

Mortgage Journeys: A Video Ethnography of the Homebuying and Mortgage Process

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Abstract

This paper presents findings about lower-income first-time homebuyer mortgage shopping experiences emerging from a 2015 video ethnography study conducted by the authors for Fannie Mae. Specifically the paper makes the case for three distinct phases in the home buying process which set the parameters for the degree of mortgage shopping that lower-income first-time homebuyers engage in. Additionally five contextual factors further influence the mortgage shopping behavior of study participants in each stage of the process. Drawing on longitudinal ethnographic video and interview data collected from 14 low-income first time homebuyers in Massachusetts and Tennessee in 2015, this paper describes the different paths lower-income, first-time homebuyers take to obtaining a mortgage; the kinds of mortgage search tools that lower-income, first-time homebuyers use in their searches; the different competencies, preconceptions, and shopping behavior that homebuyers draw on in the mortgage search process; and how these factors influence the kinds of mortgage products they seek or obtain. The findings from the paper illuminate the need to improve the ease of mortgage shopping for lower-income first-time homebuyers at all stages of the home buying process.

Introduction¹

Successful homeownership in the United States may offer a range of social and economic benefits for homeowners and their families. Benefits seem to include; an improved sense of psychological well-being (Manturuk, 2012; Manturuk, Riley and Ratcliffe, 2012); improved child outcomes such as educational attainment (Rohe and Lindblad, 2013); and social and political engagement (Manturuk, Linblad, and Quercia 2012). Research has also found a relationship between physical health and homeownership status (Rohe and Lindblad, 2013). For middle-class Americans that have net assets, housing wealth is the dominant form of wealth in their wealth portfolio (Kuhn, Schularick, and Steins, 2018).

However the benefits of homeownership are not evenly distributed; low- and moderate-income Americans have historically faced challenges in achieving homeownership for the first time, a result of economic and underwriting barriers such as a lack of down payment or overall savings, low credit scores

¹ The view expressed in this paper are those of the authors and do not necessarily reflect the views of Abt Associates or Fannie Mae or its management. Any errors or omissions are the responsibility of the authors. This paper is in draft form. Please contact the authors before citing.

and debt-to-income ratios.² First-time homebuyers faced an additional set of challenges after the Great Recession—low wage growth, delayed family formation, and tighter mortgage lending standards (JCHS 2017). These tighter lending standards, which have only recently loosened, exacerbated the historical challenges for even highly motivated first-time homebuyers to access homeownership.

Since homeownership offers both tenure stability along with social benefits and the opportunity for households to build wealth, policymakers understandably want to explore how to make homeownership more accessible. Research about the experiences of low- and moderate-income prospective homebuyers in the wake of the Great Recession has provided helpful insights about consumer financial attitudes, housing views, and mortgage shopping behavior in the aggregate. For example, research suggests that a significant proportion of all homebuyers do not engage in shopping for a mortgage, and rely primarily on their friends, family and real estate agents for information when looking for a mortgage. However this line of research has three main shortcomings: 1) it focuses on observable consumer behavior rather than seeking to understand that behavior; 2) it is survey research and thus subject to respondent image curation and recall bias; and 3) it mostly focuses only on mortgage consumers who successfully purchase homes rather than potential consumers who are not successful.

First, consumer perspectives are important to understand because they offer insights into why consumers behave in certain ways. As consumers explain their behavior, researchers and policy makers are better able to understand the very contextually logical reasons behind consumer behavior; without consumer perspectives, we might hypothesize a range of motivations to explain what seems like illogical behavior and then put in place policies which will not be successful in changing consumer behavior.

Image curation is the process whereby participants proactively or subconsciously share select information that matches their conscious or subconscious image of themselves. Information that does not match their self-image is omitted. For example, homebuyers might want to project an image of themselves as a “rational” consumer who followed best practices and got a good deal on a mortgage, even if that was not objectively true. To understand consumer behavior, researchers and policymakers need to draw on data that is not as impacted by image curation. Recall bias, the process of forgetting important details about events in the past, means that research participants may simply not remember the details of a closed mortgage transaction well or, now that they know how the story ends, only remember details that make the present outcome seem linear and inevitable.

Finally, due to data limitations, most research on prospective homebuyers focuses on those who successfully purchase homes or those who have a mortgage denial. The latter body of research, primarily using Home Mortgage Disclosure Act (HMDA) data, can provide important insights into the characteristics of denied applicants compared to successful ones and has been particularly important for assessing lending standards and patterns of lending discrimination (e.g., Cherian 2014; Hirasuna and Allen 2012; Wei and Goodman 2014). What both these types of research cannot show is the experiences

² Other factors limiting low-income and minority homeownership include racial discrimination in lending, household composition and age (Haurin, Herbert, and Rosenthal 2007).

of prospective homebuyers along the way to getting a mortgage or the experiences of those who become discouraged before submitting a mortgage application.

This paper addresses these three shortcomings. It draws on data from consumers' own perspectives, in real time, and from successful and unsuccessful aspiring homeowners. The paper draws on data from a "Mortgage Journeys Study," conducted with a video ethnographic approach with 14 aspiring homebuyers in Massachusetts and Tennessee in 2015.³ This real-time and longitudinal data collection allowed us to build strong enough rapport with participants so that they more openly shared details about their home search. Notably, participants shared sensitive emotions and financial information, talked about issues in their lives, such as relationship tensions, and job anxieties; and effused excitement and frustration over their home searches. The research team was able to observe this range of emotions in real time over the course of the study period. This data allowed us to observe the different emotional tenor of the three different home purchase stages (presented below) and to note the differences in mortgage shopping behavior at each stage. We were also able to observe how contextual life factors, which differed by participant, impacted the mortgage shopping trajectory of each participant.

The paper reveals three key findings. First, study participants' mortgage journeys were shaped by five factors, anticipated in prior research. These included three contextual factors which set the stage for participants' engagement with the homebuying process: participants' financial self-perceptions, personal relationships, and access to resources. These contextual factors interacted with two homebuying specific factors—the trusted professionals that participants interacted with, and participants' mortgage product preferences. The trusted professionals and the mortgage product preferences were influenced by a participant's financial self-perception, personal relationships and access to resources.

Second, Mortgage Journey study participants moved through three different stages of the mortgage and homeownership process: a preparation stage in which they focused on activities to prepare for homeownership and getting a mortgage; a decision stage where they evaluated homes and mortgages and decided which house they would purchase; and a purchase stage where they completed the activities associated with getting a mortgage and purchasing a house. We suspect that these stages are not unique to first-time homebuyers. Not all participants were successful in moving through each of the three stages in the study period; some had cycled between the preparation and decisions phase prior to the study period and did not move to the purchase phase during the study, while others cycled between different phases during the study.

Finally, mortgage shopping activities differed for each of these phases and was influenced by the five factors noted above. For example, mortgage shopping activities in the preparation phase included using online mortgage calculator tools, whereas mortgage shopping activities in the decisions phase involved getting a pre-approval. Critical for providing insight to the mortgage industry, participant mortgage shopping attitudes and behaviors do not match mortgage industry expectations of mortgage shopping behaviors.

³ Key results of the Mortgage Journeys Study have been released by Fannie Mae. For details, please see <http://www.fanniemae.com/portal/research-insights/perspectives/mortgage-focus-home-purchase-palim-052418.html>

The next section of the paper situates the research within the literature on accessing first-time homeownership experiences of the mortgage process for low- and moderate-income families and provides detail on the importance of mortgage shopping for first-time homebuyers. The following section reviews the data collected with prospective homebuyers in Massachusetts and Tennessee, the methodological approach, and the analytical process. Following this, we review the key insights that emerge from the data. Finally we turn to a discussion of the findings and implications for policy.

Background and Literature Review

As noted in the introduction, homeownership has several potential social and economic benefits associated with it. It is linked with improved psychological and physical health, improved child outcomes, and greater political and social engagement (Rohe and Lindblad, 2013). It can be an important route for households to build wealth either through appreciation of a home, or through forced savings.⁴ However, to successfully attain these social and economic benefits, a homeowner needs to first be able to purchase the home, maintain ownership over the long-term, and (for wealth accumulation) the home must rise in value. To attain successful and stable homeownership, a potential first-time homebuyer's mortgage journey will ideally involve overcoming a potential set of barriers to getting a mortgage and shopping around for a mortgage lender and mortgage product to get a mortgage suitable for their personal financial situation and for the home they are buying.

The literature review that follows begins by briefly discussing changes in the mortgage lending market since 2008 that have potentially increased the barriers that first-time homebuyers face in getting a mortgage, before moving on to discuss what research has revealed to date about homebuyer's mortgage shopping behavior and why mortgage shopping matters. While the study itself does not specifically address issues related to access to credit or racial discrimination, they provide important context for understanding the attitudes of the study participants.

Access to Homeownership since 2008: Tightened Credit Markets

Mortgage lending has been profoundly reshaped in response to the post Great Recession. Mortgage lenders tightened underwriting standards in response to the large losses experienced during the Great Recession. Federal programs like the Federal Housing Authority (FHA) kept the mortgage market functioning for first-time homeowners and others shut out of the conventional mortgage market during this time period (Goodman et al. 2016). FHA increased its share of the mortgage market from 4.5 percent in 2005 and 2006 to 32.6 percent by 2009 (HUD 2012a; JCHS 2017). In the post-Great Recession period FHA mortgages remain an important part of the mortgage market, especially for first-time homebuyers.

Responding to the financial crisis, federal policy makers established new rules to prevent some of the worst excesses seen in the subprime mortgage market. Specifically Congress passed the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 (Dodd-Frank) to achieve this goal. This legislation most importantly established a number of mortgage lending consumer protections including the criteria

⁴ Note that in some situations houses decrease in value over time, and in these scenarios, homeownership can lead to wealth depletion.

for a Qualified Mortgage (QM) (Bocian 2012).⁵ The intent of the qualified mortgage rule was to establish that a mortgage must be suitable for the borrower's financial situation. As a result of this legislation, most of the predatory mortgage products, products designed to strip equity from a borrower, were regulated out of the marketplace.

The impact of the Great Recession on homeownership was drastic: homeownership rates plummeted to the lowest levels since 1965 according to one study, as a result of lower rates of families entering homeownership, foreclosures, and a preference to rent over purchase (Acolin et al. 2017). The trend is something for policymakers to worry about since homeownership confers a range of social and economic benefits for both adults and children in a home-owning family. A major motivation for the current study was understanding the experiences of first-time homebuyers trying to get a mortgage in the post-Recession era while credit standards were still recovering.⁶

Research has shown over the last twenty years that low- and moderate-income families and families of color often face specific social and economic contexts which can create barriers to homeownership and getting a mortgage. The result is that these families typically have lower homeownership rates, entering homeownership for the first time at later ages than the average American. The kinds of barriers low-income families and families of color typically face include: (1) access to economic resources; (2) housing affordability; and (3) social capital and knowledge about the process (human capital).

Access to limited economic resources can present a significant barrier to low-income families accessing homeownership for the first time. Both U.S. research and international research points towards the critical role that extended family help through gifts or inheritances, play in helping households move into homeownership sooner than households without this financial help (Shapiro 2004; Druta and Ronald 2016; Williams 2017). This financial help is often used to pay for the down payment on the home. Single households and those without such down payment help have to delay the purchase of a home while they build up savings (Herbert et al. 2013). Government (state and federal) mortgage products seek to provide mortgage products with reduced down-payment sizes which helps lower-income families and families of color access homeownership. Since 2008, debt-to-income ratios have become a challenge for families particularly due to increases in student debt levels (National Association of Realtors 2018). The other aspect of access to economic resources is the credit score of the individual or family applying for a mortgage. In response to the Great Recession the average credit score for getting a mortgage has increased, shutting more low-income families out of the mortgage market. Before the Great Recession (in

⁵ For a comprehensive review of the Dodd Frank Act, see <https://www.responsiblelending.org/sites/default/files/uploads/3-mortgages.pdf>

⁶ After plummeting during the Great Recession, the proportion of GSE-backed first-time homebuyers appears to have been increasing steadily since 2012. The first quarter of 2018 marked first-time homebuyers' highest share of overall Freddie Mac-backed mortgages since Q1 2012 reaching almost half of these originations (Gopal 2018). By contrast, the FHA share of the mortgage lending market has been dropping (Bai, Zhu and Goodman, 2015).

2005) the median homebuyer's credit score was 696 and in 2006 705. By contrast the median credit score for a purchase mortgage in April 2018 was 738 (Goodman et al. 2018).⁷

Housing affordability varies considerably by state, from metropolitan to rural areas, and between neighborhoods within metropolitan areas. Housing affordability has been worsening since prices bottomed out during the Great Recession and, by 2018, housing prices were less affordable than historic averages (ATTOM Data Solutions 2018). This study was conducted during this period of worsening affordability. Drawing on 2017 data,⁸ the national housing affordability index was 25.4 for purchases with a 3.5 percent down payment. Our project's sites represented one high-cost area—Massachusetts with a 30.5 affordability index—and a lower-cost area—Tennessee with a 22.4 affordability index (Urban Institute 2018).⁹ Low-income families trying to purchase a home in a more expensive state like Massachusetts may face greater barriers to successful homeownership than in a lower-cost state like Tennessee.

Access to social capital and human capital or “knowledge about the mortgage process” can present a barrier to purchasing a home for lower-income and other first-time homebuyers who do not have parents or other close relations who are homeowners who can share firsthand knowledge (Pittman 2008). Non-profit organizations have provided classes for first-time homebuyers based on the premise that buying a home is complicated and most first-time homebuyers do not know a lot about the process.

Mortgage Quality and Mortgage Shopping

The U.S. mortgage market is characterized by a large array of private and government mortgages, from 30-year, fixed rate mortgages backed by government-sponsored entities like Fannie Mae, to adjustable rate mortgages, to subsidized Federal Housing Administration (FHA) loans. Mortgages originated and backed by state housing finance agencies (HFAs) often come with additional grant programs that cover some of the closing costs for a first-time homebuyer, or have lower down-payment requirements. Each of these products has different down-payment and underwriting criteria. While the mortgage industry understands these differences clearly, consumers often do not have a good sense of different mortgage qualification criteria (Fannie Mae survey 2015).

The Great Recession highlighted the importance of two aspects of mortgage product quality in the sustainability of homeownership: whether or not a mortgage product was safe, and how well suited the mortgage product was to a household's financial situation. Unsafe mortgage products had significantly higher rates of foreclosure, or failed homeownership; these mortgages have largely been regulated out of the mortgage market. Still of importance for the current mortgage market is the suitability of a mortgage product for a household's financial situation. For any given homebuyer, a mortgage may be more or less

⁷ A credit score below 620 is generally considered subprime, scores between 620-700 generally seen as prime, and scores above 700 as excellent.

⁸ Data is not available at the state level for 2015.

⁹ The affordability index is defined as “portion of the state's median income needed to pay the state's median monthly mortgage with a 3.5 percent down payment; a higher index indicates a less affordable housing market because a greater portion of income is dedicated to the mortgage” (Urban Institute 2018).

suitable given that homebuyer's unique set of circumstances, particularly financial.¹⁰ Mortgage lenders have to weigh the unique consumer characteristics against their own risks in lending to that individual, along with the characteristics and risks of the home that will secure the mortgage note.

Mortgage shopping is important because it has been documented (in pre-Recession research) to improve the suitability of the mortgage, and (in post-Recession research) to lower the costs of the mortgage over its lifetime.¹¹ For example, mortgage rates can vary as much as fifty basis points for a conventional mortgage for a high-credit borrower with a 20 percent down payment, amounting to \$3,500 more in interest payments over just the first five years of the loan (CFPB 2015). Differences could be greater or lesser for borrowers with lower credit or down payments. According to Freddie Mac research, borrowers that got five different rate quotes saved on average 0.166 percent on their interest rate which would translate to almost \$3,000 over the life of the mortgage on a \$250,000 mortgage.¹²

Surveys reveal that anywhere from one third to half of mortgage borrowers did not shop around for a mortgage. In a nationally representative survey of 1,922 homebuyers conducted by the Consumer Financial Protection Bureau (CFPB) and Federal Housing Finance Authority, researchers found that almost half of those surveyed did not shop around for a mortgage. Borrowers who were less familiar with the mortgage process tended to shop less. A Fannie Mae study of recent homebuyers found that approximately one third of all homebuyers do not obtain multiple quotes for their mortgage. First-time homebuyers did not appear to shop around more or less frequently than repeat buyers (Fannie Mae, 2015). A shortcoming of the latter Fannie Mae study is that the survey data does not reveal what respondents mean by a mortgage quote: whether respondents mean getting a pre-qualification, a pre-approval, or submitting multiple mortgage applications. Receiving multiple pre-qualification letters is significantly less meaningful than submitting multiple applications to assess the actual terms and conditions of a mortgage associated with a particular property along with the borrowers' credit risk. Even when homebuyers do shop around for mortgages, they often have difficulties interpreting complex transactions like a mortgage, leading to difficulties comparing offers of credit (Woodward and Hall 2012).

Care needs to be taken not to conflate the mortgage originator with the mortgage product. The mortgage originator is the organization that is either directly lending the mortgage or acting as a broker for the mortgage lender. The degree of diversity of mortgage products available through a mortgage originator can differ: some offer a large variety of both private and public mortgage products, while others have a more limited set of products. No data on the impact of mortgage originator on mortgage product exists for

¹⁰ On the extreme end of low mortgage quality are predatory mortgage products which were designed to strip equity from the borrower—they were not designed to be suitable mortgage products for the family who got them. Some mortgage products, while not predatory, were subprime and poorly designed to meet the needs of a borrower—in those cases low-income families were given three year fixed adjustable rate mortgages and the borrower did not expect to increase their income when the interest rate was expected to increase. These mortgage products have largely been regulated out of the market through the QM rule.

¹¹ By mortgage quality, we mean that a mortgage is the most, or as close as possible to being, suitable mortgage for a particular borrower and home. In other words a suitable mortgage will meet the needs of the borrower in terms of interest rate, points, down-payment, monthly payments, term and the type of rate.

¹² http://www.freddie.mac.com/research/insight/20180417_consumers_leaving_money.html

the post-Recession period. Analysis of mortgage data from the Great Recession suggested that mortgage broker-originated loans were significantly more likely to go into foreclosure than correspondent lenders¹³ (Jiang, Nelson and Vytlačil, 2014). This suggests a relationship between mortgage channel and the quality of the mortgage product. Several other pre-Recession studies found that the route a borrower took in getting a mortgage (whether through a retail bank, a mortgage lender, or a mortgage broker) influenced the specific type of mortgage product that the borrower ends up with (Apgar, Bendimerad, and Essene 2007; Jiang, Nelson, and Vytlačil 2014). Analysis of post-Recession data is needed to understand the new relationship between mortgage product, cost and mortgage originator since the Great Recession and QM rule.

Limited data exist on how borrowers shop for their mortgage lender. Reid (2010) found in 100 interviews in California among low-income and minority communities, that borrowers were most likely to get referrals for mortgage brokers from their close families and friends: borrowers preferred mortgage brokers who were part of the local community. Reid found that borrowers felt that sharing sensitive financial information with members of their social network more distant than family and friends would have felt like an invasion of their privacy, thereby limiting their capacity to get more advice on their homeownership bid. Research by the CFPB suggests that factors such as the geographic proximity of the mortgage lender or the lender's reputation influenced a borrower's decision to work with a particular mortgage lender as much as the mortgage product they offered (CFPB 2015).

Borrowers' information sources might be expected to impact their mortgage shopping behavior either for the mortgage product or for the mortgage originator. Research suggests that the greater the diversity of sources of information about the mortgage, the lower the borrower's interest rates are (Pittman 2008). However it is unclear from this research whether the borrower was obtaining information about the mortgage originator, the mortgage product, or both. The CFPB's nationally representative survey found that homebuyers' primary source of information about mortgages was a mortgage lender or broker, followed by a real estate agent. Fewer consumers obtain information from outside sources, such as websites, financial and housing counselors, or personal acquaintances (such as friends, relatives, or coworkers) (CFPB 2015). Results from the National Housing survey in 2015 suggest that while survey respondents draw on multiple sources of information, in-person information sources such as lenders, real estate agents and family and friends are more trusted (Fannie Mae 2015).

Economic status influences where borrowers get information about their mortgage. In comparing mortgage shopping behavior between higher- and lower-income borrowers, Fannie Mae's National Housing Survey found that higher-income borrowers are more likely to use online tools or applications while lower-income borrowers are more likely to rely on real estate agents, mortgage lenders, family, and friends for advice and recommendations (Fannie Mae 2014).

¹³ Correspondent lenders are whole sale lenders who underwrite and fund mortgages using their own money. This contrasts with mortgage brokers who originate a mortgage on behalf of a lender for a fee, but do not fund the mortgage.

The literature indicates that shopping for a mortgage product is important. Yet we have very few studies that include the direct consumer experience of these activities to understand what factors influence first-time homebuyers' mortgage shopping activities. The Mortgage Journeys Study discussed in this paper helps us better understand low- to moderate- income households' (LMI) mortgage shopping experiences in buying their first homes and getting a mortgage. The data reveal three key stages in the mortgage shopping experience and the key influences on the mortgage shopping process. The following section reviews our research approach, then provides more detail on the specific methods used for this study. We then discuss the key study findings before broadening into a discussion of the policy implications of the study findings.

Research Approach and Data

Mortgage Journeys Study Design

To address limitations in prior studies of first-time homebuyer's experiences with getting a mortgage, the Mortgage Journeys Study design incorporated five key elements of longitudinal data collection as study participants moved through the process of buying a home: (1) participant video diaries (2) in-depth interviews; (3) observations of mortgage and home purchase events; (4) short weekly online surveys (about their housing search, attitudes, and mortgage knowledge); and (5) review of participants' finances and any mortgage related documents they obtained. Data collection occurred over six months between December 2014 and July 2015. Each research participant was enrolled in the study before they were pre-qualified for mortgages, in most cases; in other cases, participants enrolled in the time between their pre-qualification and up to a month before their closing.¹⁴ Each research participant's involvement in the study varied in length of time, depending on the timeline of their homebuying and mortgage experience—for example, multiple rounds of mortgage shopping and attempts at prequalification if he or she had credit problems, or renegotiating the purchase and sale price (and perhaps mortgage) if a home did not appraise as expected.

¹⁴ Due to challenges recruiting all participants before prequalification, we accepted one household in Tennessee that had placed an offer on a home.

Researchers visited each participant in-person at least three times at different points in their homebuying journey. Each visit included an in-depth interview and, as appropriate to their stage in the process, an observation of an appointment or event, for example observing a meeting with a bank about the mortgage. We gathered copies of relevant documents, such as mortgage applications, credit reports, and good faith estimates. Visits helped maintain participants' engagement with the study, including trouble-shooting with conducting video diaries. Researchers also spoke with participants on the phone as needed to manage survey data collection and help participants with conducting video diaries.

Video diaries: Video diaries (with a few audio-only entries) created by participants provided ongoing, participant-driven insights into first-time homebuyers' mortgage experiences. These diaries allowed participants to capture their thoughts and experiences in real time to help overcome problems of the recall of their search behavior. Participants were encouraged to record as much as they like but asked to make at least one video entry per week in response to a prompt sent by the research team. In order to help participants overcome camera shyness, Abt staff developed a guide to making mortgage video diaries which included a set of prompts to respond to each week in case participants did not know what to share in the diary.

Sample Video Diary Prompts

- Why do you want to buy a house? What does it mean to you buy a house? And why do you want to do it now?
- What do you think about when you think about getting a mortgage? How do you feel about it—both the idea of having a mortgage and the process of getting one? Tell us all the details – no detail is too small.
- Have you had any setbacks or surprises trying to buy a house?

In-Depth Interviews: Each participant was interviewed in person at three points in their home search, for an average of ten hours of interviews per person. Interview topics included: updates on home buying and mortgage process, financial life story, housing history and goals, mortgage search experience to date, and household finances and budgeting. Interviews also revealed participants' aspirations, social networks, including trusted advisers' experiences with home purchases, and our participants' preferred methods of research, shopping, and decision-making. The final interview included some validated questions to assess financial and mortgage literacy¹⁵ along with viewing a credit report with participants if participants had not provided a credit report by that time, and reviewing mortgage documents for those who had purchased homes. We took detailed notes on all interviews and selectively transcribed sections. The second and third interviews were video recorded.

Observations: We observed a range of mortgage related activities including: prequalification appointments with mortgage brokers (n=2), one of which was at a non-profit housing counseling agency and also included housing counseling advice; loan closings (n=3); and online house and mortgage research (n=8). We also observed some broader home buying activities in both markets where participants lived: a real estate seminar

¹⁵ We held any formal assessment of financial literacy until the end of data collection so that the content of the quizzes did not influence participants to seek out certain kinds of information they would not have otherwise sought.

in Boston, a homebuyer education course in Knoxville, and a day of a mortgage broker’s work in Boston. These observations allowed the researchers to take detailed notes on the topics that were discussed during these real-time exchanges, including questions raised by participants, how professionals addressed questions, what advice professionals gave, and participants’ body language (indicating stress, relaxation, confusion, etc.).

Weekly surveys: Each week we emailed participants a short (approximately 5-question) survey asking about what they had done that week related to the home or mortgage search, their feelings about homeownership and their search, and financial literacy questions. Many of the questions were drawn from Fannie Mae’s National Housing Survey.¹⁶

Relevant financial documents: During their last interviews, we reviewed mortgage documents with participants who purchased homes. We asked participants to walk us through the documents and explain them and tell us about remaining questions they had about the documents. We also reviewed other relevant documents, including a lease-purchase agreement and prequalification letters.

Participant Characteristics

We recruited a small (n=14) purposive sample of prospective homebuyers in two different states. As shown in Exhibit 1, most participants lived in high-cost urban Massachusetts (n=9 in greater Boston, n=1 in Worcester) while fewer lived in lower-cost Tennessee (n=4).¹⁷ Most participants (n=10) were female, white (n=8), and partnered (n=8). No participants had minor children living with them at the time of the study. Participants’ incomes ranged from 26 percent Area Median Income (AMI) (in both sites) to 105 percent AMI in our Massachusetts site and 97 percent AMI in our Tennessee site.¹⁸ By the end of the study, half of participants (7) had purchased homes.

Exhibit 1. Participant Characteristics

	Massachusetts (n=10)	Tennessee (n=4)	Total
Gender (F/M)	8/2	2/2	10/4
Race			
White	5	3	8

¹⁶ <http://www.fanniemae.com/portal/research-insights/surveys/national-housing-survey.html>

¹⁷ Our recruitment criteria were that households earn less than Area Median Income, be first-time homebuyers, were sure of their decision to purchase a home within the next six months; were not yet prequalified for a mortgage; and regular access to the internet to complete study activities. We recruited through public flyers at financial institutions, public places, libraries, and community centers; online and newspaper advertisements; real estate agents; and housing counseling agencies.

¹⁸ We chose these sites in order to have one site in a higher-than-average cost housing market and one in a lower-than-average cost market where the lead researchers had existing connections to real estate professionals.

African-American	3	1	4
Latino	0	0	0
Asian-American	1	0	1
Other	1 (Haitian American)	0	1
Income Range (AMI)	\$24,000-95,000* (\$90,000)	\$15,600-\$58,000 (\$60,000)	n/a
Single	3	3	6
Partner/married	7	1	8
Children present	1 (adult child) 1 (pregnancy)	0	1
Purchased home as of 9/16/15	5/10	2/4	7/14

Analysis

We conducted interpretive analysis of interviews and participant video diaries focused on beliefs, concepts, and values about homebuyer experiences. Interpretive analysis is designed to understand the meaning of events from the perspective of those experiencing them; it is explicitly about discovery of new information rather than testing hypotheses. We conducted ongoing analysis during data collection to make sense of each participant’s journey as data was collected and to inform additional data collection. Once all data was collected, we used a combination of qualitative coding in NVivo 10 software and team analytic debriefings to draw together key themes that provided insights and responses to the study research questions. Emergent themes related to the research questions were incorporated into the analysis as relevant, particularly where they provided helpful context in understanding participant behavior. Video material was organized into key themes that emerged from the analysis process.

Limitations

This study allowed for longitudinal and in-depth understanding of a small sample of low- to moderate-income, first-time homebuyers’ experiences. A primary limitation of this study is its small sample size. The study provides exploratory insights into homebuyer perspectives, offering demonstration of the social processes of getting a mortgage and buying a home rather than a representative sample of homebuyer experiences across the country, or even within a state or housing market. Our focus was on low- to moderate-income first-time homebuyers; the homebuying process may differ substantially for repeat homebuyers of any income or asset level, as it may for first-time buyers with higher incomes or assets. Only conducting the research in two markets also limits the generalizability of the study. The study was

also conducted before the QM rule and new mortgage disclosure documents were implemented, so findings on those topics should be read in that context.

The technological requirements of being involved with the study likely introduce a degree of bias into the sample. Some study participants found it difficult to engage and dropped out despite wishing to participate, e.g. families with young children. Older and less technology savvy participants may have also self-excluded because of these requirements. The study was also conducted only in English: non-English speaking individuals and families experiences may be considerably different. The study only followed households over the course of a six month window. Some participants' home buying journeys took much longer than this, and as a result we did not gain the full range of insights that might have been possible from conducting a longer study, for example spending a year following participants.

The following sections present our findings in two major sections: First, we present a set of ***five factors that influenced the mortgage shopping process***. Next, we present ***three phases of the home and mortgage shopping process***. We highlight how the five factors were at play and how ***mortgage shopping behavior varied in each stage***.

Five Factors Shaped Participants' Mortgage Pathways

We identified a set of five factors that interacted dynamically to influence each individual's mortgage pathway: ***three contextual factors***—financial self-perception, resources, and personal relationships—and ***two home buying-specific factors***—professional relationships and product preferences. Contextual factors were established before and outside of the home buying process but they could significantly influence participants' motivations, orientation to the mortgage, and access to different professionals and products. Once the home search was underway, the two drivers specific to the homebuying process emerged: trusted professionals and mortgage product preferences. Participants then drew on contextual factors in different ways in response to needs or challenges that arose in the home buying process. The degree to which homebuyers were able to leverage these contextual factors—or supplement them with professional relationships and products—influenced how their mortgage pathway developed and sometimes whether they were able to successfully purchase a home.

Contextual Factors

Financial self-perception

Homebuyers' self-perceptions about themselves as financial managers generally and as creditworthy (or not) specifically affected how they approached the mortgage process, including the mortgage products they researched, product preferences they developed, and lenders they were willing to approach. Three identities that we saw most explicitly influencing participants' behavior were: understanding themselves as “low credit” or “not creditworthy”; being averse to debt; and identifying as black consumers.

Previous negative financial experiences especially impacted study participants' self-assessed creditworthiness.¹⁹ Such experiences led Mortgage Journeys participants to avoid or gravitate to certain types of lenders—either a whole category of lender (e.g., credit unions over retail banks) or a specific lender because of its reputation. A research participant, Duncan,²⁰ had previously been denied a business loan and, because of this, wanted to avoid mainstream lenders, potentially cutting him off from valuable and reliable information. He explained, I “*actually Googled mortgages for bad credit.*” Through these results, he learned about FHA mortgages and later connected to the non-profit Neighborhood Assistance Corporation of America that provides financing and housing counseling.

Another participant, Joshua, illustrates how both self-perception as debt-averse and having a negative credit experience influenced the mortgage search.²¹ Joshua was averse to debt overall and saw a mortgage as a “necessary evil” to accomplish his goal of homeownership. Because of his aversion to debt, he had never taken out loans, including to cover his college education, or used credit cards because he believed it was prudent to only purchase things he could afford with cash on hand. As a result he was initially denied a mortgage prequalification due to having a thin credit file. When he resumed his home search two years later, he chose to work with a mortgage broker, both because she was recommended by his realtor and because he perceived she would have access to a wide range of products that, given his thin credit history and preference for a conventional mortgage, he felt he might need.

Finally, while our sample is small, we saw three of our four black²² participants' racial identity play an important role in strategic decisions about the mortgage.²³ These participants talked about explicit decisions they made in response to anxiety about how they might be treated as black people by financial institutions. These participants perceived themselves to be financially vulnerable resulting from a combination of historical and recent trends in national mortgage lending, narratives about lending in the black community, personal experiences, and reported experiences of close friends and family. These participants were aware of larger trends and, regardless of their own creditworthiness or the behavior of specific lenders they approached, that awareness shaped their attitudes about and behavior in the mortgage search process. For example, Duncan, whose business loan denial was mentioned above, felt that his denial was partly related to being black. Another participant, Nancy, witnessed her parents refinance into an adjustable rate mortgage which had significantly impacted their financial security. Anxious that as a young black woman she might be more likely to be marketed a similar mortgage, she had worked hard to present herself as organized and informed as a defense strategy. She put together a professional-looking binder of information about the home search and brought it to all appointments

¹⁹ This makes sense given the brain's inherent negativity bias to remember previous negative events more strongly than positive events, even of similar intensity (e.g., Baumeister, Bratslavsky, and Finkenauer 2001).

²⁰ All names in the paper are pseudonyms.

²¹ More detail on Joshua's story is provided in relation to home purchase motivations and barriers. Study participants Steve and Joelle, also profiled below, also held a strong identity as aspiring to live debt-free.

²² These participants identified as African American or Haitian American.

²³ We did not see this self-perception arise for any white participants.

(including study interviews). She made sure to dress professionally and to project herself in a way she thought mortgage professionals would be less likely to mistreat her. As we discuss below in “Access to Resources,” another black participant, Patricia drew on knowledge she gained from several black friends who had been through foreclosures.

Personal Relationships

Personal relationships impacted decision-making in the home buying and mortgage pathway. Family structure was the most frequent deciding factor in Mortgage Journeys participants’ decisions about housing tenure; it also mattered greatly for the mortgage process. Having more income earners in the family was a major asset. Four of the seven successful homebuyers in the study were partnered in dual-income households and a fifth pooled finances with her family to buy a multifamily home. Expectations about family structure affected access to the mortgage in product-specific ways. For example, Abby and her partner, motivated to buy a home on learning they were expecting their first child, did not want to get legally married. However in order to jointly own the home, a financially attractive Veteran’s Administration loan would have required them to be married; this created a sticking point in their home buying journey. Participants also attempted to navigate program requirements by being strategic about family structure. Nancy and her fiancé needed to access first-time homebuyer assistance to afford a home in Boston but their combined income was over the program’s threshold. They strategically pre-qualified for a mortgage before they got married, using only her income, although she and her partner were pooling their finances to pay the mortgage.

Echoing findings from the literature, personal relationships influenced the information that participants accessed about home buying and the mortgage. Many participants relied on family (most often parents) and friends for advice on the home buying process. Most participants had grown up in households where their parents owned their homes and so they approached the home buying process with some tacit knowledge about homeownership, had role models or warnings (for unsuccessful cases) to look to, and personal advisors to rely on for advice. Parents and older family members were able to offer guidance based on successfully navigating previous home purchases and other financial management. Peers were able to use their recent home buying experience to update parents’ general advice on principles of working with a realtor and mortgage broker to include additional advice like referrals to professionals they had worked with. In this study, Patricia, the Haitian American woman introduced above, had several friends who had obtained subprime adjustable-rate mortgages that precipitated foreclosures. These stories helped her to grasp much more about taking out a mortgage than she was understanding from conversations with the banks. Her friends who’d lost their homes had all gotten mortgages from the same national lender. This influenced her to consider not taking out a mortgage with this lender, and to carefully look at the long-term interest rates on her mortgage. The stories also helped her to understand the financial implications of taking out a mortgage, and helped her to take seriously how she could experience negative consequences as a result of buying a home.

Sometimes participants did not have personal advisors or had people inexperienced in home buying advising them. Some participants were able to make up for deficits in their personal networks with advice from trusted professionals, while others either did not or could not. For example, James did not trust his family for advice because his parents kept their money in the fridge. He aspired to obtain a real estate license and was also driving for Uber to make extra money. Because he did not have family and friends

providing trusted advice in the process, he relied on his mentor in real estate. That is, he was able to compensate for the lack of trustworthy advice in his personal relationships by bringing in a professional.

Access to Resources

Mortgage Journeys participants drew on a range of financial and non-financial resources to facilitate their home purchases. Two of our participants received financial support to cover their down payments: Steve, as described above, and Betsy, whose mother-in-law offered the couple an extraordinary gift of \$250,000 for a down payment.

While money was of course an important resource, non-financial resources were also very helpful in some cases—for example, having a social network with experience and knowledge of home buying (discussed above), flexible time, and access to technology. Participants' work conditions sometimes facilitated their job searches if they offered either flexible schedules or down time, or access to technology. For example, Joshua enjoyed flexibility and some down time at his job and he also had access to a fax machine he could use at work. Both of these features let him be responsive to paperwork requests from his realtor (when he renegotiated the contract several times due to needed repairs) and his lender. Nancy, too, benefitted from flexibility at work to be able to talk to housing professionals and view properties in Boston's tight real estate market during the day. Since her fiancé, a teacher, did not have flexibility during his workday, Nancy's flexibility gave them an advantage in being able to stay organized and move quickly in approaching multiple lenders for quotes and qualifying for a down payment assistance program. Access to transportation also proved to be an issue for Barbara: because she was not ready to work with a realtor yet, she was exploring neighborhoods and available listings by driving through areas she might want to live. Her car began breaking down and contributed to her putting her home search on hold, both because she needed to divert money she otherwise would have saved into car repairs and because she could not look at prospective houses since they were not served by bus lines.

Home Buying Specific Factors

Trusted professionals

Trusted Professionals worked in a variety of roles: mortgage brokers, realtors, housing counselor, lawyer, and a financial advisor. Realtors appeared most often to be the key channels of information about mortgage brokers and they often had either explicit or implicit partnerships. It appeared common for realtors to co-sponsor home buying seminars with mortgage brokers, with participants then understanding them to be a "package deal" whether the realtor and broker had any formal relationship or not. In Boston, we observed the work of a realtor who works in a firm with an in-house mortgage brokerage. Therefore, in understanding how to reach first-time homebuyers with high-quality information about affordable products, realtors are a crucial audience.

While all of our participants relied on professional advisors to some degree, two of our participants explicitly used relationships with professionals to overcome deficits in knowledge in their personal relationships. Rose and her partner were isolated from their families in their home buying process. Her family was in another country and they felt his family was judgmental about their desire to purchase a

home. Rose's partner worked for a mortgage company and they relied on advice from his boss, a mortgage broker. While this gave them advantageous access to resources (contextual financial knowledge), they also felt it would be "taboo" not to take a mortgage through the company he worked for (relationships and product preferences).

The strength of trusted advisors' recommendations was a crucial factor in steering participants towards shopping around for the mortgage—either a lender (mortgage channel) or product as they entered the decisions stage of homebuying. The most common pathway we observed was for realtors' existing partnerships with mortgage brokers or institutions to steer participants towards a specific **mortgage channel or lender**. For example, Betsy and her partner "*literally took the guy's word who worked with our realtor... We did no shopping, no research, nothing.*" Participants in our sample who had connected with a homebuyer education program took that advice and focused on pre-qualifying for certain **products**, such as housing finance agency loans, sometimes in conjunction with a preferred mortgage channel, too.

Mortgage Product Preferences

Through self-perceptions, access to resources, and impressions formed early in the home buying process, participants developed product preferences that were relatively durable. Joshua, for example, aspired to live debt-free and saw homeownership as a chance to build wealth along with housing stability. Because of his general discomfort with taking on debt and desire to build wealth, he developed a strong preference to avoid primary mortgage insurance (PMI), so he constrained his price range so he could put down a large enough down payment to take out a conventional mortgage.

Study participants who took a first-time homebuyer course or attended a real estate presentation gravitated to affordable loan products with features like lower down payments, suggesting that these avenues provide valuable consumer education. Learning about these products was often the only route some participants could foresee to homeownership, as a lack of down payment was a primary barrier for several. The products also often have lower credit score thresholds than conventional mortgages, which help participants like Barbara, who faced both a lack of savings and a lower credit score.

How These Factors Converge: Steve and Joelle's Story

In our study, Steve and Joelle aspired to live debt-free and had been deeply influenced by Dave Ramsey's Financial Peace program they had taken through their church. They kept strictly to a budget and were following Ramsey's "debt snowball" program to reduce their medical and student debts. They were focused on paying off debts and were not willing to draw down their savings for a down payment so they could have cash on-hand for other priorities, including ongoing repairs to their house. They viewed home buying simultaneously as an investment and utilitarian purchase but also as a sign of maturity and that they were putting down roots. Joelle met a realtor and mortgage broker team at a one-hour seminar they put on for first-time homebuyers. She had good rapport and a high level of trust in them from the beginning; Steve called it "a match made in heaven" and the mortgage broker prequalified them for a no down payment housing finance authority (HFA) first-time homebuyer mortgage. They found a home and had an offer accepted after a few weeks but the closing got delayed because the inspection suggested that several substantial repairs should be done.

They relied heavily on advice from Joelle’s father, a master builder, in advocating for the necessity of the repairs, obtaining estimates, and pushing back against the low quality of repairs they felt the sellers initially provided. These issues absorbed a significant amount of Steve’s energy and attention in the time leading up to closing. During the final underwriting of their loan, they learned from their broker that they were slightly over income for the HFA mortgage. While they qualified with their regular salaries, Steve does freelance graphic design work that, once accounted for, pushed them over the income threshold. The day before their rescheduled closing, they switched from the HFA loan to an FHA loan. They had to borrow \$5,000 from Joelle’s parents as a loan to cover the down payment.

Steve and Joelle’s experience illustrates how their financial self-perception (as debt-free) influenced their product preferences (for a no down payment loan). They formed a close relationship with professionals whose advice they trusted throughout the process, despite a setback in being able to obtain the loan they planned for—though the new loan came with a lower interest rate and monthly payment. When they encountered challenges with the home purchase, they had personal relationships that offered them both knowledge (Joelle’s father’s expertise on repairs) and access to resources (being able to borrow a down payment rather than dig into other savings). It is unclear if they would have been able to successfully purchase a home without these relationships and resources.

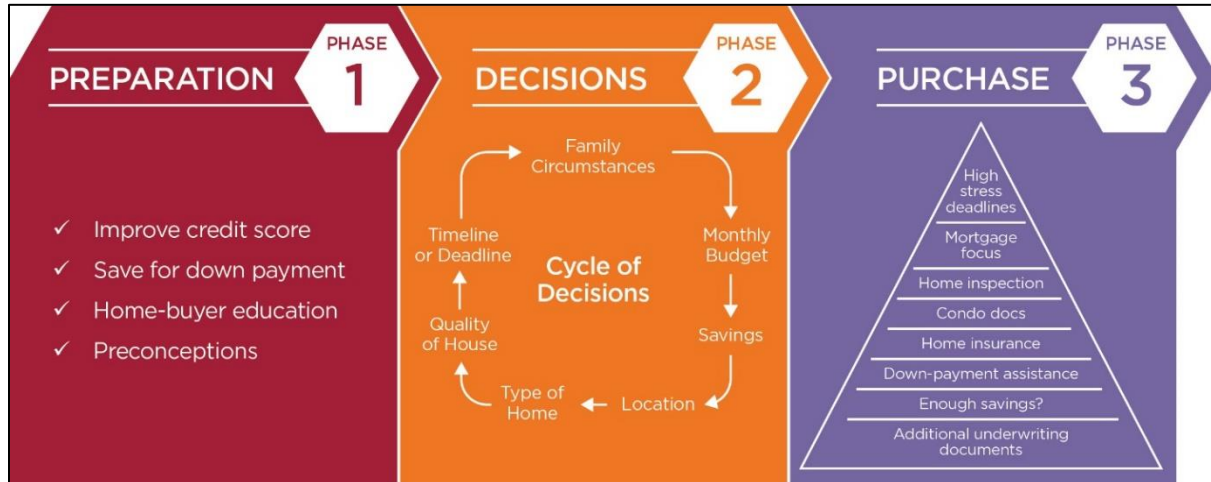
The next section introduces the three phases of the home buying and mortgage journey observed among Mortgage Journeys participants. Discussion of each phase includes an overview of all the components of that phase, barriers participants encountered in the phase and strategies they used to overcome them. Then, we focus specifically on how mortgage shopping varied in each phase. In transitioning to a focus on phases of the mortgage journey, readers should keep in mind that the five factors described above continue operating in each phase. We did not observe a consistent pattern in the way participants drew on these five factors as they progressed through a home purchase. There was not, for example, a trend for contextual factors to be more important early on but give way to reliance on trusted professionals and products in later phases. Indeed, as Steve and Joelle’s story shows, participants sometimes (but not always) had to draw heavily on contextual factors (family support, job flexibility) to successfully complete the purchase phase. In other cases, guidance from trusted professionals became more crucial in the stressful days leading up to a closing.

Phases of the Home Buying and Mortgage Journey

Perhaps unsurprisingly, Mortgage Journeys study participants’ path to getting a mortgage and buying a home was not a linear one. The experiences of the study participants revealed three main phases in the homebuying process: (1) Preparation, (2) Decisions, and (3) Home Purchase. Exhibit 2 provides an overview of each phase. Each phase included different mortgage-related activities. Participants might move easily from one phase to the next, or they may experience flux, moving from one to the next, only to move back to a prior phase as a result of a failed house offer or after discovering a major fault with the home. Although the graphic shows a linear progression, the process was usually non-linear as participants faced a range of different barriers along the way in purchasing their home. Homebuyers’ timelines ranged

from six months to more than two years;²⁴ during the course of the study, a few put their home searches on hold indefinitely. Participants faced barriers related to both their home and mortgage searches in all phases of the process, from the preparation phase to the active search, until purchase.

Exhibit 2: Three non-linear phases of homebuying for MJ participants



Preparation Phase

In the preparation phase, participants in the Mortgage Journeys study did preparation work such as improving their credit score; saving for the down payment; and, in some cases attending home-buyer education, either short events presented by realtors or longer courses offered by non-profit housing counseling agencies. At this stage, they had limited preconceptions and preferences about their desired area, desired housing characteristics (e.g., condo, multi-family, fixer-upper or move-in ready), and mortgage terms or lenders, although some were starting to form. Four of the Mortgage Journeys study participants were still in the preparation phase at the end of the study.²⁵

Home Purchase Motivation

The decision to buy a home for the first time is influenced by many non-housing related factors the prospective homebuyer is considering related to life stage, household members, and lifestyle. These issues often get expressed as statements about identity, such as wanting to “grow up”—meaning, purchase a

²⁴ Where a participant’s journey lasted longer than the study period, that participant reported being engaged in the home search process prior to the study period.

²⁵ Two participants, both in Boston, ended their home purchase pursuit by the end of the study: Abby and her partner ended their purchase pursuit when her partner lost his job in the summer of 2015 and Abby was due with their first child in fall of 2015. Nina had been working to repair her low credit score, having raised it from 388 to 580 when she was beginning her home search. Her teenage son was arrested and this derailed her ability both to continue searching for a home and participating in the study.

single-family home in which to raise future children or a desire to purchase in an up-and-coming area to maximize the wealth-building potential of a purchase. Since these motivations and identities have implications for the type of housing, location, and potentially mortgage products prospective buyers seek, we cannot understand the financial decision-making framework of a household without understanding the underlying contextual factors and motivations for purchasing a home.

Among the contributing motives we saw, in order of prevalence, were: **a desire for a different structure of family; “growing up”; dissatisfaction with renting; a desire to build wealth; and occasionally these combined with an opportunity not previously available.** The following sections briefly describe the range of motivations that influenced Mortgage Journeys participants’ decisions to purchase.

Family Structure and “Growing Up”

Overall, family and lifestyle considerations were the most important motivations for study participants. Owning a home meant participants could access more personal space that offered space, privacy, and/or place for a newly formed or growing family. In our study, Duncan, recently married, wanted to have personal space with his new husband while Abby and her partner sought to buy a house when she found out she was pregnant.

All but one participant had homeowner parents (though not all were successful cases) and saw homeownership as the template to aspire towards. Three participants talked explicitly about the social expectations they held for themselves, influenced by having parents who owned a home or seeing peers buying homes. They saw owning a home as the next step in the adult trajectory, the right thing to do at a certain life-stage, or the perceived route to building wealth. One participant said, “People like me” can do this. Another couple said, “It’s time for us to grow up.” They, like many Americans, fused the identities of “adult” and “homeowner.”

Dissatisfaction with renting

Dissatisfaction with renting was the second most common motivation for wanting to own a home. Participants were dissatisfied with renting for a number of different reasons. Particularly in high-cost Boston, renting often meant living with roommates and having to share space. Renting was also experienced as inherently unstable while owning was seen as more stable. Barbara, a 62-year-old woman from Tennessee, lived the first fifty years of her life in her family home until after her father whom she cared for passed away. This offered her unparalleled housing stability that was about to change because when she enrolled in the study, she was living in an apartment complex undergoing a change in management. She hoped to buy a home with the assistance of state homebuyer programs so that she could establish greater housing stability. Another participant, Lisa, did not have homeowner parents but “*wanted homeownership in the family*” to provide greater stability for herself and her disabled adult son.

Wealth-building

Wealth-building strongly motivated four buyers but was not a major consideration for most. This is not to say that prospective homebuyers did not have this as one among several considerations but it was not the

primary motive most articulated. Among the wealth-motivated participants were Cortney and Justine, both white participants in the Boston area in their mid-thirties who found the rental market too expensive and wanted to build equity.

Opportunity

In the Boston area, an unexpected opportunity motivated two participants. In one case, a participant became aware of a condo that someone in his social network hoped to sell well below market price through a lease-purchase arrangement. The opportunity meant the participant could pursue his goal to provide more private space for himself and his new husband. Another Boston couple had been stimulated to pursue first time homeownership (something they considered previously unattainable given the expensive Boston housing market) by the offer of a large down payment (\$250,000) by a family member.

Multiple Motivations and Multiple Barriers: Joshua's Story

Mortgage Journeys study data revealed that homebuyers often have multiple motivations for purchasing a home and that it can be the combination of several factors that push someone to pursue homeownership at a given time. Joshua illustrates how multiple influences resulted in the tipping point decision to purchase for the first time, as well as barriers he encountered and mitigating strategies (to which we turn below) he used. In 2012, Joshua was dating someone who owned properties that she rented out. Having rented with roommates since college, he was both tired of moving frequently and was interested in having stability in his housing situation and the opportunity to build wealth. He made a decision to purchase a large building he could live in and rent out as a youth hostel, combining his desires to create housing stability, have decision-making power about his residence, and build wealth.

However, he encountered barriers from the city government in understanding and approving his idea so he transitioned to searching for a single-family home. When he applied for a prequalification, he was denied for having no credit history. As discussed above, Joshua believed it was most responsible to only pay for what he could afford in cash. He also did not have proof for alternative forms of credit, such as a lease or utilities in his name (always having been a sub-letter) or a cell phone (being part of a family plan with his parents). The denial was emotionally unsettling because it contradicted what he thought was his financial prudence and reinforced his sense that his housing situation (e.g., as a sub-letter) was a hindrance to his life. This reinforced his desire to purchase a home and he spent a year working to build credit by opening a credit card he used for small purchases. He resumed his home search in 2014, during which he remained anxious about the mortgage because of his previous denial.

Preparation Phase Barriers and Strategies to Overcome Them

In the preparation phase, participants encountered barriers based on their past circumstances, current circumstances, or both. Barriers related to their past included having no or thin credit files, low credit scores, low levels of savings, a history of credit denials, or a lack of income history. Joshua's story presented above illustrates how thin credit file and credit denial created barriers in his home purchase: at first, by delaying it in 2012, then by creating an emotional challenge (anxiety about approval in 2014).

Contemporary barriers participants faced included unemployment, job loss, family crises that derailed homebuyers' preparation for buying a home, and a lack of knowledge about home buying. In the current study, Franklin, the expecting father and veteran considering a Veterans Administration loan introduced above, was waiting to gain sufficient employment history at his new job before applying for a mortgage. However, he was laid off close to the end of the study period and the couple put their home search indefinitely on hold. Another participant, Gina, had been saving money and working on her credit but a family crisis of her son being arrested along with an already unstable housing situation meant she had to put her homebuying journey indefinitely on hold. This was the second time that she had started down the path of preparing to buy a home and had needed to postpone it.

Participants used various strategies to overcome these barriers. When faced with a lack of savings, two participants moved in with their parents and others with roommates to save money. Participants worked to reduce their expenses and build savings by closely watching their budget. Rose and Philip cut down on many expenses, including not eating out and checking their budget weekly to find ways to save money for a down payment. Another strategy to build up savings was to increase income through extra jobs. James, a twenty-one year old single man, started driving for Uber to save extra money. To deal with poor credit, participants worked to pay off debts.

To compensate for a lack of knowledge about the home buying process, participants also engaged in this stage with homebuyer courses offered by both non-profits and realtors. Both non-profit classes and realtor company homebuyer classes tend to be focused on providing relatively impartial information along with a set of real estate professionals (realtors, mortgage lenders/brokers, insurance brokers). Observation of both types of classes suggests that information shared in the non-profit provided classes tends to include questions to ask of real estate professionals, and other more critical lenses through which to assess the homebuying process. There is a lack of good information on whether the non-profit homebuyer classes offer a more "protective" context to ensure higher rates of success in the homeownership endeavor.

Mortgage Shopping in the Preparation Phase

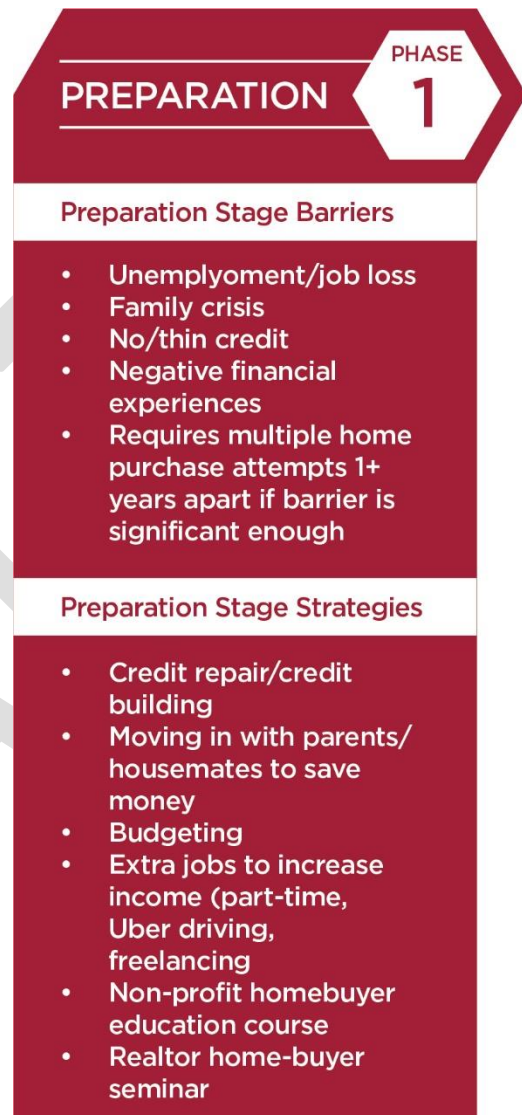
In the preparation stage, participants formed vague preconceptions about mortgages as they weighed the costs of their tenure choice, most often a monthly mortgage payment against rent. At this stage, participants focused on the total monthly mortgage payment and not its composition—such as principal, interest, taxes, insurance—or the interest rate or whether it was a fixed or adjustable rate. Online mortgage calculators were a tool some participants used in this phase to make estimates of affordability, though these calculators cannot take into account specific factors about a particular home, nor details such as the interest rate or type (fixed or adjustable) it was advertising.

As discussed above, participants' self-perceptions are an important contextual factor that shapes the mortgage search from the beginning. Participants' self-perceptions specifically influenced the lenders they approached and products they sought at the pre-qualification stage—for example, if they considered themselves “low credit” or “uncreditworthy.” Some Mortgage Journeys participants focused on improving their credit and did preparatory activities such as attending home buying classes that provided participants with valuable information about low down payment products for first-time homebuyers. Some Mortgage Journeys participants started to use online tools like mortgage calculators to get a sense of how much house they could afford. These tools focused consumer attention on the down payment and monthly mortgage payments. These kinds of activities helped participants prepare for shopping for a mortgage but did not constitute active shopping either for a mortgage originator or a mortgage product.

Decisions Phase

The decisions phase is characterized by looking at homes, obtaining a pre-qualification letter, analyzing budgets, thinking about the quality and location of the home, and synthesizing all this information. This phase is characterized by timelines related to putting in offers on a home and ends with putting in an offer. By the time of putting in an offer, the potential homebuyer has usually developed more precise mortgage information from the pre-qualification. One participant termed this the “cycle of decisions” phase, meaning that it was cyclical and governed by the housing stock available within the search area under consideration. When, for example, there were no affordable properties in a chosen geographic area, participants had to go begin the cycle of decisions again. Two study participants were still involved in the “cycle of decisions” by the end of the study.

Exhibit 3: Preparation Stage Barriers and Strategies to Overcome Them



One study participant, Cortney from Boston, was earning \$52,000 a year at the time of the study, employed as a teacher and working over the summer at a summer camp. She was living with her parents in order to save money. Her key motivation to own a home was the high cost of renting, and she also wanted to build equity. In the spring of 2015 she met with a realtor, then started attending open houses to get a sense of the housing stock available. She got a pre-qualification by a mortgage broker recommended by the realtor she met with. In the summer of 2015 she was still looking at homes. She saw the summer as a key opportunity to work at the process, since once the school year began, it was harder to carve out time to go and see properties. She was very focused on whether a property was the “right” one and was willing to wait or continue saving to purchase a more expensive property. She got pre-qualified for a mortgage when she found a potential property. She was guided in her decision-making by her a financial advisor who was also a family friend. He provided suggestions to her about how much to put down for the down payment and how to budget as a homeowner. By the end of the study she was still looking for the “right” home, continuing to live with her parents and save for a down payment.

Decision Stage Barriers and Strategies to Overcome Them

The decision stage is a tumultuous, cyclical one where participants explored housing options in their preferred neighborhoods, learned about costs, and financing options through pre-qualifications. As the numbers became more specific, individuals reported being able to make more sense of whether and how they would be able to manage the mortgage. Patricia, a Haitian-American woman in her late twenties, had gone through a previous cycle of trying to purchase a home prior to being in the Mortgage Journeys study. During her first attempt to buy a home, as she’d become more interested in making an offer on a condo, the information from the seller had got more specific and she was able to see that the combination of the condo fees, and the likely mortgage payment would not be affordable for her. With a renewed understanding that a higher credit score could lower her interest rate and mortgage payment she had gone back to the drawing board and started working on improving her credit score to over 700.

Families also learned during this phase that their savings were insufficient to cover a down payment on their preferred house. This might send a participant back to the preparation phase, or in search of additional resources to help with the down payment, including down payment assistance through a first-time homebuyer program, or a low down payment government or non-profit mortgage product. Indeed, in order to afford a mortgage to buy a home, six participants focused on various first-time homebuyer programs and mortgage products. Programs that participants were considering included: the Neighborhood Assistance Corporation of America, the Veterans Administration, the Federal Housing Authority, municipal down payment assistance programs, and state housing finance authority first-time homebuyer loans.

In the decisions phase participants also faced barriers that were beyond their control and that precluded them from moving forward in their home purchase. These included unemployment and family crises, or a change in household composition that changed the parameters of the home search. The consequence of facing and dealing with barriers in the cycle of decisions phase resulted in extending the anticipated timeline for purchasing the home.

Exhibit 4: Decision Phase Barriers and Strategies



Barbara’s case illustrates how despite overcoming a barrier of insufficient savings through a Housing Finance Authority (HFA) product, other barriers sent her from the decisions phase back into preparation. Barbara had attended a homebuyer education course at a non-profit in Knoxville as part of her preparation to buy a home. She frequently referred back to materials in the binder given to participants and was trying to follow the instructors’ advice closely. Because of this, she had become focused on obtaining a low down payment first-time homebuyer loan through the Tennessee Housing Development Authority and on using a credit union instead of a bank; however, she discovered her preferred credit union did not offer her preferred mortgage. Barbara was shopping for both mortgage product and mortgage originator, but found a mismatch.

Her savings were insignificant and she could not increase her income due to medical conditions that limited how much she could work. She researched neighborhoods and available housing stock by driving through neighborhoods and doing some limited online research. However, as noted above, her car needed several costly repairs that limited both her ability to search for housing and to build her savings. During the course of the study, she moved from the cycle of decisions phase back to preparation: researching neighborhoods, looking at homes, rebuilding her credit after amassing debt on a store credit card, and trying to continue saving even as she encountered unexpected expenses.

Mortgage Shopping in the Decisions Phase

During the decisions phase, participants’ main mortgage-related focus was in obtaining a pre-approval letter. Mortgage Journeys participants worked hard to get mortgage pre-approvals for loan products that they perceived would make financial sense for them, based on their available financial resources for a down payment and closing costs. Similarly to the preparation phase, Mortgage Journeys participants continued to focus closely on the monthly mortgage payment and the total mortgage amount, which would determine whether or not they could buy their preferred home.

We observed Mortgage Journeys participants selecting lenders for pre-approval based on several factors, including: their self-conceptions (discussed above), trusted advisors (discussed above), misinformation and confusion about the mortgage process, and the contextual factors discussed above set the stage for which lenders they might consider.

Echoing research suggesting homebuyers are not always informed about the mortgage process, a few participants were confused about the mortgage process. One study participant, Nancy, provides an

example of how misinformation about the mortgage process could influence participants shopping behaviors. In the current study, Nancy explained the common fear that **too much shopping** around for a mortgage can lower one's credit score and therefore lead to obtaining worse mortgage terms:

One fast-talking mortgage guy, that I didn't like because he sounded like a salesman, said that I could pre-qual everywhere in 30 days and it won't affect my credit score. And somebody told me that wasn't true. I think it was our friend at [financial institution they used]. I was like, concerned. Your credit score drives your interest rate on the mortgage. So the more mortgage shopping you do, it would negatively affect your credit score...and that probably drove the number of people I let draw pre-quals for me. I just didn't want that many people looking at my credit and showing up as several queries.

Once prospective buyers selected a lender for a pre-approval based on the buyer's characteristics, it set the mortgage process in motion and buyers who moved into the purchase phase very rarely re-evaluated lender or mortgage choices afterward. The only times we saw Mortgage Journeys participants re-evaluating mortgage choices made in the decisions phase was in a reactive way if something went wrong with either their lender or product (as we discuss below).

Purchase Phase

The purchase phase is the final phase of the homebuying process and requires homebuyers to focus on multiple aspects of the home purchase simultaneously and within a short amount of time. These can be broken down into three main categories: (1) activities related to the house and home contract, (2) activities related to the lender, and (3) activities related to the mortgage product and loan terms. Slippage in any of these areas can jeopardize the closing date. With a great deal of emotion-excitement, anticipation, and nervousness-riding on the successful completion of the home purchase, Mortgage Journeys participants were overwhelmingly focused on activities related to completing the home purchase such as the inspection, reviewing condo documents, negotiating or completing repairs, and submitting a variety of different documents necessary for the mortgage application to move ahead. Homebuyers were actively involved in both the home- and mortgage-related parts of this phase but in different ways. They were active participants in the home-related parts of this process, especially negotiating on terms of the purchase agreement, such as repairs and price concessions. In Tennessee, the inspection could be an opportunity for homebuyers to improve the quality of the home and/or lower the purchase price. Both Steve and Joshua in Knoxville negotiated on repairs after they had a signed purchase agreement and the house went through inspection. In Joshua's case, he was able to negotiate for the seller to complete repairs of plumbing, electrical, exhaust, and subfloor issues. Steve and Joelle had repairs, including of their electrical unit, completed at the seller's expense. We did not see any buyers in Boston use this strategy, perhaps because of the tight housing market/higher competition for houses so sellers could reject demands for repairs more easily.

Mortgage Journeys participants were more passive or reactive (as opposed to proactive) about mortgage-related parts of the purchase phase compared to the home-related tasks. Homebuyers' participation at this

stage was primarily putting in a formal loan application with their selected lender and providing documentation such as tax returns, bank statements, and pay stubs. After submitting their loan documentation, the title search and underwriting process happened largely out of homebuyers' view and homebuyers did not have a way to be involved with these stages. Indeed, Rose's husband who worked in a mortgage broker's underwriting department confessed to becoming irritated with buyers who asked questions at this stage. A few participants did mention getting calls from unknown professionals at this stage—such as the title insurance agent—and not being sure who they were or how they were involved in the process. Seven Mortgage Journeys participants reached the purchase phase by the end of the study. We review one below for illustrative purposes.

Rose and Philip

Rose and her husband Philip together earned \$74,000. Prior to 2014, Philip had a period of unemployment. His job, starting in 2014 was supporting a mortgage broker team. At that point, Rose and Philip decided they wanted to save for a down payment to buy a home before they had children. Rose was a Filipina immigrant who did not have family with knowledge about home buying in the United States and Philip had tense and difficult relations with some of his family members, resulting in them having a limited kin and social network to draw on. They had some down payment savings which they had worked hard to accumulate through careful budgeting and cutting back on expenditures. Although his family had financial assets that they might have shared with him, Philip did not feel comfortable asking for financial assistance. When pushed by Rose to ask for help with the down payment, his family members refused. While looking for a home, the couple noted the fast turnover of properties in Boston. Rose and Philip put in an offer on a home for \$400,000 in the spring of 2015 but realized after the inspection that it needed a gut rehab. They also felt that the monthly mortgage payments would have stretched them too far, and it was with a great deal of relief that they did not buy the property and returned to the “cycle of decisions” phase. In late spring 2015, they put down an offer on a single family home for \$274,000. They signed a 30 year fixed rate mortgage and moved into the property in a residential neighborhood in a middle-class suburb of Boston.

Purchase Phase Barriers and Strategies

Study participants in the purchase phase reported overwhelming levels of stress with tight timelines to review large numbers of documents, communicate with real estate professionals, and complete closing. During this final and high-pressure phase, Mortgage Journeys participants also learned more specific information about first time homebuyer programs. Although participants had learned some details about these programs in the decisions phase, actually qualifying for the programs happened in the purchase phase. Sometimes, as in Steve and James' cases (reviewed above), participants encountered problems qualifying for these programs at the last minute in ways that put their home purchases in jeopardy.

Study participants reported frustrations with often unresponsive real estate professionals that sometimes put the closing date in jeopardy. Participants felt helpless, and that they would do whatever they were told or needed to do to finalize the closing, whether or not that was the optimal decision for them financially.

Exhibit 6: Purchase Phase Barriers and Strategies to Overcome Them

In scenarios where participants decided not to move forward with the purchase, they returned to the decisions phase.

Mortgage Shopping in the Purchase Phase

PURCHASE

PHASE
3

Purchase Stage Barriers

- Lender doesn't offer desired affordable mortgage programs
- Large renovations necessary beyond budget
- Responsiveness of professionals

Purchase Stage Strategies

- Negotiate repair concessions with sellers
- "Do what it takes" to close
- Sense of stress and helplessness with these barriers
- Go back to cycle of decisions or preparation if barrier significant enough

At the purchase stage, details about the home purchase became much more concrete. Mortgage Journeys participants discovered relevant details about the home's characteristics, such as the need for repairs and the appraisal value. For example, Rose and Phillip, mentioned above, had discovered the need for expensive repairs to a home that made the home too expensive and they walked away from the property. Details about the mortgage sometimes shifted at this stage. For example, one participant discovered they did not qualify for the first-time homebuyer program they thought they qualified for and needed to find an additional \$5,000 for a down payment. Another participant discovered their lender did not provide the first-time homebuyer program he had anticipated and had to reapply for another mortgage through a different lender at the last minute.

Recommended best practice for mortgage shopping is to ask for multiple loan estimates from different lenders after selecting a home.²⁶ Yet this high-stress and deadline-driven purchase phase did not create an environment conducive for Mortgage Journeys participants to engage in comparison shopping. A signed purchase agreement sets a firm deadline with an aggressive timeline, often 30-45 days, which leaves very little room for slippage for the typical closing process. A typical closing process includes many steps that can, in broad brush, be broken down into steps related to the house

itself and those related to the mortgage. In this compressed, high-stress, and deadline-driven process, homebuyers had limited ability to engage with all aspects of the process.

While many Mortgage Journeys participants showed themselves to be savvy in shopping around for a mortgage in the preparation and decisions phase of the process (primarily looking for pre-qualifications) and also in shopping for homes, they **did not shop around for multiple loan estimates once they had selected a home**. This was not because of a general challenge with shopping around or negotiating, or even doing so in the context of home buying. Mortgage Journeys participants demonstrated the capacity

²⁶ For example, the Consumer Financial Protection Bureau recommends this practice in several resources, including Your Home Loan Toolkit and its Owning a Home portal. See https://files.consumerfinance.gov/f/201503_cfpb_your-home-loan-toolkit-web.pdf and <https://www.consumerfinance.gov/owning-a-home/process/compare/request-multiple-loan-estimates/>.

to shop around for lenders for pre-approvals and negotiated on home purchase terms. However, they did not get multiple mortgage quotes later in the process when they had an accepted offer on a home.

From observing seven Mortgage Journeys participants completing the home purchase phase, we conclude several factors influence the lack of shopping at the purchase phase. First, the structure of the mortgage closing process is high-pressure with limited time, deadlines and a fear of being rejected from the mortgage process (for example, in Joshua's case described above). Participants nervously "waited" for their "approval" and reported being very happy when they got it. Second, Mortgage Journeys participants were fearful of the consequences of not purchasing the home or meeting deadlines, as described in James' case below. Third, the stressful emotional tenor of the purchase phase, coupled with doing a complex and large financial transaction for the first time, resulted in heavy reliance on trusted advisors and a lack of focus on mortgage details compared to home selection. Participants described the large volume of paperwork required and the associated stress of not understanding what was in the documents. Even after having it explained by mortgage and real estate professionals, participants did not understand what was in the documents after the loan closing.

Barriers to Mortgage Shopping and Decision Fatigue

In contrast to their proactive home shopping, and in some cases higher degrees of shopping for mortgage prequalification, participants encountered multiple barriers to shopping around for mortgages at the purchase stage including: inaccurate information about the negative effect of multiple mortgage applications on their credit (discussed in the decisions phase); overreliance on trusted advisors; decision fatigue; and feeling they did not have the time to reach out to multiple lenders to compare loan terms. No one mentioned considering submitting multiple mortgage applications.

As discussed in the preceding section, homebuyers relied on **trusted advisors** to guide them to mortgage products and through the application and closing process. They responded to mortgage professionals who were understanding of and responsive to their personal situations and demonstrated accessibility. In our study, Patricia chose a lender who "*seemed reasonable, she seemed understanding, maybe she was a family person and understood where I was coming from*" in purchasing a multifamily home with her sibling. Yet these professionals often discouraged shopping around both implicitly and explicitly. For example, just not mentioning the need to shop around allows for momentum to carry participants forward with the same lender recommended by a trusted advisor. Only non-profit entities (housing counseling agencies and a non-profit lender) encouraged their clients to do so. Further, realtors who have strong professional networks with mortgage brokers implicitly discouraged shopping around because that broker is seen as "the" person who works with that realtor, as if in a "package deal." At later stages of the process, a mortgage underwriter described to us how he became irritated with buyers who asked questions once the paperwork reached his desk and that he would respond curtly, further discouraging question-asking at the same time that buyers' attention is being called to myriad other tasks such as inspections, repairs, and title insurance.

Another key aspect of homebuyers' flagging attention to the mortgage is offered by the "**decision fatigue**" literature. Taken together, these psychological and economic studies show that humans all—from impoverished rural villagers to experienced judges—perform worse on mental tasks the more

decisions and trade-offs we have had to make (e.g., Spears 2010; Levav, Reinholtz, and Lin 2013; Danzinger, Levav, and Avnaim-Pesso 2013). The effect can be seen both within a day (e.g., decisions deteriorating over the course of a day) or over a sustained period of time (e.g., living in poverty). Buying a home, including both the home search and mortgage, is a process that Mortgage Journeys participants lumped into a single mental bucket and so may draw on the same set of decision-making resources. It is worth exploring in further research whether homebuyers' decision-making capabilities get depleted by making early-stage decisions—such as whether, where, and which house to buy—leaving less decision-making power for later decisions, such as obtaining multiple mortgage quotes.

Given these barriers at the purchase stage, the choices that buyers had made about lenders and products in earlier phases of the process were by and large “sticky” at the time of actually applying for the mortgage. In other words, while the industry and consumer advocates separate the process of preapproval and mortgage application, in practice borrowers in our study collapsed these phases: The shopping around participants in our study did occur during the preparation and cycle of decisions phase before they had chosen a specific house, and therefore before they could know the terms of an actual mortgage. When things went awry at the purchase stage with one of these earlier decisions, homebuyers were not in a position to adjust their choices and shop around again. This was driven by the pressure of meeting the closing date in their contract (and perhaps by decision fatigue).

As discussed earlier, a sense of urgency and a lack of time fed into participants' lack of mortgage shopping behavior at the purchase stage. Indeed recent research has documented how humans tend to choose an urgent activity with a deadline over a more important activity (Zhu, Yan and Hsee, 2018) suggesting that in the case of the home purchase phase, the set of deadlines pushes forward decisions towards purchasing the home and getting the mortgage, even though doing multiple mortgage applications (mortgage shopping) might be a better decision for the prospective homebuyer than continuing down the home purchase path irrespective of the mortgage product.

James' experience illustrates how **time pressure** inhibits comparison shopping for even a highly motivated, informed, and savvy homebuyer. James, who planned to become a realtor, began his home search by engaging closely with and thinking about the mortgage. However, as the timeline progressed and he neared the mortgage closing and home purchase, the details became overwhelming. Soon before closing, he realized that he needed to get the city of Worcester's down-payment assistance program because his savings would not cover the down payment and the closing costs. The mortgage lender that he was working with was not actually qualified to provide that program, due to some bureaucratic problems with the city, and so within the last 24 hours before the loan closing, James had to find another bank with whom to get a mortgage. Understandably, he talked about this experience as highly stressful.

As he explained, “*I would have loved*” to have seen all the options for every lender who was qualified to work with the HFA down payment assistance program he used. “*But given I was so crunched for time I felt like I needed to rush so I used the general guidelines I had for what I wanted, a 30-year loan product*” and did not have time to compare specific loans, “*I just went with the first thing that I could.*” While James was more specific about his preference to shop around at the purchase stage, his experience of the high time and emotional pressure leading to suboptimal comparison shopping was typical of other participants who went through the complete home purchase process.

Study Participants' Mortgage Shopping Varied by Stage in the Homebuying Process

As shown in the preceding sections, Mortgage Journeys participants' mortgage shopping behavior varied by the stage they were at in the homebuying process. Exhibit 7 below summarizes Mortgage Journeys participants' shopping behavior through the different stages. The table also includes best practice recommendations from consumer advocacy and homebuyer education, to highlight where Mortgage Journeys participants converged and diverged from these best practices. Note that the home purchase phase incorporates several sub-phases: the home contract terms; lender selection, mortgage product selection and finally loan terms selection.

Exhibit 7: Mortgage Shopping by Stage in Homebuying Process

Homebuying Phase	Best Practices from Homebuyer Education	Emotional Layers	MJ Participants' Home Shopping Actions	MJ Participants' Mortgage Shopping Actions
Preparation Phase	<p>Build credit.</p> <p>Attend a first time homebuyer course.</p> <p>Build savings toward a down payment.</p> <p>Consider costs of homeownership, including monthly mortgage payment, insurance, monthly costs, and maintenance.</p>	<p>Decide to purchase a home now, with several motivations likely.</p> <p>Can include identity shift toward "growing up" or putting down roots.</p>		<p>Worked on credit score.</p> <p>Learned about range of products available to them.</p> <p>Discuss home buying with friends and family.</p>
Decisions Phase	<p>Shop for pre-qualification letters and first-time homebuyer programs.</p>	<p>The home search was exciting, motivating, interesting, and stressful, and sparked attention to detail.</p>	<p>Search for homes with realtor or online.</p>	<p>Shop for pre-qualification letters and first-time homebuyer programs.</p> <p>Consider monthly mortgage payment in relation to their budget, down payment requirements related to any savings, and the size of the mortgage they qualify for.</p>

Homebuying Phase	Best Practices from Homebuyer Education	Emotional Layers	MJ Participants' Home Shopping Actions	MJ Participants' Mortgage Shopping Actions
				Participants did not focus on other terms of mortgage.
Purchase Phase: Home Contract Terms	N/A	Significant time and mental focus as closing approached, inhibiting further mortgage shopping.	<ul style="list-style-type: none"> • Review condo agreements • Negotiate repairs • Acquire lawyer 	N/A
Purchase Phase: Lender	Choose lender based on service and product.	Fear and stress about all the pieces of the process meant trusted advisors steered participants towards lenders.	N/A	<p>Participants chose lenders based on <i>one or a combination of</i></p> <ol style="list-style-type: none"> 1) offering a product they desired, 2) referral from a realtor, 3) emotional reassurance/guidance from lender. <p>Lender selection from preapproval stage is "sticky" by and large.</p>
Purchase Phase: Mortgage Product	Research loan types and costs, looking beyond monthly payment	Overwhelmed by stress of closing deadlines and long list of items to complete and documentation.		<p>Product selected based on specific features that met their financial needs, e.g. low or no down payment.</p> <p>Focus on monthly mortgage payment and how it fit their budget.</p>
Purchase Phase: Loan Terms	Buyers request loan estimates from least 3 lenders	Participants did not talk about applying for more than one mortgage.		Research participants applied for only one mortgage. They had already selected a lender and felt under pressure to close by their desired date.

Mortgage Journeys participants conducted the most research and comparison shopping for their mortgages at the decisions phase; the purchase phase was largely for them to execute those decisions. By

contrast, industry and consumer protection best practices are to keep open one's field of choices partway through the purchase phase (that is, to submit multiple mortgage applications). This may explain some differences in understanding between consumers and professionals (industry, consumer advocates, and policymakers). Our study suggests that homebuyers perceive shopping around at the pre-qualification stage to be sufficient, not fully understanding the difference that shopping around at the application stage—when a specific home has been selected—can make to their costs of homeownership. Mortgage Journeys participants also did not appear to distinguish the differences between mortgage originator and mortgage product as specifically as industry analysts. This goes some way toward explaining how homebuyers perceive themselves to have shopped around for mortgages (that is, researched lenders and products) while industry analysts do not (because they do not apply for more than one mortgage).

Discussion and Policy Implications

Discussion

The longitudinal and real-time nature of the Mortgage Journeys project enabled several insights unavailable through other methods. These findings have implications for housing policymakers, regulators, and industry professionals.

Our data illustrate three key stages in the home purchase process (preparation, decisions, and purchase), involving increasing numbers of activities and progressively shorter and deadline driven time-frames. As first-time homebuyers encounter each of these phases, their mortgage shopping behavior changes. In the preparation phase, homebuyers more often looked at different mortgage products and lenders and searched online for lenders and products. In the decisions phase, homebuyers usually picked one lender to get a pre-qualification letter from. As they moved into the high stakes and time-pressured closing phase, they were not likely to shop for mortgage lenders or to get quotes from multiple lenders. Their focus was on the home closing and completing all the tasks. The only time they considered an alternative product was when the product or lender they had picked was no longer able to offer the product that would allow them to purchase the home. The terms the potential homebuyers focused on did not align well with best practice for doing mortgage shopping. As noted above, potential buyers focused primarily on the monthly payment and the type of lender to choose as opposed to looking at the interest rates, points, fees and other product features.

It is clear that the current structure of the home purchase is not facilitating potential first-time homebuyers' mortgage shopping for either lenders or products. This paper provides insights about the process and phases of getting a mortgage the mortgage industry could work to create tools to increase the ease of mortgage shopping at each phase. Mortgage shopping tools should take into account both the mortgage channel and the product, and should encourage potential homebuyers to shop around for both the lender and the product. Second, the mortgage industry, CFPB, and GSEs could give first-time homebuyers a sense of the affordable loan products they might be qualified for given their credit profile and a particular property that is under consideration.

The structure (short timeline with deadlines) and emotional characteristics (high stress, excitement, and uncertainty) of the purchase phase does not provide optimal conditions for prospective homebuyers to shop for a mortgage. Specific structural barriers include the limited information consumers can get about a potential mortgage before they have an offer accepted on a house (e.g., pre-qualifications do not take

into account home characteristics that matter to the mortgage), coupled with an intense and pressured time table to take out a mortgage (to meet a closing date) once an offer is accepted. Both the time pressures and paperwork burden of applying for a mortgage discourage consumers from shopping around. In our sample, some participants remained confused about how much and when shopping around for a mortgage would affect one's credit score, creating a chilling effect against getting more mortgage quotes. Industry actors such as realtors and lenders, often acting as trusted advisors, are not incentivized to profit when consumers shop around: indeed they may lose a client with whom they have a close relationship, or be forced to cut their profit.

Understanding homebuyer experiences in this way can help the mortgage industry better reach and serve potential low- and moderate-income homebuyers as well as ensure that certain segments of the population are not being excluded from the benefits of homeownership. More specifically, consumers' perspectives—especially when they do not match the current industry consensus on best practices—can help improve ways the mortgage transaction is structured to allow for easier comparison of mortgage products and to help first time homebuyers draw on a wider set of prospective lenders.

The paper also documents how five key factors create opportunities for or barriers to mortgage shopping. Pre-existing factors of homebuyers' financial self-perception, resources, and personal relationships intersect with the professional relationships and product preferences homebuyers develop during their home search process. Our study builds on the insights of others about the important role that social networks and personal relationships play in where potential homebuyers go to look for mortgage products. Insights from our study point to the important role in potential borrowers' self-perception which influences where and how they apply for a mortgage. Notably the industry will not be able to directly influence financial self-perception, nor the economic resources a family brings to the table or their social relationships.

Policy Implications

This study has the potential to inform both future research as well as offering some seeds of ideas for making the homeownership and mortgage process more transparent. Increasing the transparency and ease of shopping for both the mortgage originator and the mortgage product is critical. As policy makers and mortgage industry professionals consider how to do this, incorporating end-user research is critical.

How policymakers respond to the research is important: we can either call for greater consumer education, or we can think about restructuring some of the “choice architecture” that influences consumer behavior. As a case in point, we draw your attention to a response to a research brief about this project, from the Mortgage Bankers' Association (MBA) (Finkelstein 2018). An MBA blog called, “Some low-income buyers don't prepare to get a mortgage” placed the onus of the mortgage shopping process on consumers. From this interpretation, the correct type of policy intervention is more consumer education to train consumers how to conform to the industry's standards of best practice. However, such interventions would miss the insight that it is the structures in the homebuying process that discouraged Mortgage Journeys participants from being able to follow best practices.

Our findings point to two major areas where interventions may smooth the mortgage journey for first-time homebuyers, following from the homebuying-specific and contextual factors described throughout

the paper. Below we suggest some possible directions for policy makers and industry to consider. Many previous studies and interventions have called for increased consumer education to help consumers' behavior approximate industry standards of best practice. While increasing access to non-profit housing counseling services and access to down payment assistance programs can help increase access to homeownership or to well-grounded decisions that homeownership is inappropriate at the time, it is not sufficient. Beyond consumer education, we see a need to adjust the structure of the mortgage journey towards getting a mortgage to improve the experience.

Use human-centered design to improve mortgage shopping at all stages: While it is harder for the mortgage industry to address homebuyers' contextual factors, the mortgage industry and policymakers can begin to tailor marketing and product design to accommodate these insights. For example, by understanding that some borrowers think of themselves as having bad credit the policymakers such as the GSEs or CFPB could target a public service marketing campaign to increase awareness of steps to take to improve credit, or of high-quality financial products for those with previous credit issues.

We urge housing policymakers and industry professionals to follow the turn in other industries toward using human-centered design and behavioral insights to adjust the process to work more smoothly in response to consumers' real behavior. (This will address challenges in the homebuying-specific factors.) Based on the data collected in the Mortgage Journeys study, we suggest several options that could alleviate friction points for prospective homebuyers and enhance the "choice architecture" to enable easier and more transparent mortgage shopping.

The primary goal of restructuring the mortgage shopping process should be to ease the process of comparison shopping and increase transparency for consumers at the mortgage application stage. We found study participants unlikely to shop for mortgages at stages after applying for and receiving a mortgage pre-qualification letter. A major step forward—and, we admit—a major shift in the market—would be to create a mortgage application portal where consumers could submit a single application once they had an accepted sale and purchase agreement on a property, and have it sent to multiple institutions for a mortgage quote.²⁷ We suggest it be possible for consumers to submit this application either online or in person through a participating lender, so that consumers with lower access to or comfort with technology would not be excluded from the service.²⁸ Prospective homebuyers could choose to receive

²⁷ Mortgage brokers, whether in person or online, already offer the service of contacting multiple institutions to provide clients with mortgage quotes. However, there is not necessarily transparency in the brokerage system and mortgage brokers' incentives may not be aligned with consumers' when a broker is paid for the loan through an origination fee, which may vary and be more beneficial to the broker compared to a loan that may be better for a homebuyer over the long term. Some online mortgage calculators also present comparison shopping options: they estimate mortgage information based on details a consumer enters on the website, then it links below to "offers" from many lenders. Those "offers" show a lender name, APR, and estimated monthly payment. Each entry has a link to "learn more," which takes the user to the lender's website where they fill in again the details of their expected mortgage. This lender-by-lender process is more burdensome for the consumer and does not allow for ready comparability of quotes.

²⁸ Recent years have seen an increase in online lenders, such as Rocket Mortgage, SoFi, and Lenda that attempt to streamline the mortgage application process. They do so by getting electronic information about applicants'

multiple quotes from different types of mortgage institution either choosing specific institutions or types of institutions (e.g., a credit union within X miles of the home, an online-only lender, a regional or national bank, etc.). Such a tool might require comparison of mortgage rates between different types of mortgage originators (e.g. broker, lender, and bank). Achieving scale with the new mortgage portal is of vital importance to ensure there are a large number of participating lenders and a wide variety of products—including first-time homebuyer products—to ensure the system increases choice for consumers and improves on today’s low comparison shopping rates.

While creating a national mortgage portal or an underwriting clearinghouse may sound daunting for the mortgage industry, it is not without precedent. For example, the Free Application for Federal Student Aid (FAFSA) provides an approximate analogy: prospective college students and their families only have to gather financial information for one application, the results of which can be sent to multiple colleges and lenders of the student’s choice. Already in the mortgage industry, major players have created the Mortgage Electronic Registry System (MERS) to facilitate mortgage sales on the secondary market. MERS is a private database that allows secondary mortgage market actors to keep a mortgage registered to MERS even as it is bought and sold by different investors, rather than having to update county-level public records with each transaction. These examples suggest that when there is sufficient benefit and sufficient will, an integrated system such as we suggest can be feasible.

Pre-purchase mortgage education: The research findings from this study provide a good basis to develop a pre-purchase mortgage education or counseling tool, to help make explicit to borrowers the kinds of contextual factors that may influence their mortgage journey. By making these explicit, housing counselors could help them best align the mortgage product (according to a variety of features) for their particular situation, or suggest how to identify and navigate sources of information. While the most valuable way to use such a tool would be in a mortgage counseling session, it could also potentially be used by real estate agents, or other trusted advisors. It could even potentially be created so that it can be a self-guided tool or a smartphone app.

Homebuyers most often use housing counseling services as a loan requirement—when it is too late to affect loan choice—or, less often, to address significant barriers such as credit repair. This study and others have found that homebuyers respond to professionals that are emotionally available to them. This suggests that homebuyers might instead work with a homebuying *coach*. A coaching model would differ from current homebuyer education courses where instructors provide a broad set of content.²⁹ Services

earnings, assets, debts, and credit scores through financial institutions. While this eases the burden on consumers to find, copy, and deliver (by hand, email, or fax) copies of financial documents, applicants only receive a quote from the lender(s) they use, rather than obtaining multiple quotes they can compare.

²⁹ A major difference between homebuyer education and coaching is that homebuyer education intentionally covers a broad set of topics, including home maintenance and potential delinquency, that prospective buyers may not even be aware of. By contrast, financial coaching (on which homebuyer coaching could be based) is explicitly driven by a client’s goals. If practitioners were to develop homebuyer coaching services, there would need to be development of standards and practices for how to allow client priorities drive the engagement while still introducing content beyond their immediate concerns. That development is outside the scope of this paper.

would be provided one-on-one and only deliver content specific to each person's situation; this is similar to how housing counseling services are provided but would not need to emphasize overcoming explicit barriers but rather navigating the process and obtaining impartial advice. Both a prospective tool and homebuyer coaching would reach their broadest audiences by being available online or, in the case of coaching, online (video chats, chat windows) or by phone. HUD's first-time homebuyer study found that study participants assigned to use remote housing counseling services did so at more than twice the rate of participants assigned to in-person homebuyer education (63 percent versus 26 percent) (Moulton et al. 2018).

Another avenue for broadening take-up of this mortgage education could be to embed the suggested educational content into more widespread media, such as through partnerships with HGTV or popular financial advisors. The popularity of HGTV's homebuying shows suggest there could be a very large audience for information about preparing for the financial aspects of homeownership if it were embedded within existing programs or incorporated into a new show focused on first-time homebuyers. Hosts could also increase the amount of financing-related tips they give in segments around commercial breaks.

These suggestions are only a few of the potential routes policymakers could consider to reduce the stress, difficulty, and lack of comparison shopping documented for homebuyers. We are sure that additional industry stakeholders and policy makers will see additional ways to make use of the insights we share in this paper. With this research as a first step in the process, and drawing on the principles of human centered design, the GSEs or CFPB could consider additional proposals to reduce the pain points for low- and moderate-income families in shopping for a mortgage for the first time. This study begins the process of painting a detailed portrait of how first-time homebuyers approach the home purchase decision, process, and mortgage. By better understanding first-time homebuyers' attitudes, resources, and experiences, industry and policymakers are better equipped to meet their needs.

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References

Acolin, Arthur, Paul Calem, Julapa Jagtiani, Susan Wachter, 2017 "First-Time Homebuyers: Toward a New Measure" Federal Reserve Bank of Philadelphia Working Paper No. 17-36 examine different data sources and attempt to identify a new measure of first time homebuyers' share of home purchases.

Apgar, William & Bendimerad, Amal & S. Essene, Ren. 2007. Mortgage Market Channels and Fair Lending: An Analysis of HMDA Data. Joint Center for Housing Studies: Cambridge, MA. <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.190.8054&rep=rep1&type=pdf>. Accessed January 13, 2019.

- ATTOM Data Solutions. 2018. U.S. Home Affordability Drops to Lowest Level in 10 Years. <https://www.attomdata.com/news/market-trends/home-sales-prices/q3-2018-home-affordability-report/>. Accessed February 15, 2019.
- Bai, Bing, Jun Zhu, and Laurie Goodman. 2015. A Closer Look at the Data on First-Time Homebuyers. Urban Institute: Washington, DC. <https://www.urban.org/sites/default/files/publication/49876/2000210-A-Closer-Look-at-the-Data-on-First-Time-Homebuyers.pdf>. Accessed January 13, 2019.
- [Baumeister, Roy F.](#); Finkenauer, Catrin; Vohs, Kathleen D. 2001. "Bad is stronger than good". Review of General Psychology. 5(4): 323-70. <http://assets.csom.umn.edu/assets/71516.pdf>. Accessed January 14, 2019.
- Bocian, Debbie Gruenstein. 2012. Mortgages: The State of Lending in America & Its Impact on American Households. Center for Responsible Lending: Durham, NC. <https://www.responsiblelending.org/sites/default/files/uploads/3-mortgages.pdf>. Accessed January 13, 2019.
- Boehm, Thomas P. and Alan Schlottmann. 2008. Wealth Accumulation and Homeownership: Evidence for Low-Income Households. Cityscape 10(2):225-256.
- Cherian, Madhavi. 2014. Race in the Mortgage Market: An Empirical Investigation Using HMDA Data. Race, Gender & Class: 21(1-2), 48-63.
- Consumer Financial Protection Bureau (CFPB). 2015. Consumers' mortgage shopping experience: A first look at results from the National Survey of Mortgage Borrowers. Consumer Financial Protection Bureau: Washington, DC. https://files.consumerfinance.gov/f/201501_cfpb_consumers-mortgage-shopping-experience.pdf. Accessed January 14, 2019.
- CFPB. n.d.a Your home loan toolkit: A step-by-step guide. Consumer Financial Protection Bureau: Washington, DC. https://files.consumerfinance.gov/f/201503_cfpb_your-home-loan-toolkit-web.pdf. Accessed January 14, 2019.
- CFPB. n.d.b Buying a House: Tools and resources for homebuyers. Consumer Financial Protection Bureau: Washington, DC. <https://www.consumerfinance.gov/owning-a-home/>. Accessed January 14, 2019.
- Danzinger, Shai, Jonathan Levav, and Liora Avnaim-Pesso. 2011. Extraneous factors in judicial decisions. PNAS April 26, 2011 108 (17) 6889-6892; <https://doi.org/10.1073/pnas.1018033108>.
- Druta, Oana, and Richard Ronald. 2016. "Young Adults' Pathways into Homeownership and the Negotiation of Intra-Family Support: A Home, the Ideal Gift." Sociology, Volume: 51 issue: 4, page(s): 783-799.
- Fannie Mae. 2014. Fannie Mae National Housing Survey Topic Analysis: Technology Use in Mortgage Shopping. January 2014. <http://www.fanniemae.com/resources/file/research/housingsurvey/pdf/010214-topicanalysis.pdf>

- Fannie Mae. 2015. Fannie Mae National Housing Survey™ Topic Analysis: What is the Mortgage Shopping Experience of Today's Homebuyer? Lessons from recent Fannie Mae acquisitions. April 2015. <http://www.fanniemae.com/resources/file/research/housingsurvey/pdf/apr2015-topicanalysis-presentation.pdf>
- Finkelstein, Brad. 2018. Some low-income borrowers don't prepare to get a mortgage: Fannie. National Mortgage News. May 24, 2018. <https://www.nationalmortgagenews.com/news/some-low-income-buyers-dont-prepare-to-get-a-mortgage-fannie>. Accessed November 14, 2018.
- Freddie Mac. 2018. Why Are Consumers Leaving Money On The Table? Economic & Housing Research Insight. http://www.freddiemac.com/research/insight/20180417_consumers_leaving_money.html. Accessed February 18, 2019.
- Goodman, Laurie, Jun Zhu, and Bing Bai. 2016. Overly tight credit killed 1.1 million mortgages in 2015. Urban Wire: Housing and Housing Finance. <https://www.urban.org/urban-wire/overly-tight-credit-killed-11-million-mortgages-2015>. Accessed January 13, 2019.
- Goodman, Laurie, Alanna McCargo, Edward Golding, Bing Bai, and Sarah Stochak. 2018. Barriers to Accessing Homeownership: Down Payment, Credit, and Affordability. Urban Institute: Washington, DC. https://www.urban.org/sites/default/files/publication/99028/barriers_to_accessing_homeownership_2018_4.pdf. Accessed January 13, 2019.
- Gopal, Prashant. First-Time U.S. Homebuyers Account for Almost Half of Mortgages. June 4, 2018. Bloomberg. <https://www.bloomberg.com/news/articles/2018-06-04/first-time-u-s-homebuyers-account-for-almost-half-of-mortgages>. Accessed December 31, 2018.
- Haurin, Donald R., Christopher E. Herbert, and Stuart S. Rosenthal. 2007. Homeownership Gaps Among Low-Income and Minority Households. *Citiescape* 9(2): 5-52.
- Herbert, Christopher, Daniel T. McCue, and Rocio Sanchez-Moyano. 2013. Is Homeownership Still an Effective Means of Building Wealth for Low-Income and Minority Households? Was It Ever? Joint Center for Housing Studies: Cambridge, MA. <http://www.jchs.harvard.edu/sites/default/files/hbtl-06.pdf>. Accessed January 13, 2019.
- Hirasuna, Donald P. and Ryan Allen. 2012. The resurgence of denial rates for home loans: an examination of disparate effects on groups of applicants in the upper Midwest. *Housing Policy Debate* 22(4): 573-603.
- Hizmo, Aurel and Shane Sherlund. 2018. The Effects of the Ability-to-Repay / Qualified Mortgage Rule on Mortgage Lending. FEDS Notes. Board of Governors of the Federal Reserve: Washington, DC. <https://www.federalreserve.gov/econres/notes/feds-notes/effects-of-the-ability-to-repay-qualified-mortgage-rule-on-mortgage-lending-20181116.htm>. Accessed January 14, 2019.
- Jiang, Wei, Ashlyn Aiko Nelson, and Edward J. Vyclacil. 2014. Liar's Loan? Effects of Origination Channel and Information Falsification on Mortgage Delinquency. Research Paper 2009-06-02. Indiana University—Bloomington, School of Public & Environmental Affairs. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1421462. Accessed January 14, 2019.

Joint Center for Housing Studies (JCHS). 2017. The State of the Nation's Housing 2017. Joint Center for Housing Studies: Cambridge, MA. http://www.jchs.harvard.edu/sites/default/files/harvard_jchs_state_of_the_nations_housing_2017_chap4.pdf. Accessed December 13, 2018.

Kuhn, Moritz and Moritz Schularick. 2018. Income and Wealth Inequality in America, 1949-2016. Opportunity and Inclusive Growth Institute Working Paper 9 June 2018. Federal Reserve Bank of Minneapolis. <https://doi.org/10.21034/iwp.9>. Accessed February 18, 2019.

Levav, Jonathan, Nicholas Reinholtz, and Claire Lin. The Effect of Ordering Decisions by Choice-Set Size on Consumer Search. *Journal of Consumer Research*, Volume 39, Issue 3, 1 October 2012, Pages 585–599, <https://doi.org/10.1086/664498>. Accessed December 13, 2018.

Manturuk, Kim R. 2012. Urban Homeownership and Mental Health: Mediating Effect of Perceived Sense of Control. *City & Community* 11(4): 409-430.

Manturuk, K., Lindblad, M., & Quercia, R. (2012). Homeownership and Civic Engagement in Low-Income Urban Neighborhoods: A Longitudinal Analysis. *Urban Affairs Review*, 48(5), 731–760. <https://doi.org/10.1177/1078087412441772>.

Manturuk, Kim, Sarah Riley, and Janneke Ratcliffe. "Perception Vs. Reality: The Relationship between Low-Income Homeownership, Perceived Financial Stress, and Financial Hardship." *Social Science Research* 41, no. 2 (2012): 276-286.

Moulton, Shawn, Laura Peck, Nichole, Debbie Gruenstein Bocian, and Donna DeMarco. 2018. Who Participates in Homebuyer Education and Counseling Services and Why? Insights From HUD's First-Time Homebuyer Education and Counseling Demonstration. U.S. Department of Housing and Urban Development: Washington, DC. <https://www.huduser.gov/portal/publications/First-Time-Homebuyer-Education-and-Counseling-Services.html>. Accessed February 18, 2019.

National Association of Realtors. 2018. Share of First-time Buyers Held Steady at 32% in 2017 as Home Prices Continue to Increase under Tight Supply. Economist's Outlook Blog, National Association of Realtors. <http://economistsoutlook.blogs.realtor.org/2018/01/31/share-of-first-time-buyers-held-steady-at-32-in-2017-as-home-prices-continue-to-increase-under-tight-supply/>. Accessed January 14, 2019.

Palim, Mark. 2018. Lack of Mortgage Focus Complicates Home Purchase: An Ethnographic Study Among Low- and Moderate-Income Households. Fannie Mae. May 24, 2018. <http://www.fanniemae.com/portal/research-insights/perspectives/mortgage-focus-home-purchase-palim-052418.html>

Pittman, Cassi L. 2008. [The Use of Social Capital in Borrower Decision-Making](http://www.jchs.harvard.edu/sites/default/files/w08-4_pittman.pdf). Cambridge, MA: Joint Center For Housing Studies of Harvard University. http://www.jchs.harvard.edu/sites/default/files/w08-4_pittman.pdf. Accessed January 14, 2019.

Reid, Carolina. 2010. Sought or Sold? Social Embeddedness and Consumer Decisions in the Mortgage Market. Federal Reserve Bank of San Francisco Working Paper 2010 – 09. <http://www.frbsf.org/community-development/publications/working-papers/2010/december/mortgage-market-social-networks-consumer-decision/>. Accessed January 14, 2019.

Rohe, William and Hye-Sung Han. "Housing and Health: Time for Renewed Collaboration." *North Carolina Medical Journal* 73, no. 5 (2012): 374-380.

William M. Rohe and Mark Lindblad. 2013. *Reexamining the Social Benefits of Homeownership after the Housing Crisis*. HBTL-04. Joint Center for Housing Studies: Cambridge, MA.
<http://www.jchs.harvard.edu/sites/default/files/hbtl-04.pdf>. Accessed February 17, 2019.

Shapiro, Thomas. 2004. *The Hidden Cost of Being African American*. Oxford University Press: New York.

Spears, Dan. 2010. *Economic Decision-making in Poverty Depletes Behavioral Control*. Princeton University CEPS Working Paper No. 213 December 2010.
<https://www.princeton.edu/ceps/workingpapers/213spears.pdf>. Accessed January 14, 2019.

United States Department of Housing and Urban Development (HUD) 2012. "Exhibit 16. FHA Market Share of 1- to 4-Family Mortgages: 2001–Present," *U.S. Housing Market Conditions Report, 1st Quarter 2012*, 76;

Urban Institute. 2018. *Access and Affordability: Interactive map and research on 3 barriers to homeownership*. <https://www.urban.org/policy-centers/housing-finance-policy-center/projects/access-and-affordability-interactive-map-and-research-3-barriers-homeownership>. Accessed November 16, 2018.

Wei, Li and Laurie Goodman. 2014. *A Better Measure of Mortgage Application Denial Rates*. Urban Institute: Washington, DC. <https://www.urban.org/sites/default/files/publication/33501/2000031-A-Better-Measure-of-Mortgage-Application-Denial-Rates.pdf>. Accessed January 14, 2019.

Williams, Robert B. 2017. *The Privileges of Wealth: Rising inequality and the growing racial divide (Economics in the Real World)* Routledge: New York.

Woodward, Susan E., and Robert E. Hall. 2012. "Diagnosing Consumer Confusion and Sub-optimal Shopping Effort." *American Economic Review*, 102 (7): 3249-76.

Zhu, Meng, Yang Yang, Christopher K Hsee; The Mere Urgency Effect, *Journal of Consumer Research*, Volume 45(3): 673–690, <https://doi.org/10.1093/jcr/ucy008>.