

May 2018

# What do prospective homebuyers know about mortgages and mortgage shopping?

Know Before You Owe: Mortgage shopping study – brief #3



*This is the third in a [series of research briefs](#) on homebuying and mortgage shopping developed by the Bureau of Consumer Financial Protection's Office of Research and Division of Consumer Education and Engagement.*

# 1. Summary

The Bureau asked a large group of prospective homebuyers nine multiple choice questions to gauge what they knew about home mortgages. Bureau researchers found large differences in the proportion of respondents who gave correct answers across the questions. First-time homebuyers were less knowledgeable, as were older consumers, lower income consumers, consumers with subprime credit scores, and those who were not employed full-time. During the course of the homebuying process, respondents generally became more knowledgeable about most related topics, but areas of misunderstanding remained. Finally, the analysis shows that while consumers are aware of their lack of knowledge on certain topics, they are unaware of their lack of knowledge on others.

## 2. Introduction

The mission of the Bureau of Consumer Financial Protection (Bureau) includes educating consumers to make informed decisions about financial products. The Bureau also is charged with researching and reporting on consumer awareness and understanding of costs, risks and benefits of consumer financial products and services. To those ends, it is helpful to explore consumers' knowledge regarding important financial decisions such as buying a home and getting a mortgage. This research brief analyzes variation in mortgage knowledge across different concepts, different demographic subgroups, and over the course of the homebuying process, showing areas of understanding and misunderstanding.

This research brief is based upon a homebuying study conducted by the Bureau in the spring and summer of 2016. The study methodology is fully described in the [methodology brief](#). In short, prospective homebuyers took a baseline survey at the beginning of the study, and bi-weekly check-in surveys for up to three months or until they bought a home, whichever occurred sooner.

# 3. Method

## 3.1 Survey

During respondents’ baseline and final surveys, the Bureau asked a set of nine multiple choice questions on the topic of home mortgages. These questions were designed to measure knowledge of mortgage-related concepts, including specific features of mortgages like discount points and mortgage insurance. Each question had four or five possible answers, including an explicit “I don’t know” option. The list of the questions and their possible answers is given in Table 1 along with an indication of which of the possible answers was scored as correct.

Additional information on the surveys the Bureau administered and the participants who answered those surveys can be found in [first research brief](#) in this series.

**TABLE 1:** KNOWLEDGE QUESTIONS AND POSSIBLE ANSWERS

Question number and wording	Response options
Q1. When a mortgage includes “discount points,” how do the costs compare to a similar mortgage without discount points at the same lender?	<ol style="list-style-type: none"><li>1. The one with discount points is always cheaper overall</li><li>2. The one with discount points is always more expensive overall</li><li>3. Typically, the one with discount points has higher upfront costs, but the interest rate is lower (<i>correct</i>)</li><li>4. Typically, the one with discount points has lower upfront costs, but the interest rate is higher</li><li>5. I don’t know</li></ol>

Question number and wording	Response options
<p>Q2. Which of the following benefits does “mortgage insurance” provide <u>for the borrower</u>?</p>	<ol style="list-style-type: none"> <li>1. Protection from foreclosure</li> <li>2. Protection from bankruptcy</li> <li>3. When a borrower can't pay their mortgage, lenders must renegotiate mortgage terms</li> <li>4. None of the above (<i>correct</i>)</li> <li>5. I don't know</li> </ol>
<p>Q3. Can monthly payments on a fixed-rate mortgage change?</p>	<ol style="list-style-type: none"> <li>1. No, the payments will always be the same</li> <li>2. Yes, because property taxes and insurance can change (<i>correct</i>)</li> <li>3. Yes, because mortgage companies can change payments if the borrower's credit changes</li> <li>4. I don't know</li> </ol>
<p>Q4. Typically, if a borrower pays extra toward their mortgage's principal balance each month, how does that affect the borrower's total mortgage costs over the life of the loan?</p>	<ol style="list-style-type: none"> <li>1. The total costs are lower (<i>correct</i>)</li> <li>2. The total costs are the same</li> <li>3. The total costs are higher</li> <li>4. I don't know</li> </ol>
<p>Q5. Which of these is most likely to happen if a borrower cannot make a 20% down payment?</p>	<ol style="list-style-type: none"> <li>1. The borrower cannot get a mortgage</li> <li>2. The borrower will have to pay for mortgage insurance (<i>correct</i>)</li> <li>3. The borrower will have to get an adjustable-rate mortgage</li> <li>4. I don't know</li> </ol>
<p>Q6. With a typical fixed-rate mortgage, how much of the monthly payment will go to interest (versus principal)?</p>	<ol style="list-style-type: none"> <li>1. The amount going to interest starts high and gets lower over time (<i>correct</i>)</li> <li>2. The amount going to interest stays the same over</li> </ol>

Question number and wording	Response options
	<p>time</p> <p>3. The amount going to interest starts low and gets higher over time</p> <p>4. The amount going to interest varies depending on financial markets</p> <p>5. I don't know</p>
<p>Q7. What would normally happen to a borrower who submitted multiple mortgage applications within the same week?</p>	<p>1. The borrower's credit score would get worse</p> <p>2. The borrower's credit score would improve</p> <p>3. The borrower's credit score would stay the same (<i>correct</i>)</p> <p>4. Borrowers are not allowed to apply to more than one lender in such a short period of time</p> <p>5. I don't know</p>
<p>Q8. Typically, how does the interest rate on a mortgage loan compare with the loan's annual percentage rate (APR)?</p>	<p>1. The interest rate is higher than the APR</p> <p>2. The interest rate is the same as the APR</p> <p>3. The interest rate is lower than the APR (<i>correct</i>)</p> <p>4. Mortgage loans don't have an APR</p> <p>5. I don't know</p>
<p>Q9. Typically, does negotiating a lower purchase price for a home change the amount of money a homebuyer's real estate agent makes?</p>	<p>1. Yes, the agent will make more money</p> <p>2. Yes, the agent will make less money (<i>correct</i>)</p> <p>3. No, the amount the agent makes is not affected</p> <p>4. I don't know</p>

\*This table contains the knowledge questions and possible response options in the order they were displayed in the survey. The text “*correct*” designates the answer classified as correct in Table 2 and elsewhere; that text was not displayed to survey respondents.



## 4. Results: Baseline survey

### 4.1 Analysis of correct, incorrect, and “I don’t know” responses at baseline

Bureau researchers first analyzed the proportion of respondents giving correct, incorrect, and “I don’t know” responses across all of the questions at baseline. The questions are listed in Table 2 in descending order of difficulty—that is, the question with the highest proportion of correct responses is in the first row.<sup>1</sup> As shown, most participants knew about the effect of making additional payments on the total loan costs over the life of the loan (Question 4) and that real estate agents typically make less money when a home sells for a lower price (Question 9). In contrast, participants were less familiar with specific loan terms, such as private mortgage insurance (Question 2) and discount points (Question 1). The range in proportion of correct and incorrect responses was wide; over 80 percent of respondents answered the easiest question correctly (with approximately 8 percent giving an incorrect response), while only 15 percent of respondents answered the hardest question correctly (with approximately 65 percent giving an incorrect response).

Significantly, only 15 percent of respondents knew that submitting multiple mortgage applications within one week does not hurt a consumer’s credit score with almost two-thirds believing the opposite (Question 7). This belief may negatively impact consumers’ willingness to

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<sup>1</sup> Note that the proportions that are shown do not adjust for variation in the number of possible responses per question (i.e., four or five response categories). Questions with fewer response options may have been easier to answer simply because there were fewer incorrect responses for participations to choose.

shop. Additionally, less than 30 percent understood the difference between the interest rate and the APR (Question 8) which is usually quoted in connection with a mortgage.

**TABLE 2:** PROPORTION OF RESPONDENTS GIVING CORRECT, INCORRECT, AND “I DON’T KNOW” RESPONSES ACROSS THE KNOWLEDGE QUESTIONS IN THE BASELINE SURVEY

Question number and topic	Correct	Incorrect	Don’t know
Q4. Effect of extra payments	85.1	7.5	7.4
Q9. Agent commission	73.8	10.7	15.5
Q5. Down payment (PMI)	66.9	16.6	16.5
Q6. Interest vs. principal over time	65.1	18.5	16.5
Q3. Monthly payments on fixed rate mortgages	55.1	35.5	9.4
Q2. Mortgage insurance benefits	37.0	30.1	32.9
Q1. Discount points	36.2	16.4	47.5
Q8. Interest vs. APR	27.8	29.6	42.6
Q7. Multiple mortgage applications	15.4	64.8	19.8

\* N = 19,314-19,368 participants. Percentages in each row may not sum to 100 percent due to rounding. Questions ordered by percent correct. Question numbers listed in the leftmost column match Table 1, which displays full question wording and response options. Questions are listed in descending order of difficulty (i.e., how many respondents answered the questions correctly).

The research team next examined the proportion of respondents who answered that they did not know the answer to a question. Respondents who say “I don’t know” the answer to a question are indicating that they are aware of their lack of knowledge; this awareness can be contrasted with respondents who give an incorrect answer, and therefore may be unaware. In general, the number of respondents who said “I don’t know” was approximately the same as the number who gave the incorrect answer. However, there were three notable exceptions to this pattern. On Question 1, which asked about discount points, the number of respondents stating “I don’t know” was approximately three times higher than the number who gave an incorrect response, suggesting that many respondents were aware of their lack of knowledge on this subject. Questions 7 and 3 showed the opposite pattern, with the number of respondents giving an incorrect answer being higher than the number who stated “I don’t know.”

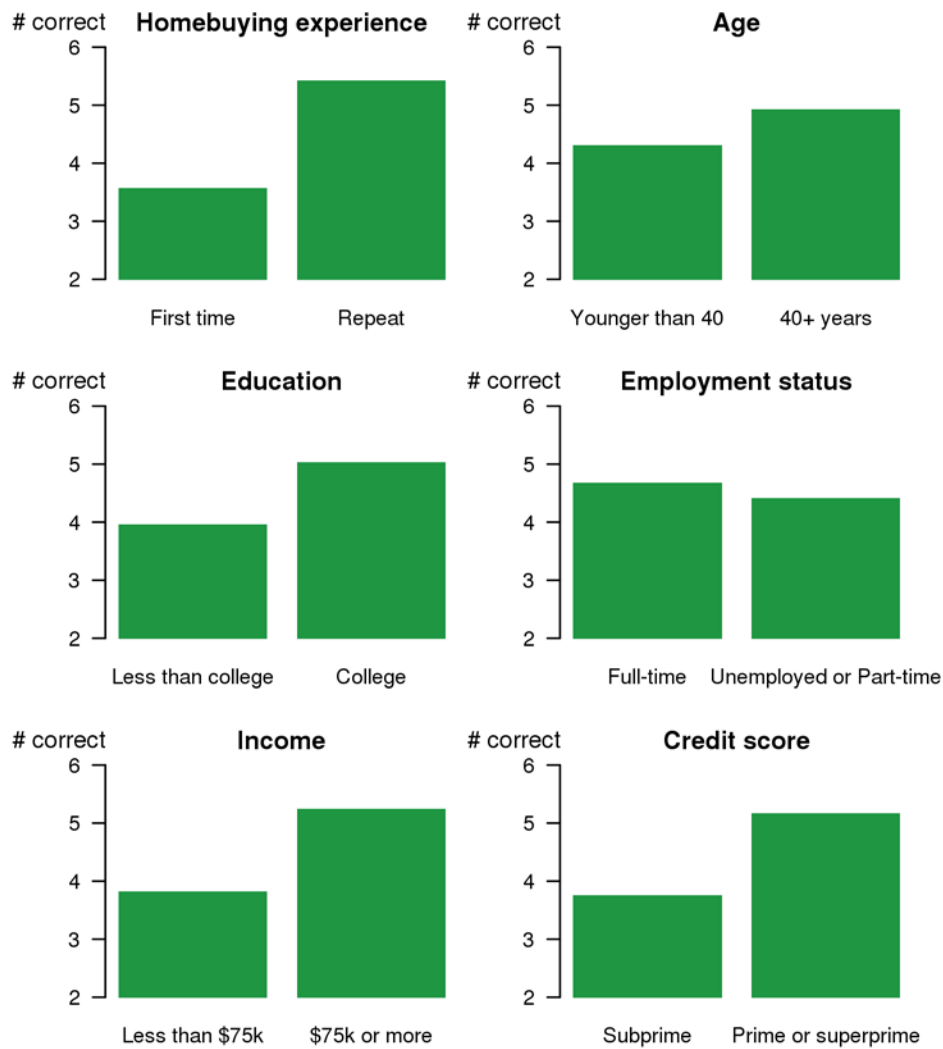
## 4.2 Differences in knowledge across demographic groups at baseline

The research team analyzed variation in overall mortgage knowledge across respondents to see what demographic characteristics were associated with different levels of knowledge.

Researchers first calculated the total number of answers that each respondent got correct. The average number of questions correct was 4.6 ( $SD = 2.2$ ,  $range = 0$  to 9).

The research team found significant variation in knowledge across groups. Figure 1 below displays average knowledge for selected demographic groups. For instance, the top left shows that repeat homebuyers have higher mortgage market knowledge than first-time homebuyers.

**FIGURE 1: AVERAGE KNOWLEDGE AMONG SELECT SUBGROUPS**



\* This figure shows average knowledge among certain demographic groups. The number of participants represented in each graph may vary due to non-response on questions eliciting demographic characteristics. Graphs are truncated at a minimum value of two correct questions. All differences between groups are significant at the .05 level.

The six panels in Figure 1 show that more knowledgeable participants are, on average, those who have purchased a home in the past, are older, have higher educational attainment, are employed full-time, have higher household income, or have higher credit scores.<sup>2</sup>

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<sup>2</sup> A linear regression that predicted knowledge using all six variables simultaneously showed the same patterns of results. All differences were statistically significant ( $ps < .001$ ) except for age ( $B = .058, se = .033, p = .079$ ).

# 5. Results: Learning over time

## 5.1 Analysis of change in correct, incorrect, and “I don’t know” responses

The survey also allows researchers to view changes in respondents’ answers between their baseline and final surveys. Bureau researchers analyze these changes to determine whether respondents’ knowledge is increasing, decreasing, or staying the same over time. Table 3 contains data from respondents in the control group who answered the knowledge questions both at baseline and in a subsequent survey, after they had spent some time shopping for a home. The left three columns show the proportion of correct, incorrect, and “I don’t know” responses at baseline among this sample.<sup>3</sup> The right three columns show the percentage point change in correct, incorrect, and “I don’t know” responses between baseline and the later survey. For example, the bottom row shows that 17.2 percent of respondents correctly answered Question 7 (about submitting multiple mortgage applications) at baseline, but that the proportion of correct responses had increased 8.2 percentage points (to 25.4 percent of responses) by the end of the study.

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<sup>3</sup> A comparison with Table 2 shows that those who completed both surveys started, on average, with higher knowledge than the total sample, indicating that those who did not finish the study had lesser knowledge than those who completed both surveys

**TABLE 3:** PROPORTION OF RESPONDENTS GIVING CORRECT, INCORRECT, AND “I DON’T KNOW” RESPONSES AT BASELINE, AND THE CHANGE IN THESE RESPONSES BY THE END OF THE STUDY

	Baseline survey: Correct	Baseline survey: Incorrect	Baseline survey: Don’t know	Respondents’ later survey (pct. pt. change): Correct	Respondents’ later survey (pct. pt. change): Incorrect	Respondents’ later survey (pct. pt. change): Don’t know
Q4. Effect of extra payments	88.7	6.1	5.2	-1.3	+0.4	+0.9
Q9. Agent commission	78.9	9.7	11.4	+0.3	-0.1	-0.3
Q5. Down payment (PMI)	75.6	11.8	12.6	+5.0	-2.8	-2.2
Q6. Interest vs. principal over time	69.7	17.5	12.7	+4.8	-2.6	-2.3
Q3. Monthly payments on fixed rate mortgages	60.2	32.7	7.2	+4.3	-2.5	-1.8
Q2. Mortgage insurance benefits	41.7	28.4	29.9	+3.9	+3.4	-7.4
Q1. Discount points	41.5	15.7	42.8	+8.8	+1.8	-10.5
Q8. Interest vs. APR	31.8	28.9	39.3	+10.1	-3.8	-6.3
Q7. Multiple mortgage applications	17.2	66.7	16.1	+8.2	-6.0	-2.1

\*N = 2897 to 2911. Sample is restricted to those participants in the control group who answered the knowledge questions twice. Percentages in each row may not sum to 100 percent because of rounding. Questions ordered by percent correct in the baseline survey. Question numbers listed in the leftmost column match Table 1, which displays full question wording and response options.

Table 3 shows that, over the course of the study as participants were shopping for a home, the proportion of correct responses increased and the proportion of “I don’t know” responses decreased across almost all of the questions. However, there was variation in the rate of improvement across the questions. The questions showing the largest gains in knowledge

tended to be those where the initial knowledge rates were low – those about specific terms (i.e., Question 1 about discount points, Question 8 about interest and APR, and Question 7 about submitting multiple mortgage applications). Even so, only slightly more than half of respondents answered the discount points question correctly in the second survey and only a quarter answered the question regarding multiple mortgage applications correctly.

Perhaps surprisingly, the rate of *incorrect* responses increased over time during the homebuying process for some questions, particularly those about the benefits of mortgage insurance (Question 2) and discount points (Question 1). These two questions also showed the largest decrease in “I don’t know” responses. This pattern suggests that some respondents moved from “I don’t know” to the wrong answer. As such, some respondents were no longer aware of their lack of knowledge on these subjects; instead, they were falsely confident. Together, these patterns suggest that many participants became more confident about their responses, and while the majority did so by learning, others did so incorrectly.



## 6. Conclusion

The Bureau’s mission includes helping consumers with information so they can make better-informed decisions about financial products. The results of this research show that consumers’ mortgage knowledge varies along many dimensions. Consumers’ knowledge is highest on basic mortgage concepts, such as the effect of extra payments on total mortgage costs, but lower for specific terms like discount points or the difference between interest rates and APR. Knowledge is lower among respondents from certain groups: first-time homebuyers, those who are not employed full-time, lower income consumers, and consumers with subprime credit scores. Consumers can learn to be more informed; over the course of their homebuying process, they tend to become more knowledgeable about certain pieces of information. However, overall knowledge remains low on some topics. For instance, many consumers incorrectly believe that submitting multiple mortgage applications within the same week will detrimentally affect their credit score, perhaps because they (correctly) know about the negative effects of credit applications over longer time periods.<sup>4</sup>

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<sup>4</sup> Having multiple credit applications over a longer time frame can have a negative impact on a consumer’s credit report. See <https://www.consumerfinance.gov/ask-cfpb/how-do-i-get-and-keep-a-good-credit-score-en-318/> for more detail.