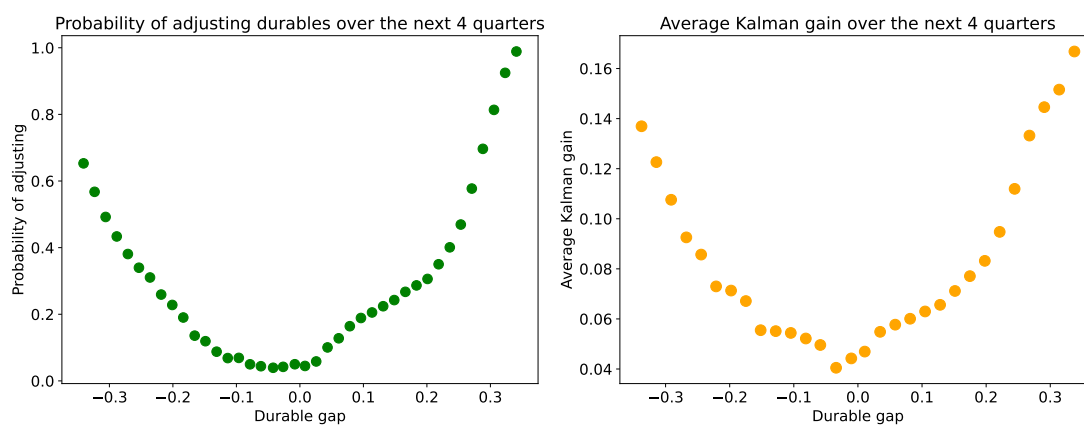


Figure A8: Adjustment hazard and Kalman gain in the simulated model.



## B Additional Tables

	(1)	(2)	(3)
	Mortgage rates	Inflation	Home prices
Future DM (2-5 yrs)	-3.37*** (0.79)	-0.66 (0.64)	-0.66 (0.70)
Current DM (<2 yrs)	-3.66*** (0.81)	-1.19* (0.69)	-2.33*** (0.75)
Constant	7.82*** (1.80)	3.82** (1.63)	4.81*** (1.78)
Observations	107	115	120
$R^2$	0.52	0.29	0.36
Controls	Yes	Yes	Yes

Table B1: Quarters since last active search for information.

	(1)	(2)	(3)
	Mortgage rates	Inflation	Home prices
Future DM (2-5 yrs)	0.07 (0.05)	-0.02 (0.05)	0.11** (0.05)
Current DM (<2 yrs)	0.19*** (0.05)	-0.04 (0.05)	0.13** (0.05)
Constant	0.30*** (0.10)	0.60*** (0.10)	0.56*** (0.10)
Observations	695	695	695
$R^2$	0.10	0.09	0.06
Controls	Yes	Yes	Yes

Table B2: Demand for additional information.

<b>Panel A: Title for First Panel</b>			
	(1)	(2)	(3)
	Auto loan rates	Inflation	Car prices
Future Car DM (1-3 yrs)	0.07* (0.04)	0.08* (0.04)	0.04 (0.04)
Current Car DM (<1 yr)	0.25*** (0.05)	0.10* (0.06)	0.31*** (0.05)
Constant	0.48*** (0.09)	0.40*** (0.10)	0.42*** (0.09)
Observations	674	674	674
$R^2$	0.24	0.12	0.22
Controls	Yes	Yes	Yes

<b>Panel B: Title for Second Panel</b>			
	(1)	(2)	(3)
	Auto loan rates	Inflation	Car prices
Future Car DM (1-3 yrs)	0.06* (0.03)	0.05 (0.04)	0.03 (0.04)
Current Car DM (<1 yr)	0.26*** (0.04)	0.15*** (0.05)	0.31*** (0.05)
Constant	0.04 (0.08)	0.01 (0.09)	0.11 (0.08)
Observations	674	674	674
$R^2$	0.14	0.08	0.16
Controls	Yes	Yes	Yes

Table B3: Information acquisition intensifies closer to car purchases.

	(1)	(2)	(3)
	Auto loan rates	Inflation	Car prices
Future Car DM (1-3 yrs)	-0.90 (0.73)	-0.89 (0.68)	-2.18*** (0.66)
Current Car DM (<1 yr)	-3.21*** (0.78)	-1.23* (0.70)	-2.72*** (0.72)
Constant	7.32*** (1.71)	3.94** (1.62)	4.72*** (1.58)
Observations	124	124	132
$R^2$	0.41	0.31	0.34
Controls	Yes	Yes	Yes

Table B4: Quarters since last active search for information.

	(1)	(2)	(3)
	Auto loan rates	Inflation	Car prices
Future Car DM (1-3 yrs)	0.15*** (0.04)	0.05 (0.04)	0.21*** (0.04)
Current Car DM (<1 yr)	0.22*** (0.05)	0.05 (0.05)	0.31*** (0.05)
Constant	0.08 (0.09)	0.55*** (0.09)	0.42*** (0.09)
Observations	823	823	823
$R^2$	0.10	0.10	0.12
Controls	Yes	Yes	Yes

Table B5: Demand for additional information.