



# TECHNICAL REPORT 2

## National Survey of Mortgage Originations Technical Documentation

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## 1. Introduction<sup>1</sup>

The National Mortgage Database (NMDB<sup>®</sup>) program is jointly funded and managed by the Federal Housing Finance Agency (FHFA) and the Consumer Financial Protection Bureau (CFPB). The program is designed to provide a rich source of information about the U.S. mortgage market based on a five percent sample of residential mortgages. It has three primary components:

- (1) the National Mortgage Database (NMDB);
- (2) the National Survey of Mortgage Originations (NSMO); and
- (3) the American Survey of Mortgage Borrowers (ASMB).

The NMDB program enables FHFA to meet the statutory requirements of section 1324(c) of the Federal Housing Enterprises Financial Safety and Soundness Act of 1992, as amended by the Housing and Economic Recovery Act of 2008 (HERA).<sup>2</sup> Specifically, FHFA must, through a monthly survey of the mortgage market, collect data on the characteristics of individual mortgages including both those eligible and not eligible for purchase by Fannie Mae and Freddie Mac, and including subprime and nontraditional mortgages. In addition, FHFA must collect information on the creditworthiness of borrowers, including a determination of whether subprime and nontraditional borrowers would have qualified for prime lending.<sup>3</sup>

For CFPB, the NMDB program supports policymaking and research efforts, and helps identify and understand emerging mortgage and housing market trends. CFPB uses NMDB, among other purposes, in support of the market monitoring called for by the Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act), including understanding how mortgage debt affects consumers and for retrospective rule review required by this statute.<sup>4</sup>

In seeking to meet these objectives, FHFA and CFPB decided to create NMDB after determining that no existing database was sufficient.<sup>5</sup> NMDB is a de-identified loan-level database of closed-end first-lien residential mortgages. It has the following features:

- (1) Represents the market as a whole;
- (2) Contains detailed, loan-level information on the terms and performance of mortgages, as well as characteristics of the associated borrowers and properties;
- (3) Continually updates;
- (4) Has a historical component dating back before the financial crisis of 2008; and
- (5) Provides a sampling frame for NSMO and ASMB.

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<sup>1</sup> The authors would like to thank several groups for their contributions to this report: our former NMDB team members at FHFA and CFPB; our current and former colleagues at both agencies; and everyone who has worked on the NSMO project at Experian, Westat, and Freddie Mac.

<sup>2</sup> Housing and Economic Recovery Act of 2008, Pub. L. 110–289, 122 Stat. 2654 (2008).

<sup>3</sup> FHFA interprets the NMDB program, including NSMO, as the “survey” required by the Safety and Soundness Act. The statutory requirement is for a monthly survey. Core inputs to NMDB, such as a regular refresh of credit-repository data, occur monthly, though NSMO is conducted quarterly.

<sup>4</sup> Dodd-Frank Wall Street Reform and Consumer Protection Act, Pub. L. 111-203, 124 Stat. 1376 (2010).

<sup>5</sup> For a fuller description of NMDB, including a discussion of existing sources and their limitations, see NMDB Technical Report 1 at [www.fhfa.gov/nmdb](http://www.fhfa.gov/nmdb).

The core data in NMDB represent a statistically valid 1-in-20 random sample of all closed-end first-lien mortgages in the files of Experian, one of the three national credit bureaus.<sup>6</sup> When the NMDB program began, an initial sample was drawn from all mortgage files outstanding at any point from January 1998 through June 2012. Since then, the sample has been updated quarterly with mortgages newly reported to Experian. Borrowers are tracked in NMDB from at least one year prior to the origination of the sampled mortgage to one year after termination of the mortgage, whether that termination is through prepayment, adverse termination, or maturity.

NSMO is designed to complement the core NMDB by providing supplementary information related to borrower opinions, expectations, and experiences. This quarterly survey is voluntary, and its target universe is all newly originated closed-end first-lien residential mortgages and their associated borrowers. To achieve this objective, NSMO draws its sample from mortgages that are part of NMDB, whose sample is drawn from the same target universe of new loans.

Beginning with loans originated in 2013, a simple random sample of about 6,000 loans per quarter is drawn from those newly added to NMDB for NSMO. Because the volume of originations varies across time, the sampling rate for the 6,000 sampled loans varies from one quarter to the next.<sup>7</sup>

The remainder of this technical report is organized as follows.

The second through fourth sections of this technical report provides background details on the development of NSMO. The second section discusses the development of the survey questionnaire, including the approval granted by the Office of Management and Budget (OMB) as required by the Paperwork Reduction Act. The third section discusses the survey sampling frame and timeline, and the fourth section discusses the logistics of conducting the survey.

The fifth through ninth sections provide analysis and a discussion about the editing process of the survey data. The fifth section presents an analysis of survey responses for the first 34 waves. The sixth section explains how the usable population for analysis is derived, also for the first 34 waves. The seventh section describes the data cleaning, editing, and imputation processes used to refine the usable survey dataset. The eighth section discusses the construction of nonresponse-adjusted sample weights. The ninth section discusses the sampling error of the survey.

The tenth section provides an overview of techniques used to preserve respondent anonymity and data security, and the eleventh section describes a data file newly available to the public for analysis.<sup>8</sup>

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<sup>6</sup> Experian was chosen through a competitive procurement process to assist in creating NMDB.

<sup>7</sup> As of this writing, NSMO is currently in the field with Wave 42. Data in this document represent Waves 1 through 34.

<sup>8</sup> This document has four appendices. Appendix A presents the survey cover letters and the NSMO questionnaire used for Wave 34. Appendix B lists the retired survey questions. Appendix C cites the codebook that shows the changes in questions over the waves and tabulations with un-weighted frequency responses for all questions for the first 34 waves of the survey associated with mortgages originated from 2013 to 2021. Appendix D contains weighted tabulations broken down by origination year for the same period. These observations represent those included in the public use data file.

## 2. Development of the Survey

Freddie Mac developed several pilot versions of what has now become NSMO in reaction to the financial crisis of 2008. The initial pilot was administered as a mail survey to about 1,500 borrowers drawn from data maintained by Experian, one of the three national credit bureaus. The pilot used a sample frame like that currently used by NSMO. The survey response rate was much lower than was hoped, at only 12 percent.

To improve the response rate, Freddie Mac retained the services of Don A. Dillman, of Washington State University, a leading expert in mail survey methods. Dr. Dillman focused on improving the survey response rate by changing the contacting strategy, participation incentives, communication strategy, and questionnaire format. His changes were incorporated into a second pilot survey in February 2011 that sampled new Freddie Mac purchase and refinance loans, and this second pilot survey had a vastly improved response rate of 60 percent.

In the fall of 2012, Freddie Mac conducted a third pilot survey targeting a representative national sample of new 2011 mortgage borrowers drawn from Experian files. The response rate for this survey was about 45 percent.

The improvements instituted in the later pilot surveys confirmed the effectiveness of using credit reporting bureau records as the survey sampling frame as well as the effectiveness of the questionnaire and methodology.

The NSMO questionnaire draws heavily on these pilots and leverages the input of an advisory group of experts from government, non-profit organizations, advocacy groups, trade groups, and academia convened by Freddie Mac when creating its questionnaires. This group played a significant role in ensuring that NSMO provided information of interest to policymakers, researchers, and data analysts.

NSMO collects unique information that cannot be obtained from other sources, such as mortgage shopping behavior, mortgage closing experiences, borrowers' expectations regarding house price appreciation and experiences of critical household financial events (for example, a period of unemployment, large medical expenses, or divorce). Borrowers are only asked a handful of questions about their mortgage terms, just enough to verify that the survey reached the correct person and that the respondent discussed the correct loan.

By interagency agreement between FHFA and CFPB, FHFA led the production of NSMO.<sup>9</sup> This work included seeking public comments concerning information collection as required by the Paperwork Reduction Act. On April 25, 2013, FHFA published a 60-Day Notice of Submission of Information Collection for Approval from the OMB in the *Federal Register*. Subsequently, on July 1, 2013, FHFA published a 30-Day Notice of Submission of Information Collection for Approval from OMB.

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<sup>9</sup> An interagency agreement between FHFA and CFPB was signed on September 12, 2012, in which they agreed to share the costs of the survey and the development of NMDB equally.

Following these *Federal Register* notices, OMB reviewed the FHFA application and approved the request in December 2013, assigning NSMO a control number of 2590-0012 with an expiration date of December 31, 2016. In April 2014, FHFA published a revised System of Records Notice (SORN) in the *Federal Register* extending the system of records entitled “National Mortgage Database Project” to cover NSMO. The second and third revisions of the SORN were published in the *Federal Register* in August 2015 and December 2016, respectively.

After obtaining OMB approval, FHFA modified an existing contract with Experian, which subcontracted the survey administration through a competitive process to Westat, a nationally recognized survey vendor. Fair Credit Reporting Act (FCRA) rules dictate that the survey process must be administered through Experian to maintain consumer privacy because it utilizes borrower names and addresses drawn from credit reporting bureau records.<sup>10</sup>

The NMDB team consulted with Experian, Westat, and the Freddie Mac advisory group between December 2013 and February 2014 to finalize the survey questionnaire and supporting materials. The initial survey wave was mailed out in April 2014, and a new wave of the survey has been conducted each quarter since. (See Section 3 for more information about the timeframe for each survey wave.)

In the process of applying for a three-year extension of the OMB control number, FHFA published a 60-Day Notice of Submission of Information Collection for Approval from the OMB in the *Federal Register* on September 13, 2016. Subsequently, on December 28, 2016, FHFA published a 30-Day Notice of Submission of Information Collection for Approval from OMB. OMB reviewed the FHFA application and approved the request on April 20, 2017 and extended the collection authority for NSMO through April 30, 2020. On December 10, 2019, FHFA published another 60-day notice, followed by an additional 30-day notice on April 3, 2020. OMB approved another request for extension on June 17, 2020, which extended the collection authority for NSMO through June 30, 2023. On December 6, 2022, FHFA published another 60-day notice. Following the 60-day notice, a 30-day notice was published on April 14, 2023. OMB approved this request for extension on June 15, 2023, which extended the collection authority for NSMO through June 30, 2026.

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<sup>10</sup> The Fair Credit Reporting Act (FCRA), Public Law No. 91-508, was enacted in 1970 and substantially amended since, to promote accuracy, fairness, and the privacy of personal information assembled by credit reporting agencies (CRAs). The Act's primary protection requires that CRAs follow “reasonable procedures” to protect the confidentiality, accuracy, and relevance of credit information. To do so, the FCRA establishes a framework of requirements for credit report information that include rights of data quality (right to access and correct), data security, use limitations, requirements for data destruction, notice, user participation (consent), and accountability.

### 3. Detailed Survey Sample Frame

Approximately 6,000 of the closed-end first-lien mortgage loans newly added to NMDB are selected for NSMO following the update of NMDB at the end of each quarter.<sup>11</sup> Because the volume of originations varies across time, the sampling rate for the 6,000 sampled loans varies from one quarter to the next.<sup>12</sup> Loans are selected at random from mortgages that were newly reported to Experian within a year of origination. Once selected to participate in NSMO, a borrower is ineligible to be selected again.

After the sample is selected, Experian eliminates any potential respondents who: (1) have opted out of previous surveys, (2) are deemed not to have usable addresses or names, or (3) are on a do-not-contact list (a small number). Industry guidance (Metro 2 Industry Standards for Credit Reporting) requires that servicers must supply a billing address for each borrower on a trade line (including mortgages). Experian generally uses these borrower billing addresses as the survey mailing addresses.

Table 1 shows the rules for selecting the borrower(s) and address to which the survey is mailed when there are multiple addresses or borrowers associated with a sample loan. The survey is sent to no more than two borrowers who share a common address.

<b>Number of Borrowers</b>	<b>Same or Different Address</b>	<b>Resulting Survey Recipient</b>
1	Not Applicable	One borrower with Experian’s associated best address
2	Same	Two borrower names with one common best address
2	Different	The one borrower and associated best address with the lowest number of open mortgages
>2	Same	Two borrowers with one common best address that has the highest number of trade lines reported
>2	Different	The one borrower and associated best address with the lowest number of open mortgages

<sup>11</sup> For a fuller description of how loans are selected for NMDB, see NMDB Technical Report 1.

<sup>12</sup> The variation is accounted for in the sampling weights for each observation.



## 4. Survey Timeline

At the beginning of each quarter, a 1-in-20 sample of mortgage loans newly reported to Experian over the previous quarter is delivered to the NMDB team from Experian. It takes approximately five weeks to identify and combine duplicative records, draw the NSMO sample, process it at Experian, and print the survey materials. At this point, the survey enters the field.

For the first 21 waves, the survey process was as follows:

On the first day NSMO was in the field, borrowers of sampled mortgages were sent a cover letter, printed questionnaire, and \$5 cash incentive. The mailing and printed questionnaire detailed how borrowers could mail back the completed survey or complete the survey online in either English or Spanish using instructions and a unique PIN provided in the questionnaire packet. At first, approximately one third of the overall survey responses were completed online, and this share has increased over time to about 60 percent in recent waves.

At the start of NSMO's second week in the field, borrowers were sent their first reminder letter. If a borrower had not submitted their questionnaire by the middle of NSMO's fifth week in the field, they were sent a second reminder letter, another copy of the printed questionnaire, and an additional \$5 cash incentive. If borrowers still had not replied by the end of NSMO's sixth week in the field, they were sent a third and final reminder letter at the start of NSMO's seventh week in the field. This last letter included the due date for returning the questionnaire to close the communication loop.

This sequence of survey mailings continued for waves 21 to present, with the initial survey mailing in week one and reminder mailings in week two, week five, and week seven. Beginning in wave 22, the NMDB team conducted a series of experiments that tested alternative strategies for increasing the survey's response rate. The results of these experiments led to several changes to the materials and incentives included in the survey mailings.

The first set of experiments were conducted during waves 22 through 26. In wave 22, one half of the 6,000 sampled borrowers were randomly selected to receive a \$10 cash incentive with the first mailing, and the other half received the \$5 incentive similar to prior waves. In waves 23 and 24, one half of the borrowers randomly received revised cover and reminder letters, and the other half received the unrevised letters used in prior waves. Additional edits were made to the revised letters between waves 23 and 24. In wave 25, all borrowers were sent an initial incentive of \$10. For the second incentive, one half of the non-respondents were randomly sent the normal \$5 cash incentive similar to previous waves, and the other half were randomly sent a letter informing them that they would be sent a \$20 incentive upon completion of the survey. In wave 26, all borrowers who had not returned a survey by week five were told they would be sent the \$20 incentive upon completion of the survey; half were given a \$5 incentive in week one and the other half were given \$10.

The results of these experiments allowed the NMDB team to create a new incentive structure for waves 27 to 36. All borrowers were sent a \$10 incentive in week one. In week five, if they had not yet responded, the week five reminder letter told them they would receive \$20 upon receipt

of a completed survey. This change necessitated sending a thank-you letter sent only to those who received a week five reminder letter and subsequently returned the survey, to which the \$20 is attached.

A second round of experiments were conducted in waves 37 through 40. In wave 37, one half of borrowers received letters that used a revised format, and the other half received the traditional letters. The borrowers receiving the revised letters showed modestly higher response rates, and the revised format was adopted for waves 38 to the present. In wave 38, one half of borrowers were mailed a postcard prior to the initial mailing that instructed them to keep an eye out for the initial mailing that would be delivered the following week. This group showed modestly higher response rates; however, the impact was not large enough to offset the cost of the mailed postcards so the pre-postcards were not adopted in subsequent waves. In waves 39 and 40, one half of the sampled borrowers were offered the \$20 incentive for a completed survey in the initial mailing rather than the week five letter. In both quarters, this change in the timing of the \$20 incentive increased response rates. In waves 41 to the present, all borrowers were offered the \$20 incentive for a completed survey in the initial mailing rather waiting until the week five letter.

During the first eight weeks of each cycle, Experian maintains a NSMO call center to address any questions by borrowers. This call center also allows borrowers to “opt out” of the survey and future surveys. Both FHFA and CFPB describe the survey on their websites so that borrowers can independently verify its legitimacy. The cover letter also includes the names of agency officials—the FHFA Deputy Director of the Division of Research and Statistics and the CFPB Deputy Associate Director for Research, Monitoring, and Regulations—who are identified on their respective agencies’ websites as senior employees.

Mail surveys and online responses are accepted and processed until 12 weeks after the mail date, which means that the survey cycle extends about five weeks into the next quarter. After the deadline, responses undergo initial processing by Westat to strip the data of any personally identifiable information such as the names of borrowers or institutions. This takes roughly 25 days, after which the data are delivered to FHFA by Experian.

The timeline described above applies to each quarterly data collection and production. Because some loans take longer than six months to be reported to the credit bureaus, a data file fully representative of a calendar year will generally not be available until December of the following year. For example, data on 2019 mortgage originations only became available towards the end of 2020. As of this writing, the NSMO survey is currently on its 42nd wave. Table 2 shows the survey field periods and sample size for each quarter to date. FHFA has received data from Experian up to the 39th wave as shown in Table 3 in Section 5. The NMDB team has processed, cleaned, and imputed data up to the 34th wave as shown in Tables 4 and 5 in Section 6.

<b>Table 2. Survey Field Periods</b>			
<b>Wave</b>	<b>Survey Field Dates</b>	<b>Calendar Quarter</b>	<b>Surveys Mailed</b>
1	April to June 2014	2014 Quarter 1	15,000
2	June to August 2014	2014 Quarter 2	3,000
3	August to November 2014	2014 Quarter 3	5,992
4	November 2014 to February 2015	2014 Quarter 4	5,795
5	February to May 2015	2015 Quarter 1	5,925
6	May to August 2015	2015 Quarter 2	4,428
7	August to November 2015	2015 Quarter 3	7,352
8	November 2015 to February 2016	2015 Quarter 4	5,913
9	February to May 2016	2016 Quarter 1	5,907
10	May to August 2016	2016 Quarter 2	5,885
11	August to November 2016	2016 Quarter 3	5,904
12	November 2016 to February 2017	2016 Quarter 4	5,919
13	February to May 2017	2017 Quarter 1	5,910
14	May to August 2017	2017 Quarter 2	5,804
15	August to November 2017	2017 Quarter 3	5,809
16	November 2017 to February 2018	2017 Quarter 4	5,707
17	February to May 2018	2018 Quarter 1	5,755
18	April to July 2018	2018 Quarter 2	5,773
19	August to November 2018	2018 Quarter 3	5,759
20	November 2018 to February 2019	2018 Quarter 4	5,770
21	February to May 2019	2019 Quarter 1	5,746
22	May to August 2019	2019 Quarter 2	5,720
23	August to November 2019	2019 Quarter 3	5,737
24	November 2019 to February 2020	2019 Quarter 4	5,676
25	February to May 2020	2020 Quarter 1	5,698
26	May to August 2020	2020 Quarter 2	5,676
27	August to November 2020	2020 Quarter 3	5,694
28	November 2020 to February 2021	2020 Quarter 4	5,658
29	February to May 2021	2021 Quarter 1	5,646
30	May to August 2021	2021 Quarter 2	5,650
31	August to November 2021	2021 Quarter 3	5,675
32	November 2021 to February 2022	2021 Quarter 4	5,650
33	February to May 2022	2022 Quarter 1	5,676
34	May to August 2022	2022 Quarter 2	5,681
35	August to November 2022	2022 Quarter 3	5,667
36	November 2022 to February 2023	2022 Quarter 4	5,681
37	February to May 2023	2023 Quarter 1	5,669
38	May to August 2023	2023 Quarter 2	5,699
39	August to November 2023	2023 Quarter 3	5,712
<b>Total</b>			<b>231,318</b>

## 5. Survey Samples and Returns

As shown in Table 3, NSMO typically samples about 6,000 new mortgage originations each quarter. Over the 39 waves for which FHFA has received data from Experian, just under 30 percent of the surveys mailed to borrowers of sampled mortgages were completed. The variation in quarterly sampling methodology and questionnaires are highlighted in this section. Additional details on questionnaire changes are in Appendices B and C.

Wave	Average Sampling Weight	Surveys Mailed	Postal Non-Delivery	Surveys Delivered	Surveys Completed				Opt-Out
					Total	By Mail	Online English	Online Spanish	
1	464.21	15,000	218	14,782	5,793	4,410	1,360	23	169
2	296.14	3,000	37	2,963	1,076	858	214	4	31
3	280.96	5,992	110	5,882	2,073	1,534	524	15	40
4	263.63	5,795	86	5,709	2,020	1,496	514	10	53
5	247.32	5,925	126	5,799	2,089	1,567	520	2	39
6	238.92	4,428	38	4,390	1,489	1,133	353	3	31
7	297.14	7,352	147	7,205	2,494	1,744	744	6	39
8	326.97	5,913	99	5,814	1,899	1,305	587	7	24
9	292.31	5,907	155	5,752	1,824	1,230	584	10	42
10	253.27	5,885	98	5,787	1,765	1,148	607	10	36
11	278.27	5,904	172	5,732	1,733	1,097	627	9	21
12	343.76	5,919	167	5,752	1,778	1,078	687	13	18
13	363.21	5,910	127	5,783	1,885	1,197	675	13	32
14	318.55	5,804	107	5,697	1,681	1,085	588	8	21
15	270.61	5,809	136	5,673	1,537	765	760	12	24
16	305.24	5,707	164	5,543	1,507	757	738	12	26
17	304.31	5,755	112	5,643	1,647	879	762	6	45
18	262.93	5,773	163	5,610	1,536	812	711	13	32
19	266.84	5,759	242	5,517	1,464	760	695	9	29
20	284.5	5,770	206	5,564	1,396	762	627	7	11
21	266.12	5,746	251	5,495	1,511	777	719	15	17
22	213.35	5,720	219	5,501	1,405	757	630	18	29
23	262.92	5,737	235	5,502	1,241	652	579	10	29
24	346.01	5,676	192	5,484	1,268	615	648	5	21
25	398.6	5,698	139	5,559	1,780	771	998	11	27
26	364.62	5,676	117	5,559	1,743	666	1,068	9	23

Wave	Average Sampling Weight	Surveys Mailed	Postal Non-Delivery	Surveys Delivered	Surveys Completed				Opt-Out
					Total	By Mail	Online English	Online Spanish	
27	606.49 <sup>13</sup>	5,694	91	5,603	1,821	717	1,092	12	19
28	586.42	5,658	117	5,541	1,752	562	1,178	12	9
29	626.20	5,646	124	5,522	1,761	677	1,077	7	26
30	629.72	5,650	146	5,504	1,576	646	916	14	22
31	621.31	5,675	169	5,506	1,458	567	877	14	19
32	509.98	5,650	182	5,468	1,415	552	852	11	22
33	463.01	5,676	198	5,478	1,482	720	748	14	26
34	468.72	5,681	161	5,520	1,253	596	643	14	28
35	352.82	5,667	208	5,459	1,270	540	711	19	23
36	258.50	5,681	265	5,416	1,181	415	755	11	19
37	205.64	5,669	264	5,405	1,088	440	637	11	20
38	165.57	5,699	377	5,322	1,107	492	602	14	11
39	178.94	5,712	357	5,355	1,099	486	592	21	13
Total	-	231,318	6,522	224,796	65,897	37,265	28,199	434	1,166
<b>Percent of Mailed Surveys</b>		<b>100.00%</b>	<b>2.82%</b>	<b>97.18%</b>	<b>28.49%</b>	<b>16.11%</b>	<b>12.19%</b>	<b>0.19%</b>	<b>0.50%</b>
<b>Percent of Completed Surveys</b>					<b>100.00%</b>	<b>56.55%</b>	<b>42.79%</b>	<b>0.66%</b>	<b>NA</b>

In 2014, the first year of the survey, a modified version was conducted for the first three waves in April, June, and September. Wave 1 (April) included a sample of 15,000 mortgages. This was a catch-up period to cover cases originated in 2013 and newly reported to Experian in the archives for June, September and December 2013.

Wave 2 (June) included 3,000 surveys and was for mortgages that were originated in 2013 and newly reported to Experian between January and March 2014. For Wave 3 (August), Westat mailed out 6,000 surveys representing mortgages that were originated in 2013 and reported to Experian between March and June 2014 within a year of origination as well as any mortgages originated in 2014 and reported to Experian between January and June 2014.

The fourth wave, mailed in November 2014, was the first sample that is comparable to subsequent surveys. It was comprised of any mortgage newly reported to Experian in the most recent quarter (July to September 2014) that was reported within a year of origination. It is also the first wave where Experian eliminated potential sample cases deemed to not have legitimate addresses or names prior to mailing. Other than slight changes to two questions, the questionnaire was unchanged from prior waves. This same questionnaire was used for Wave 5.

Initial analysis of data from the first four waves of the survey prompted major revisions to the questionnaire around this time. Examination of responses suggested that respondents may have

<sup>13</sup> The average sampling weight increased in 2020 due to the unusually large volume of originations in that year.

frequently misunderstood or misinterpreted some of the questions.<sup>14</sup> This issue was addressed in changes made to the questionnaire for parts of Wave 6 (details below) and all of Wave 7. Users should be aware of these interpretation inconsistencies when using data from the earlier waves.

These revisions were anticipated, so Wave 6 was broken into two parts. Mortgages that were originated in 2014 were mailed on time, following the established schedule and using the original questionnaire; mortgages originated in 2015 were held back to be mailed with the new questionnaire alongside the usual Wave 7 sample.

Wave 7 consisted of three samples drawn independently. The first were respondents selected for Wave 6 with loans originated in 2015. The second were respondents with mortgages newly reported to Experian between April and June 2015 (the normal quarterly sample frame). Finally, a special sample of borrowers residing in “remote rural” counties as defined using a U.S. Department of Agriculture (USDA) criterion with 2014 loan originations reporting to Experian within a year of origination was selected.<sup>15</sup> Each subsample was assigned a different sample weight.

All subsequent waves of the survey sent out only the regular sample mailed on-schedule. Minor revisions occurred roughly twice a year and can be tracked in the codebook included in Appendix C. One prevailing trend during these waves was a slow but steady overall decline in the response rate, a problem facing many other surveys like NSMO during this period. Beginning in wave 22, the NMDB team conducted a series of experiments that tested alternative strategies for increasing the survey’s response rates. These experiments and the resulting changes to the survey materials and incentives are described in Section 4.

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<sup>14</sup> A list of retired survey questions is provided in Appendix B. Changes to the language of the questions across waves are provided in the codebook, included in Appendix C.

<sup>15</sup> See <http://www.ers.usda.gov/data-products/rural-urban-continuum-codes/documentation.aspx> for the USDA definition of “rural” used for this sample.

## 6. Usable Survey Responses

Returned questionnaires and online responses were evaluated to determine the set of usable responses. Table 4 summarizes the results of this analysis through the 34 waves which have been completely processed and illustrates the four criteria for rejecting a completed questionnaire.

Survey Wave	Returned	Not Usable				Usable
		Duplicate or Ineligible	Answered "No" to Q1	Did Not Finish Survey	Wrong Loan	
1	5,792	91	737	127	216	4,621
2	1,076	15	85	16	38	922
3	2,073	41	108	36	58	1,830
4	2,020	123	131	46	63	1,657
5	2,089	41	81	46	62	1,859
6	1,489	117	70	29	50	1,223
7	2,494	73	142	78	96	2,105
8	1,899	46	72	28	59	1,694
9	1,824	42	68	27	37	1,650
10	1,765	63	84	40	58	1,520
11	1,733	43	92	38	37	1,523
12	1,778	62	101	49	50	1,516
13	1,885	50	102	52	54	1,627
14	1,681	55	66	52	44	1,464
15	1,537	35	136	78	33	1,255
16	1,507	33	115	70	26	1,263
17	1,647	31	126	62	34	1,394
18	1,536	29	113	60	34	1,300
19	1,464	41	101	59	31	1,232
20	1,396	40	114	66	24	1,152

Survey Wave	Returned	Not Usable				Usable
		Duplicate or Ineligible	Answered "No" to Q1	Did Not Finish Survey	Wrong Loan	
21	1,511	67	125	82	23	1,214
22	1,405	39	126	56	23	1,161
23	1,241	33	86	49	32	1,041
24	1,268	57	60	78	37	1,036
25	1,780	30	55	73	63	1,559
26	1,743	27	39	66	81	1,530
27	1,821	15	54	70	96	1,586
28	1,752	22	52	79	76	1,523
29	1,761	17	39	80	67	1,558
30	1,576	13	41	52	95	1,375
31	1,458	23	47	49	71	1,268
32	1,415	16	40	58	73	1,228
33	1,482	16	58	39	61	1,308
34	1,253	28	38	23	68	1,096
<b>Total</b>	60,151	1,474	3,504	1,913	1,970	51,290
<b>Percent of Mailed Surveys</b>	<b>29.65%</b>	<b>0.73%</b>	<b>1.73%</b>	<b>0.94%</b>	<b>0.97%</b>	<b>25.28%</b>

The first category of unusable surveys comes from respondents whose sample loans were ultimately removed from NMDB after the survey had been executed either because they were deemed to have duplicate trade lines and do not meet the criteria for remaining in NMDB or where the sample loan was determined to be a second and not a first mortgage lien. This was a particular problem in Wave 4 where a significant number of respondents were removed from NMDB for reasons unrelated to the survey. In some instances, the survey response itself led to the removal, as margin notes or comments indicated that the loan was a second lien.

The second criterion is a “no” response to the first question (Q1). Q1 is used as a screener question to confirm that the survey respondent took out a mortgage during the reporting period (which Experian records suggest that they did). In the first wave, a surprisingly high number of respondents (737) said that they had not taken out a mortgage. An analysis of these responses suggests that many people did not consider a refinance a “new” mortgage. Consequently, in Wave 2, the wording of Q1 was changed to add the phrase “including any mortgage refinances.” With this change, the share of “no” responses to Q1 decreased from 13 percent to 8 percent.

The next exclusion criterion eliminates breakoffs, defined as those for which the respondent stopped answering questions halfway through or answered less than 50 percent of the questions overall.



The last criterion for exclusion was for respondents who provided information on the wrong loan. The sampling frame was tied to a particular loan associated with the borrower. However, the questionnaire did not refer explicitly to that loan. Instead, respondents who had taken out multiple loans during the reference period were asked to report on the “most recent.” In some instances, this was not the sample loan. This was a particular problem in Wave 1 which, as a “catch up” survey, had a relatively long reference period. Also, some respondents who have refinanced their mortgage report on the original home purchase mortgage rather than the refinance. Finally, in a few instances it appears that the survey went to the wrong person, with answers bearing no resemblance to the sample loan features as characterized by Experian records. In each of these circumstances the survey response was removed from the data set used for analysis.

Given this, the rate of usable responses in each wave is lower than the survey response rates reported earlier. Overall, for the first 34 waves, 51,290 usable responses were obtained from 60,151 returned surveys. This resulted in a usable response rate of 25.28% out of the mailed-out questionnaires. The distribution of the usable surveys by mortgage origination year is shown in Table 5.

<b>Table 5. Usable Survey Responses by Origination Year</b>										
<b>Survey Wave</b>	<b>Total Usable</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>
1	4,621	4,621	0	0	0	0	0	0	0	0
2	922	922	0	0	0	0	0	0	0	0
3	1,830	507	1,323	0	0	0	0	0	0	0
4	1,657	11	1,646	0	0	0	0	0	0	0
5	1,859	5	1,854	0	0	0	0	0	0	0
6	1,223	0	1,223	0	0	0	0	0	0	0
7	1,810 <sup>16</sup>	0	192	1,618	0	0	0	0	0	0
8	1,694	0	12	1,682	0	0	0	0	0	0
9	1,650	0	1	1,649	0	0	0	0	0	0
10	1,520	0	0	1,052	468	0	0	0	0	0
11	1,523	0	0	155	1,368	0	0	0	0	0
12	1,516	0	0	12	1,504	0	0	0	0	0
13	1,627	0	0	2	1,625	0	0	0	0	0
14	1,464	0	0	0	1,116	348	0	0	0	0
15	1,255	0	0	0	179	1,076	0	0	0	0

<sup>16</sup> Excludes the remote rural special sample drawn in wave 7. This count is therefore lower than the count of usable responses in Table 4, which includes the remote rural sample.

**Table 5. Usable Survey Responses by Origination Year (cont.)**

Survey Wave	Total Usable	2013	2014	2015	2016	2017	2018	2019	2020	2021
16	1,263	0	0	0	6	1,257	0	0	0	0
17	1,394	0	0	0	5	1,389	0	0	0	0
18	1,300	0	0	0	0	942	358	0	0	0
19	1,232	0	0	0	0	131	1,101	0	0	0
20	1,152	0	0	0	0	5	1,147	0	0	0
21	1,214	0	0	0	0	1	1,213	0	0	0
22	1,161	0	0	0	0	0	788	373	0	0
23	1,041	0	0	0	0	0	78	963	0	0
24	1,036	0	0	0	0	0	0	1,036	0	0
25	1,559	0	0	0	0	0	2	1,557	0	0
26	1,530	0	0	0	0	0	0	1,017	513	0
27	1,586	0	0	0	0	0	0	56	1,530	0
28	1,523	0	0	0	0	0	0	3	1,520	0
29	1,558	0	0	0	0	0	0	0	1,557	1
30	1,375	0	0	0	0	0	0	0	493	882
31	1,268	0	0	0	0	0	0	0	17	1251
32	1,228	0	0	0	0	0	0	0	7	1221
33	1,308	0	0	0	0	0	0	0	0	1308
34	643	0	0	0	0	0	0	0	0	643
<b>Total</b>	50,542	6,066	6,251	6,170	6,271	5,149	4,687	5,005	5,637	5,306
<b>Percent of Mailed Surveys</b>	<b>24.91%</b>	<b>2.99%</b>	<b>3.08%</b>	<b>3.04%</b>	<b>3.09%</b>	<b>2.54%</b>	<b>2.31%</b>	<b>2.47%</b>	<b>2.78%</b>	<b>2.62%</b>

## 7. Cleaning, Editing, and Imputing Responses

One advantage that NSMO has over other surveys is the availability of credit and administrative data, much of which appears to be quite reliable. These data can be used to assist in the editing and imputation process. Four primary sources of such data are available in processing NSMO:

- (1) Credit data from Experian on sample loans;
- (2) Data collected by Experian from other data sources on the survey respondents, including loan servicers and data companies;
- (3) Information from matches to administrative loan files (Fannie Mae, Freddie Mac, Federal Housing Administration (FHA), Department of Veteran Affairs (VA), Rural Housing Services (RHS), and Federal Home Loan Banks (FHLB)); and
- (4) Information for loans that could be matched to Home Mortgage Disclosure Act (HMDA) files.<sup>17</sup>

The credit and administrative data are used to determine which borrower in the Experian data corresponded to the respondent (and spouse/partner of the respondent) in the survey and to infer the loan the respondent had in mind when answering the survey. These data are also useful in determining if respondents correctly identified their loan as a home purchase loan or a refinance.

The survey responses are first subjected to thorough editing and review after being delivered to FHFA. This initial phase consists of standard editing—correcting numbers reported in the wrong units, changing answers in responses based on margin notes and comments, assigning responses for questions with open-ended “other” responses, dealing with multiple responses to a question that calls for only one response, and deciding how to handle situations where respondents followed the wrong skip pattern.

Tabulations of the raw unweighted—but edited—responses to all the survey questions are included in Appendix C. Data are presented for usable observations in Waves 1 through 34 with loan originations between 2013 and 2021. These observations are those included in the public use data file.<sup>18</sup>

After editing and cleaning the survey response data, missing responses are imputed using answers to related questions or statistical models estimated based on credit and administrative data and answers to other questions in the survey. Imputations are designed to replicate the level of inherent inconsistencies between related variables in the actual (non-imputed) responses by the respondents. Actual responses are generally not changed (except in cases where they are

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<sup>17</sup> Merges with most administrative files are conducted behind a firewall at Experian using borrower name, address, date of birth and Social Security number to ensure the highest quality match accuracy (neither FHFA nor CFPB staff ever receive such information). However, merging the NMDB data with the HMDA data and the FHLB loan files must rely on variables common to both datasets, including the original loan balance, the opening date of the mortgage and the general location of the property (census tract or state/county) but not property address or borrower name. Unfortunately, mortgage servicers report the billing address of the mortgage borrowers to Experian, but this is not necessarily the property address, particularly for mortgages on non-owner-occupied properties. Those, when converted to a census tract for matching may be incorrect. Thus, HMDA merges are less accurate than those employing directly identifying information such as name and Social Security number because the latter are less reliant on address.

<sup>18</sup> Section 10 contains an explanation of the differences between the public use file and the internal use file.

edited as described above). In order to preserve the original responses, the raw responses are retained with missing responses coded as such. A parallel set of variables (“X” variables) are constructed where all missing responses are imputed, and necessary responses are edited as described above. Each instance in which an X variable differs from original responses is recorded by a shadow variable (“J” variables) that indicates the method and reason why the change was made. Missing responses typically total about three to five percent of responses for most questions and only in a few instances were more than 10 percent. The X variables are not created when a directly comparable credit or administrative variable is available for all respondents (*e.g.*, loan amount, loan payment, number of co-signers) as comparable credit or administrative variables can be used in lieu of survey responses in analysis. Instead, Z variables are created in their place to indicate whether the respondents answered the question.

The initial set of imputations are based on inferences drawn from patterns of response. Patterns of missing responses sometimes provide an indication of how the respondent would have answered if they had taken the time to fill out all answers of a group. For example, one question reads, “how important were each of the following...” and provides choices of important or not important. Some respondents only mark “important” for the choices important to them. Other respondents might only mark choices that are “not important.” When all answers are in a group with only one side answered, the other answers are imputed as the opposite choice. For example, when a respondent only marks choices that are “important,” the missing questions were imputed as “not important.”

The survey skips do not always work for every respondent and some respondents miss the lead-in question. The answers to the lead-in question were often imputed based on actual answers to the follow-up questions. For example, one question reads, “how many different mortgage lenders/brokers did you end up applying to” and provides options for one to five or more. When a respondent chooses one, they skip the next question about reasons they applied to more than one. If the lead-in question was left blank, any yes answer to the follow-up is considered a reason to impute that they applied to more than one lender. All “no” answers to the follow-up questions mean that they probably only applied to one lender. When respondents skip both a lead-in and follow-up question, both are imputed with one of the imputation models.

Once these inferential imputations are taken care of, statistical models are used to impute the remaining missing answers. The most common type of question in NSMO provides a simple “yes” or “no” answer. A binomial logistic model provides an estimated probability of a “yes” answer. For some questions, such as the number of lenders or brokers the respondent seriously considered, the answers are in a logical order. For these types of questions, an ordered logistic model is used to determine the probability of each answer. For other questions the order does not matter, and the answer choices are not related to the previous choice. For these questions, a multinomial logistic model is used, and the reference group is selected to be the most common answer. Again, the model produces a probability of each answer response. A random number is drawn with a different seed for every question and it is then compared to the probability of each response level. When the random number falls below the cumulative probability of an answer, that answer is used as the imputed response. This method injects some randomness while preserving strong correlations with the predicted values from the imputation models.

The dependent variable ( $y_i$ ) in all the models used is the variable being imputed. The vector of characteristics ( $x$ ) can include information from the credit files or answers to survey questions. Key demographic variables (for example, age, sex, education, ethnicity, and income) are imputed first. For these variables, high quality administrative data are generally available and can be used directly to impute a value for the X variable. For example, lender-reported information provides high quality data on age. Administrative data also provide reliable information on race, income, and interest rate. HMDA data also provide reliable information on race, income, and sex.

The initial statistical imputation models first use all the respondents who provided answers using a standard set of predictors to provide an initial imputation. Once the initial imputation values are established, the models are enhanced for any predictor that provides a good fit to the models and these models use actual and imputed values from all respondents. The missing values are imputed statistically using an iterative process where each subsequent run of the model uses the actual responses and the imputed responses from the previous run. Iterating in this way ensures that correlations among the imputed values will better reflect correlations among observations where responses were available.

Lead-in questions are always imputed before the follow-up question to keep the follow-up imputations consistent with the lead-in question.

As the recursive models run, the coefficient of each predictor variable in each model is tracked and compared with values from the previous runs. The recursive runs are only stopped when the coefficients have settled down with minimal changes in the last few runs. This ensures that the recursive effect on each model has fed into all the predictions of imputed values and stabilized.

To find the best model for each imputation, the last recursive run is selected, and the actual response is subtracted from the predicted value of the response. The difference represents the error term or the portion of the probability of a response that was not explained by the predictive variables. A large matrix of error terms is constructed, and the values are tested for correlation. Error terms with a correlation coefficient of over 0.30 get explored as possible indicators of new predictor variables. Each year, new predictors are placed into the recursive model. With improved models, the recursive runs are restarted until all the beta coefficients settle down again.

## 8. Sample Non-Response Weights

There are several ways calculations based on the NSMO raw survey responses may not be representative of the population as a whole. First, as shown earlier in Table 3, the survey waves do not have the same sampling rates. Second, only about one-fourth of the sampled borrowers completed the survey. Commonly, in survey sampling, some individuals chosen for the sample are unwilling or unable to participate in the survey. Non-response bias is the bias that results when respondents differ systematically from non-respondents. A common method for mitigating possible non-response bias is to use weights to align the characteristics of respondents and the population more closely. This is known as “non-response weighting.” Such weights are generally calculated from statistical models. Specifically, the non-response weights in NSMO are designed to “blow up” the usable sample (column 7 in Table 4) to the total surveys mailed (column 3 in Table 3), less duplicate and ineligible loans taken out of NMDB (column 3 in Table 4 and a comparable proportion of non-returned surveys not shown in the table).

Often, little is known about survey non-responders, so the statistical models used to construct non-response weights are quite simplistic. Unlike many other surveys, NSMO has extensive credit and administrative data on both responding and non-responding borrowers that can be used to estimate non-response weights.

Sample non-response weights are estimated with logistic models separately for each sample wave and within a wave for loans with a single borrower versus those with multiple borrowers. The models estimate the probability of getting a usable response for each wave of the survey. Key predictive variables included are loan amount, borrower age, the income relied upon for underwriting, the combined loan-to-value ratio, an indicator of whether it was a home purchase or refinance loan, and the interest rate spread over the prevailing prime interest rate at origination. The models also include credit score, geography using Census Divisions, and demographic characteristics like family composition, race, ethnicity, sex, and educational attainment.

The model’s predicted probabilities of response were placed into 5 equal groups of 20 percent each. The average of the response rates from each of these five groups was used to calculate a response weight as the inverse of these five average rates. Once within-wave sample non-response weights are estimated, they are multiplied by the wave sample weight to provide an overall weight.

Table 6 demonstrates the effect of differential sampling weights for the first 34 waves. Column one shows the distribution among various demographic and loan categories of the raw survey responses. Column two provides the distribution using estimated overall weights. Finally, column three shows the average overall weight for each category.

<b>Table 6. Overall Weights, 2013 - 2021 Originations (Waves 1-34)</b>			
	<b>Unweighted Percentage</b>	<b>Weighted Percentage</b>	<b>Average Weight</b>
<b>Loan Category</b>			
Purchase	46.30%	46.50%	1,426
Refinance	49.90%	49.80%	1,415
Other (i.e. bought out co-borrower, put loan on mortgage-free property)	3.80%	3.70%	1,359
	100.00%	100.00%	
<b>Loan Size</b>			
Less than \$50,000	2.10%	2.00%	1,348
\$50,000 to \$99,999	11.60%	10.60%	1,300
\$100,000 to \$149,999	17.90%	17.00%	1,346
\$150,000 to \$199,999	16.80%	16.50%	1,392
\$200,000 to \$249,999	13.70%	13.80%	1,424
\$250,000 to \$299,999	10.60%	10.60%	1,418
\$300,000 to \$349,999	7.90%	8.20%	1,478
\$350,000 to \$399,999	5.60%	5.80%	1,486
\$400,000 or more	13.90%	15.50%	1,581
	100.00%	100.00%	
<b>Mortgage Term to Maturity</b>			
Less than 15 Years	3.70%	3.00%	1,168
15 Years	15.60%	14.20%	1,284
Between 15 and 30 Years	6.80%	7.10%	1,480
30 Years or More	73.90%	75.70%	1,452
	100.00%	100.00%	
<b>Loan to Value (LTV) Ratio at Origination</b>			
Less than 75%	41.70%	39.80%	1,352
75% to 79%	11.60%	11.20%	1,371
80%	9.70%	9.30%	1,366
81% to 89%	8.90%	8.90%	1,421
90% or More	28.10%	30.80%	1,550
	100.00%	100.00%	
<b>Respondent Credit Score (VantageScore® 3.0)</b>			
Lower than 620	4.60%	6.00%	1,853
620 to 639	3.00%	3.80%	1,808
640 to 659	4.50%	5.70%	1,772
660 to 679	5.20%	6.20%	1,680
680 to 699	5.90%	6.70%	1,605
700 to 719	7.10%	7.80%	1,569
720 to 739	9.00%	9.40%	1,492
740 or Higher	60.70%	54.40%	1,270
	100.00%	100.00%	

## 9. Sampling Error

Errors in survey values can stem from several sources. Sampling error—the variability expected in estimates based on a sample instead of a census—is often an important source of error. For NSMO, estimates of statistics that apply to most mortgages may be measured with reasonable precision, but sampling variability will generally be greater for estimates for less-common types of loans or mortgage features.

Other errors occur because borrowers who respond to the survey or to a particular question are not random. Imputation and sample non-response weights correct for some, but not all, of this error. Other errors occur when respondents interpret a question differently than intended by the survey or other respondents. As noted above, for some questions, this problem was serious enough to call into question the use of the variable.

Analyses of these data with software that assumes the data are from a simple random sample will under-estimate the standard errors (statistical precision) of the estimates. Users are encouraged to use analytic procedures (so-called “survey” procedures in most major statistical analysis packages) that take into account the effect of the differential sampling and non-response adjustment weights on the estimates.



## 10. Security and Privacy Measures

The most important way NMDB protects its sampled borrowers is by keeping all personally identifiable information (PII) behind Experian's firewalls. No Social Security numbers, names, addresses, or institution names ever arrive at FHFA.

The use of a sample in the full NMDB also substantially reduces the privacy risk associated with any data collection. By contrast, a universal registry can present challenges for privacy since it is known that a particular loan must be in the dataset. However, for a 1-in-20 sample, the odds are 95 out of 100 that a particular loan is not in the database. In addition, the sample used is large enough to support almost all types of statistically valid analyses, but small enough to manage logistically, thus dramatically reducing both contract and computing costs.

All survey responses for NSMO received by Westat are purged of any information related to the name of the borrower, address of the borrower, or name of any financial institution before leaving Westat. This is done to maintain the de-identified, confidential nature of the data and to ensure that the survey responses cannot be connected to a name or address. The questionnaire also instructs recipients not to include their names or addresses when completing the questionnaire.

As a final security measure, two versions of the NSMO data are made available outside of the production environment: a public use file (PUF) available to the general public and an internal use file (IUF) accessible only to federal employees who have signed an agreement to use the data responsibly.

Neither the IUF nor the PUF contain any PII from borrowers, but the IUF contains geographic data and continuous variables that have been deemed a reidentification risk and are therefore not released to the public. The U.S. Census Bureau periodically reviews the PUF to ensure that its release cannot jeopardize respondent privacy. More information about measures taken to protect publicly available data can be found in the next section of this report.

## 11. Public Use File

On November 8, 2018, FHFA and CFPB released the first NSMO public use file based on the first 15 quarterly waves of the survey. It has since been updated regularly, with the most recent update published in July 2024. This updated file contains data for 50,542 sample mortgages originated from 2013 through 2021 based on 5,000 to 6,000 usable surveys per year.<sup>19</sup>

To ensure that the public use file adequately protects privacy, FHFA entered into an agreement with the U.S. Census Bureau to conduct an independent third-party assessment of the proposed public use file to determine whether PII can be re-identified from the NSMO public use data set by matching against other publicly available data sets. On June 11, 2021, the U.S. Census Bureau submitted a memorandum to FHFA stating that the NSMO public use data and the methods used to protect privacy in that data met its privacy standard for public release. The same methods were used for the current public data release.

The public use file excludes virtually all geographic variables to protect privacy. Specifically, the public use file excludes geographical information such as Census region, Census division, state, county, city, zip code, and Census tract. It only includes a flag indicating whether the property associated with the mortgage was in a metropolitan area tract designated as low-to-moderate income (LMI) for Community Reinvestment Act (CRA) purposes, non-CRA-LMI metropolitan tract, or in a non-metropolitan area.

The public use file contains 318 survey data elements on mortgage shopping behavior, mortgage closing experience as well as borrower perception, opinion, and outlook about their mortgages. It also contains over 200 supplementary data elements about the sample mortgages and borrowers, such as the loan amount (in \$50,000 categories), loan-to-value ratio, debt-to-income ratio, origination and quarterly VantageScore<sup>®</sup> 3.0 credit scores of borrowers, and quarterly performance status of the mortgages through September 2023.

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<sup>19</sup> The NSMO public use file does not include “remote rural” special sample loans originated in 2014 because they were sampled differently.

## Appendix A. NSMO Letters and Questionnaire, Wave 34

This appendix shows the NSMO cover letters and survey questionnaire (or instrument) that was mailed to the borrowers associated with the sampled mortgages during Wave 34. All the questionnaires used in Waves 1 through 40 are available on [www.fhfa.gov/nsmodata](http://www.fhfa.gov/nsmodata).



## IMPROVING MORTGAGE EXPERIENCES IN AMERICA

*National Survey of Mortgage Originations*

1234567 101  
 <FIRST NAME1> <LAST NAME1>  
 <FIRST NAME2> <LAST NAME2>  
 <ADDRESS>  
 <CITY> <STATE> <ZIP>

May 16, 2022

We are writing to ask for your help.

It is our understanding that you have taken out or co-signed on a mortgage loan sometime in the last two years. We want to learn about your experience, whether your mortgage was to purchase a housing property or to refinance or modify an existing loan.

The **Federal Housing Finance Agency** and the **Consumer Financial Protection Bureau** are working together on this study. Understanding your experience is particularly important in developing policies to assist consumers when obtaining a mortgage.

You can complete the paper copy and return it in the enclosed postage-paid envelope or complete the survey online in either of the following ways:

To complete the survey on a computer or tablet, please go to: **www.NSMOSurvey.com**  
 Then, enter this unique access code: **<123 456 789>**

To complete the survey on a mobile device/smartphone,  
 text your unique access code **<123 456 789>** to **(202) 759-2029** to receive a link to the survey.

The unique access number helps us keep track of returned surveys and not send needless reminders.

Completing the survey is voluntary. Your answers will not be connected to your name or any other identifying information. If you have any questions about this study, please call us toll free 1-855-339-7877 or visit our web sites, [www.fhfa.gov/nsmo](http://www.fhfa.gov/nsmo) or [www.consumerfinance.gov](http://www.consumerfinance.gov).

We realize that answering this survey will take some time and effort, so we have enclosed a small token of appreciation as a way of saying thanks.

Sincerely,

Daniel E. Coates  
 Deputy Director for Research and Statistics  
 Federal Housing Finance Agency  
[fhfa.gov](http://fhfa.gov)

Janis K. Pappalardo  
 Associate Director for Research, Markets, and Regulations  
 Consumer Financial Protection Bureau  
[consumerfinance.gov](http://consumerfinance.gov)

*Para leer esta carta en español por favor vea el dorso.*



## MEJORANDO LOS TRÁMITES HIPOTECARIOS EN ESTADOS UNIDOS

*Encuesta Nacional de Apertura de Hipotecas*



1234567

101

&lt;FIRST NAME1&gt; &lt;LAST NAME1&gt;

16 de mayo de 2022

&lt;FIRST NAME2&gt; &lt;LAST NAME2&gt;

&lt;ADDRESS&gt;

&lt;CITY&gt; &lt;STATE&gt; &lt;ZIP&gt;

Por medio de la presente queremos solicitar su ayuda.

Tenemos entendido que usted obtuvo o firmó un préstamo hipotecario en los últimos dos años. Queremos conocer su experiencia ya sea que su hipoteca fue para comprar una vivienda o para refinanciar o modificar un préstamo existente.

La **Agencia Federal de Financiamiento de Vivienda** y la **Oficina para la Protección Financiera del Consumidor** están trabajando conjuntamente en este estudio. Comprender su experiencia es de especial importancia para poder crear políticas que ayuden a los consumidores cuando obtienen hipotecas.

Puede contestar la encuesta impresa y enviarla de vuelta en el sobre pre-pagado, o la puede contestar por Internet de cualquiera de estas dos maneras:

Para contestar la encuesta en una computadora o tableta, por favor, vaya a:  
**www.NSMOSurvey.com** y anote este código de acceso único: **<123 456 789>**

Para contestar la encuesta en un aparato móvil/teléfono inteligente, envíe en un mensaje de texto su código de acceso único **<123 456 789>** al **(202) 759-2029** para recibir un enlace a la encuesta.

El número de acceso único nos ayuda a darle seguimiento a las encuestas devueltas y no tener que enviar recordatorios innecesarios.

Contestar la encuesta es voluntario. Sus respuestas no se relacionarán con su nombre ni con otra información que lo pudiera identificar. Si tiene alguna pregunta acerca de este estudio, nos puede llamar a la línea directa y gratuita 1-855-339-7877 o ir a nuestras páginas web, [fhfa.gov/nsmo](http://fhfa.gov/nsmo) o [consumerfinance.gov](http://consumerfinance.gov).

Sabemos que contestar esta encuesta tomará algo de tiempo y dedicación, por lo que hemos adjuntado una pequeña muestra de agradecimiento.

Atentamente,

Daniel E. Coates  
Director asistente de investigación y estadística  
La Agencia Federal de Financiamiento de Vivienda  
[fhfa.gov](http://fhfa.gov)

Janis K. Pappalardo  
Subdirector de Investigación, Mercados, y Regulación  
La Oficina para la Protección Financiera del Consumidor  
[consumerfinance.gov](http://consumerfinance.gov)

*To read this letter in English, please turn over to the other side.*

# Improving Mortgage Experiences in America

## National Survey of Mortgage Originations



We are conducting this survey of people who have taken out or co-signed for a mortgage loan to purchase a housing property or to refinance or modify an existing loan.

Learning directly from borrowers like you about your mortgage experiences will help us improve lending practices and the mortgage process for future borrowers like you. It is important to get the perspective of all borrowers for making government policies.

You can mail back the paper survey in the enclosed business reply envelope or complete the survey online. The online version may be easier to complete because it skips any questions that do not apply to you based on your responses. Online responses are also processed more quickly, making it less likely that you will receive reminders to complete this survey. We appreciate your help either way.

**To complete the survey on a computer or tablet**

Go to: [www.NSMOSurvey.com](http://www.NSMOSurvey.com)

Enter the unique access code provided in the letter we sent you.

**To complete the survey on a mobile device/smartphone**

Text your unique access code to (202) 759-2029.

***Para contestar la encuesta en una computadora o tableta***

Vaya a: [www.NSMOSurvey.com](http://www.NSMOSurvey.com)

*Ingrese el código de acceso único que se le envió en la carta.*

***Para contestar la encuesta en un aparato móvil/teléfono inteligente***

*Envíe en un mensaje de texto su código de acceso único al (202) 759-2029.*

**ABOUT THE SPONSORS:** The **Federal Housing Finance Agency** and the **Consumer Financial Protection Bureau** are working together to sponsor this survey. We are doing this because both agencies are concerned with improving the safety of the U.S. housing finance system and making sure all consumers have better access to mortgages. Thanks so much for helping us assist future borrowers.

You can find more information on our websites - [fhfa.gov/nsmo](http://fhfa.gov/nsmo) and [consumerfinance.gov](http://consumerfinance.gov)

Your answers to this survey will help us as we improve the safety of the U.S. housing finance system and help to ensure that people have access to funds needed to build or improve housing.

We look forward to hearing from you.

**Privacy Act Notice:** In accordance with the Privacy Act, as amended (5 U.S.C. § 552a), the following notice is provided. The information requested on this Survey is collected pursuant to 12 U.S.C. 4544 for the purposes of gathering information for the National Mortgage Database. Routine uses which may be made of the collected information can be found in the Federal Housing Finance Agency's System of Records Notice (SORN) FHFA-21 National Mortgage Database. Providing the requested information is voluntary. Submission of the survey authorizes FHFA to collect the information provided and to disclose it as set forth in the referenced SORN.

**Paperwork Reduction Act Statement:** Notwithstanding any other provision of the law, no person is required to respond to, nor shall any person be subject to a penalty for failure to comply with, a collection of information subject to the requirements of the Paperwork Reduction Act, unless that collection of information displays a currently valid OMB Control Number.

OMB No. 2590-0012  
Expires 6/30/2023

1. Did you take out or co-sign for a mortgage loan sometime in the last couple of years including a purchase or any refinance/modification of an existing loan?

- Yes
- No → Skip to 72 on page 7

2. When did you take out this mortgage? If you took out or co-signed for more than one mortgage, please refer to your experience with the most recent refinance, modification, or new mortgage.

/   
month                  year

3. Did we mail this survey to the address of the property you financed with this mortgage?

- Yes       No

4. Who signed or co-signed for this mortgage?

Mark all that apply.

- I signed
- Spouse/partner including a former spouse/partner
- Parents
- Children
- Other relatives
- Other (e.g. friend, business partner)

→ If you co-signed this loan with others, take into account all co-signers as best you can when answering the survey. If no co-signers, answer based on your own situation.

5. When you began the process of getting this mortgage, how familiar were you (and any co-signers) with each of the following?

	Very	Somewhat	Not At All
The mortgage interest rates available at that time	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The different types of mortgages available	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The mortgage process	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The down payment needed to qualify for a mortgage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The income needed to qualify for a mortgage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Your credit history or credit score	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The money needed at closing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6. When you began the process of getting this mortgage, how concerned were you about qualifying for a mortgage?

- Very                   Somewhat                   Not at all

7. How firm an idea did you have about the mortgage you wanted?

- Firm idea                   Some idea                   Little idea

8. How much did you use each of the following sources to get information about mortgages or mortgage lenders?

	A Lot	A Little	Not At All
Your mortgage lender/broker	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other mortgage lenders/brokers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Real estate agents or builders	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Material in the mail	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Websites that provide information on getting a mortgage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Newspaper/TV/Radio	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Friends/relatives/co-workers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bankers, credit unions or financial planners	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Housing counselors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (specify) <input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

9. Which one of the following best describes your shopping process?

- I picked the loan type first, and then I picked the mortgage lender/broker
- I picked the mortgage lender/broker first, and then I picked the loan type

10. Which one of the following best describes how you applied for this mortgage?

- Directly to a lender, such as a bank or credit union
- Through a mortgage broker who works with multiple lenders to get you a loan
- Through a builder who arranged financing
- Other (specify)

11. How many different mortgage lenders/brokers did you seriously consider before choosing where to apply for this mortgage?

- 1       2       3       4       5 or more





**12. How many different mortgage lenders/brokers did you end up applying to?**

1     2     3     4     5 or more

**13. Did you apply to more than one mortgage lender/broker for any of the following reasons?**

	Yes	No
Searching for better loan terms	<input type="checkbox"/>	<input type="checkbox"/>
Concern over qualifying for a loan	<input type="checkbox"/>	<input type="checkbox"/>
Information learned from the "Loan Estimate"	<input type="checkbox"/>	<input type="checkbox"/>
Turned down on earlier application	<input type="checkbox"/>	<input type="checkbox"/>

**14. How important were each of the following in choosing the mortgage lender/broker you used for the mortgage you took out?**

	Important	Not Important
Having an established banking relationship	<input type="checkbox"/>	<input type="checkbox"/>
Having a local office or branch nearby	<input type="checkbox"/>	<input type="checkbox"/>
Used previously to get a mortgage	<input type="checkbox"/>	<input type="checkbox"/>
Mortgage lender/broker is a personal friend or relative	<input type="checkbox"/>	<input type="checkbox"/>
Paperless online mortgage process	<input type="checkbox"/>	<input type="checkbox"/>
Recommendation from a friend/relative/co-worker	<input type="checkbox"/>	<input type="checkbox"/>
Recommendation from a real estate agent/home builder	<input type="checkbox"/>	<input type="checkbox"/>
Reputation of mortgage lender/broker	<input type="checkbox"/>	<input type="checkbox"/>
Spoke my primary language, which is not English	<input type="checkbox"/>	<input type="checkbox"/>
Accommodations for people with disabilities	<input type="checkbox"/>	<input type="checkbox"/>

**15. Who initiated the first contact between you and the mortgage lender/broker you used for the mortgage you took out?**

- I (or one of my co-signers) did
- The mortgage lender/broker did
- We were put in contact by a third party (such as a real estate agent or home builder)

**16. How open were you to suggestions from your mortgage lender/broker about mortgages with different features or terms?**

Very                       Somewhat                       Not at all

**17. How important were each of the following in determining the mortgage you took out?**

	Important	Not Important
Lower interest rate	<input type="checkbox"/>	<input type="checkbox"/>
Lower APR (Annual Percentage Rate)	<input type="checkbox"/>	<input type="checkbox"/>
Lower closing fees	<input type="checkbox"/>	<input type="checkbox"/>
Lower down payment	<input type="checkbox"/>	<input type="checkbox"/>
Lower monthly payment	<input type="checkbox"/>	<input type="checkbox"/>
An interest rate fixed for the life of the loan	<input type="checkbox"/>	<input type="checkbox"/>
A term of 30 years	<input type="checkbox"/>	<input type="checkbox"/>
No mortgage insurance	<input type="checkbox"/>	<input type="checkbox"/>

**18. Your lender may have given you a booklet "Your home loan toolkit: A step-by-step guide," do you remember receiving a copy?**

- Yes
  - No
  - Don't know
- } Skip to 20

**19. Did the "Your home loan toolkit" booklet lead you to ask additional questions about your mortgage terms?**

- Yes                       No

**20. In the process of getting this mortgage from your mortgage lender/broker, did you...**

	Yes	No
Have to add another co-signer to qualify	<input type="checkbox"/>	<input type="checkbox"/>
Resolve credit report errors or problems	<input type="checkbox"/>	<input type="checkbox"/>
Answer follow-up requests for more information about income or assets	<input type="checkbox"/>	<input type="checkbox"/>
Have more than one appraisal	<input type="checkbox"/>	<input type="checkbox"/>
Redo/refile paperwork due to processing delays	<input type="checkbox"/>	<input type="checkbox"/>
Delay or postpone closing date	<input type="checkbox"/>	<input type="checkbox"/>
Have your "Loan Estimate" revised to reflect changes in your loan terms	<input type="checkbox"/>	<input type="checkbox"/>
Check other sources to confirm that terms of this mortgage were reasonable	<input type="checkbox"/>	<input type="checkbox"/>

**21. Was the "Loan Estimate" you received from your mortgage lender/broker...**

	Yes	No
Easy to understand	<input type="checkbox"/>	<input type="checkbox"/>
Valuable information	<input type="checkbox"/>	<input type="checkbox"/>



**22. Did the "Loan Estimate" lead you to...**

	Yes	No
Ask questions of your mortgage lender/broker	<input type="checkbox"/>	<input type="checkbox"/>
Seek a change in your loan or closing	<input type="checkbox"/>	<input type="checkbox"/>
Apply to a different mortgage lender/broker	<input type="checkbox"/>	<input type="checkbox"/>

**23. During the application process were you told about mortgages with any of the following?**

	Yes	No
An interest rate that is fixed for the life of the loan	<input type="checkbox"/>	<input type="checkbox"/>
An interest rate that could change over the life of the loan	<input type="checkbox"/>	<input type="checkbox"/>
A term of less than 30 years	<input type="checkbox"/>	<input type="checkbox"/>
A higher interest rate in return for lower closing costs	<input type="checkbox"/>	<input type="checkbox"/>
A lower interest rate in return for paying higher closing costs ( <i>discount points</i> )	<input type="checkbox"/>	<input type="checkbox"/>
Interest-only monthly payments	<input type="checkbox"/>	<input type="checkbox"/>
An escrow account for taxes and/or homeowner insurance	<input type="checkbox"/>	<input type="checkbox"/>
A prepayment penalty ( <i>fee if the mortgage is paid off early</i> )	<input type="checkbox"/>	<input type="checkbox"/>
Reduced documentation or "easy" approval	<input type="checkbox"/>	<input type="checkbox"/>
An FHA, VA, USDA or Rural Housing loan	<input type="checkbox"/>	<input type="checkbox"/>

**24. In selecting your settlement/closing agent did you use someone...**

	Yes	No
Selected/recommended by the mortgage lender/broker, or real estate agent	<input type="checkbox"/>	<input type="checkbox"/>
You used previously	<input type="checkbox"/>	<input type="checkbox"/>
Found shopping around	<input type="checkbox"/>	<input type="checkbox"/>

Did not have a settlement/closing agent

**25. Do you have title insurance on this mortgage?**

- Yes
  - No
  - Don't know
- } Skip to 27

**26. Which one best describes how you picked the title insurance?**

- Reissued previous title insurance
- Used title insurance recommended by mortgage lender/broker or settlement agent
- Shopped around

**27. Overall, how satisfied are you that the mortgage you got was the one with the...**

	Very	Somewhat	Not At All
Best terms to fit your needs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lowest interest rate for which you could qualify	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lowest closing costs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**28. Overall, how satisfied are you with the...**

	Very	Somewhat	Not At All
Mortgage lender/broker you used	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Application process	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Documentation process required for the loan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Property appraisal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Loan closing process	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Information in mortgage disclosure documents	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Timeliness of mortgage disclosure documents	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Settlement agent	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**29. Did you take a course about home-buying or talk to a professional housing counselor?**

- Yes
- No → Skip to 33 on page 4

**30. Was your home-buying course or counseling...**

	Yes	No
In person, one-on-one	<input type="checkbox"/>	<input type="checkbox"/>
In person, in a group	<input type="checkbox"/>	<input type="checkbox"/>
Over the phone	<input type="checkbox"/>	<input type="checkbox"/>
Online	<input type="checkbox"/>	<input type="checkbox"/>
Required	<input type="checkbox"/>	<input type="checkbox"/>

**31. How many hours was your home-buying course or counseling?**

- Less than 3 hours
- 3 – 6 hours
- 7 – 12 hours
- More than 12 hours

**32. Overall, how helpful was your home-buying course or counseling?**

- Very
- Somewhat
- Not at all



**33. Which one of these reasons best describes this most recent mortgage?**

- To buy a property
- To refinance or modify an earlier mortgage
- To add/remove co-signer(s)/co-owner(s)
- To finance a construction loan
- To take out a new loan on a mortgage-free property
- Some other purpose (specify)

Skip to 37

**34. Did you do the following before or after you made an offer on this house or property?**

	Before Offer	After Offer	Did Not Do
Contacted a lender to explore mortgage options	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Got a pre-approval or pre-qualification from a lender	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Decided on the type of loan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Made a decision on which lender to use	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Submitted an official loan application	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**35. Did you use any of the following sources of funds to buy this property?**

	Used	Not Used
Proceeds from the sale of another property	<input type="checkbox"/>	<input type="checkbox"/>
Savings, retirement account, inheritance, or other assets	<input type="checkbox"/>	<input type="checkbox"/>
Assistance or loan from a nonprofit or government agency	<input type="checkbox"/>	<input type="checkbox"/>
A second lien, home equity loan, or home equity line of credit (HELOC)	<input type="checkbox"/>	<input type="checkbox"/>
Gift or loan from family or friend	<input type="checkbox"/>	<input type="checkbox"/>
Seller contribution	<input type="checkbox"/>	<input type="checkbox"/>

**36. What percent of the purchase price was the down payment to buy this property (including money from a prior home sale, gifts, etc.)?**

- 0%
- Less than 3%
- 3% to less than 5%
- 5% to less than 10%
- 10% to less than 20%
- 20% to less than 30%
- 30% or more

Skip to 40

**37. How important were the following in your decision to refinance, modify or obtain a new mortgage?**

	Important	Not Important
Change to a fixed-rate loan	<input type="checkbox"/>	<input type="checkbox"/>
Get a lower interest rate	<input type="checkbox"/>	<input type="checkbox"/>
Remove private mortgage insurance	<input type="checkbox"/>	<input type="checkbox"/>
Get a lower monthly payment	<input type="checkbox"/>	<input type="checkbox"/>
Consolidate or pay down other debt	<input type="checkbox"/>	<input type="checkbox"/>
Repay the loan more quickly	<input type="checkbox"/>	<input type="checkbox"/>
Take out cash	<input type="checkbox"/>	<input type="checkbox"/>

**38. Approximately how much was owed, in total, on the old mortgage(s) and loan(s) you refinanced?**

\$  .00

Zero (the property was mortgage-free)

**39. Did you use the money you got from this new mortgage for any of the following?**

	Yes	No
College expenses	<input type="checkbox"/>	<input type="checkbox"/>
Auto or other major purchase	<input type="checkbox"/>	<input type="checkbox"/>
Buy out co-signer(s)/co-owner(s)	<input type="checkbox"/>	<input type="checkbox"/>
Pay off other bills or debts	<input type="checkbox"/>	<input type="checkbox"/>
Home repairs or new construction	<input type="checkbox"/>	<input type="checkbox"/>
Savings	<input type="checkbox"/>	<input type="checkbox"/>
Closing costs of new mortgage	<input type="checkbox"/>	<input type="checkbox"/>
Business or investment	<input type="checkbox"/>	<input type="checkbox"/>
Other (specify)	<input type="checkbox"/>	<input type="checkbox"/>

Did not get money from refinancing

**This Mortgage**

**40. When you took out this most recent mortgage or refinance, what was the dollar amount you borrowed?**

\$  .00  Don't know

**41. What is the monthly payment, including the amount paid to escrow for taxes and insurance?**

\$  .00  Don't know

**42. What is the interest rate on this mortgage?**

%  Don't know



43. Which one of the following best describes how you decided on the interest rate of your mortgage?

- Paid higher closing costs to get lower interest rate
- Paid lower closing costs with a higher interest rate
- Got a balance between closing costs and interest rate

44. Does this mortgage have...

	Yes	No	Don't Know
A prepayment penalty ( <i>fee if the mortgage is paid off early</i> )	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
An escrow account for taxes and/or homeowner insurance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
An adjustable rate ( <i>one that can change over the life of the loan</i> )	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A balloon payment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Interest-only payments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Private mortgage insurance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

45. At any time after you made your final loan application did any of the following change?

	Higher	Same	Lower
Monthly payment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Interest rate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other fees	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Amount of money needed to close loan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

46. The "Closing Disclosure" statement you received at closing shows the loan closing costs and other closing costs separately. What were the loan closing costs you paid on this loan?

\$  .00  Don't know

47. How were the total closing costs (loan costs and other costs) for this loan paid?

	Yes	No	Don't Know
By me or a co-signer with a check or wire transfer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Added to the mortgage amount	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
By mortgage lender/broker	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
By seller/builder	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (specify)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Loan had no closing costs

48. Were the loan costs you paid similar to what you had expected to pay based on the Loan Estimates or Closing Disclosures you received?

- Yes  No

49. After closing on this mortgage, how much cash reserves in checking, savings, and other similar assets did you have remaining?

- Less than one month's mortgage payment
- 1-2 months' worth of mortgage payments
- 3-6 months' worth of mortgage payments
- 7 months' worth or more of mortgage payments

50. Did you seek input about your closing documents from any of the following people?

	Yes	No
Mortgage lender/broker	<input type="checkbox"/>	<input type="checkbox"/>
Settlement/closing agent	<input type="checkbox"/>	<input type="checkbox"/>
Real estate agent	<input type="checkbox"/>	<input type="checkbox"/>
Personal attorney	<input type="checkbox"/>	<input type="checkbox"/>
Title insurance agent	<input type="checkbox"/>	<input type="checkbox"/>
Trusted friend or relative who is not a co-signer on the mortgage	<input type="checkbox"/>	<input type="checkbox"/>
Housing counselor	<input type="checkbox"/>	<input type="checkbox"/>
Other (specify)	<input type="checkbox"/>	<input type="checkbox"/>

51. Did you face any of the following at your loan closing?

	Yes	No
Loan documents not ready at closing	<input type="checkbox"/>	<input type="checkbox"/>
Closing did not occur as originally scheduled	<input type="checkbox"/>	<input type="checkbox"/>
Three-day rule required re-disclosure	<input type="checkbox"/>	<input type="checkbox"/>
Mortgage terms different at closing than expected, e.g. interest rate, monthly payment	<input type="checkbox"/>	<input type="checkbox"/>
More cash needed at closing than expected, e.g. escrow, unexpected fees	<input type="checkbox"/>	<input type="checkbox"/>
Less cash needed at closing than expected	<input type="checkbox"/>	<input type="checkbox"/>
Asked to sign blank documents at closing	<input type="checkbox"/>	<input type="checkbox"/>
Asked to sign pre-dated or post-dated documents at closing	<input type="checkbox"/>	<input type="checkbox"/>
Felt rushed at closing or not given time to read documents	<input type="checkbox"/>	<input type="checkbox"/>

52. Is there any additional problem you encountered while getting this mortgage that you'd like to tell us about?



53. At the same time you took out this mortgage, did you also take out another loan on the property you financed with this mortgage (a second lien, home equity loan, or a home equity line of credit (HELOC))?

- Yes
- No → Skip to 55

54. What was the amount of this loan?

\$ \_\_\_\_\_ .00

- Don't know

55. How well could you explain to someone the...

	Very	Somewhat	Not At All
Process of taking out a mortgage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Difference between a fixed- and an adjustable-rate mortgage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Difference between a prime and subprime loan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Difference between a mortgage's interest rate and its APR	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Amortization of a loan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Consequences of not making required mortgage payments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Difference between lender's and owner's title insurance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Relationship between discount points and interest rate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reason payments into an escrow account can change	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### This Mortgaged Property

56. When did you first become the owner of this property?

\_\_\_\_ / \_\_\_\_  
month      year

57. What was the purchase price of this property, or if you built it, how much did the construction and land cost?

\$ \_\_\_\_\_ .00       Don't know

58. Which one of the following best describes how you acquired this property?

- Purchased an existing home
- Purchased a newly-built home from a builder
- Had or purchased land and built a house
- Received as a gift or inheritance
- Other (specify) \_\_\_\_\_

59. Which one of the following best describes this property?

- Single-family detached house
- Mobile home or manufactured home
- Townhouse, row house, or villa
- 2-unit, 3-unit, or 4-unit dwelling
- Apartment (or condo/co-op) in apartment building
- Unit in a partly commercial structure
- Other (specify) \_\_\_\_\_

60. Does this mortgage cover more than one unit?

- Yes       No

61. About how much do you think this property is worth in terms of what you could sell it for now?

\$ \_\_\_\_\_ .00       Don't know

62. Do you rent out all or any portion of this property?

- Yes
- No → Skip to 64

63. How much rent do you receive annually?

\$ \_\_\_\_\_ .00 per year

64. Besides you, the mortgage co-signers, and renters, does anyone else help pay the expenses for this property?

- Yes       No

65. Which one of the following best describes how you use this property?

- Primary residence (where you spend the majority of your time)
- It will be my primary residence soon
- Seasonal or second home
- Home for other relatives
- Rental or investment property
- Other (specify) \_\_\_\_\_

Skip to 68 on page 7

66. If primary residence, when did you move into this property?

\_\_\_\_ / \_\_\_\_  
month      year



67. Which one of the following best describes your willingness or ability to move from your primary residence?

- Unwilling to move
- Willing and able to move
- Willing but unable to move
- Unsure/Don't know at this time

68. In the last couple years, how have the following changed in the neighborhood where this property is located?

	Significant Increase	Little/No Change	Significant Decrease
Number of homes for sale	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Number of vacant homes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Number of homes for rent	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Number of foreclosures or short sales	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
House prices	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Overall desirability of living there	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

69. What do you think will happen to the prices of homes in this neighborhood over the next couple of years?

- Increase a lot
- Increase a little
- Remain about the same
- Decrease a little
- Decrease a lot

70. In the next couple of years, how do you expect the overall desirability of living in this neighborhood to change?

- Become more desirable
- Stay about the same
- Become less desirable

71. How likely is it that in the next couple of years you will...

	Very	Somewhat	Not At All
Sell this property	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Move but keep this property	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Refinance the mortgage on this property	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pay off this mortgage and own the property mortgage-free	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## Your Household

72. What is your current marital status?

- Married
- Separated
- Never married
- Divorced
- Widowed

73. Do you have a partner who shares the decision-making and responsibilities of running your household but is not your legal spouse?

- Yes
- No

Please answer the following questions for you and your spouse or partner, if applicable.

74. Age at last birthday:

You	Spouse/ Partner
<input type="text"/>	<input type="text"/>
_____ years	_____ years

75. Sex:

	You	Spouse/ Partner
Male	<input type="checkbox"/>	<input type="checkbox"/>
Female	<input type="checkbox"/>	<input type="checkbox"/>

76. Highest level of education achieved:

	You	Spouse/ Partner
Some schooling	<input type="checkbox"/>	<input type="checkbox"/>
High school graduate	<input type="checkbox"/>	<input type="checkbox"/>
Technical school	<input type="checkbox"/>	<input type="checkbox"/>
Some college	<input type="checkbox"/>	<input type="checkbox"/>
College graduate	<input type="checkbox"/>	<input type="checkbox"/>
Postgraduate studies	<input type="checkbox"/>	<input type="checkbox"/>

77. Hispanic or Latino:

	You	Spouse/ Partner
Yes	<input type="checkbox"/>	<input type="checkbox"/>
No	<input type="checkbox"/>	<input type="checkbox"/>

78. Race: *Mark all that apply.*

	You	Spouse/ Partner
White	<input type="checkbox"/>	<input type="checkbox"/>
Black or African American	<input type="checkbox"/>	<input type="checkbox"/>
American Indian or Alaska Native	<input type="checkbox"/>	<input type="checkbox"/>
Asian	<input type="checkbox"/>	<input type="checkbox"/>
Native Hawaiian or Pacific Islander	<input type="checkbox"/>	<input type="checkbox"/>



**79. Current work status: Mark all that apply.**

	You	Spouse/ Partner
Self-employed full time	<input type="checkbox"/>	<input type="checkbox"/>
Self-employed part time	<input type="checkbox"/>	<input type="checkbox"/>
Employed full time	<input type="checkbox"/>	<input type="checkbox"/>
Employed part time	<input type="checkbox"/>	<input type="checkbox"/>
Retired	<input type="checkbox"/>	<input type="checkbox"/>
Unemployed, temporarily laid-off or on leave	<input type="checkbox"/>	<input type="checkbox"/>
Not working for pay ( <i>student, homemaker, disabled</i> )	<input type="checkbox"/>	<input type="checkbox"/>

**80. Ever served on active duty in the U.S. Armed Forces, Reserves or National Guard?**

	You	Spouse/ Partner
Never served in the military	<input type="checkbox"/>	<input type="checkbox"/>
Only on active duty for training in the Reserves or National Guard	<input type="checkbox"/>	<input type="checkbox"/>
Now on active duty	<input type="checkbox"/>	<input type="checkbox"/>
On active duty in the past, but not now	<input type="checkbox"/>	<input type="checkbox"/>

**81. Besides you (and your spouse/partner) who else lives in your household? Mark all that apply.**

- Children/grandchildren under age 18
- Children/grandchildren age 18 – 22
- Children/grandchildren age 23 or older
- Parents of you or your spouse or partner
- Other relatives like siblings or cousins
- Non-relative
  
- No one else

**82. Do you speak a language other than English at home?**

- Yes
- No → Skip to 85

**83. Was it important to get your mortgage documents in this language?**

- Yes       No

**84. Did you get mortgage documents in this language?**

- Yes       No

**85. Approximately how much is your total annual household income from all sources (wages, salaries, tips, interest, child support, investment income, retirement, social security, and alimony)?**

- Less than \$35,000
- \$35,000 to \$49,999
- \$50,000 to \$74,999
- \$75,000 to \$99,999
- \$100,000 to \$174,999
- \$175,000 or more

**86. How does this total annual household income compare to what it is in a "normal" year?**

- Higher than normal
- Normal
- Lower than normal

**87. Does your total annual household income include any of the following sources?**

	Yes	No
Wages or salary	<input type="checkbox"/>	<input type="checkbox"/>
Business or self-employment	<input type="checkbox"/>	<input type="checkbox"/>
Interest or dividends	<input type="checkbox"/>	<input type="checkbox"/>
Alimony or child support	<input type="checkbox"/>	<input type="checkbox"/>
Social Security, pension or other retirement benefits	<input type="checkbox"/>	<input type="checkbox"/>

**88. Does anyone in your household have any of the following?**

	Yes	No
401(k), 403(b), IRA, or pension plan	<input type="checkbox"/>	<input type="checkbox"/>
Stocks, bonds, or mutual funds ( <i>not in retirement accounts or pension plans</i> )	<input type="checkbox"/>	<input type="checkbox"/>
Certificates of deposit	<input type="checkbox"/>	<input type="checkbox"/>
Investment real estate	<input type="checkbox"/>	<input type="checkbox"/>

**89. Which one of the following statements best describes the amount of financial risk you are willing to take when you save or make investments?**

- Take substantial financial risks expecting to earn substantial returns
- Take above-average financial risks expecting to earn above-average returns
- Take average financial risks expecting to earn average returns
- Not willing to take any financial risks





**90. Do you agree or disagree with the following statements?**

	Agree	Disagree
Owning a home is a good financial investment	<input type="checkbox"/>	<input type="checkbox"/>
Most mortgage lenders generally treat borrowers well	<input type="checkbox"/>	<input type="checkbox"/>
Most mortgage lenders would offer me roughly the same rates and fees	<input type="checkbox"/>	<input type="checkbox"/>
Late payments will lower my credit rating	<input type="checkbox"/>	<input type="checkbox"/>
Lenders shouldn't care about any late payments, only whether loans are fully repaid	<input type="checkbox"/>	<input type="checkbox"/>
It is okay to default or stop making mortgage payments if it is in the borrower's financial interest	<input type="checkbox"/>	<input type="checkbox"/>
I would consider counseling or taking a course about managing my finances if I faced financial difficulties	<input type="checkbox"/>	<input type="checkbox"/>

**91. In the last couple of years, have any of the following happened to you?**

	Yes	No
Separated, divorced or partner left	<input type="checkbox"/>	<input type="checkbox"/>
Married, remarried or new partner	<input type="checkbox"/>	<input type="checkbox"/>
Death of a household member	<input type="checkbox"/>	<input type="checkbox"/>
Addition to your household (not spouse/partner)	<input type="checkbox"/>	<input type="checkbox"/>
Person leaving your household (not spouse/partner)	<input type="checkbox"/>	<input type="checkbox"/>
Disability or serious illness of household member	<input type="checkbox"/>	<input type="checkbox"/>
Disaster affecting a property you own	<input type="checkbox"/>	<input type="checkbox"/>
Disaster affecting your (or your spouse/partner's) work	<input type="checkbox"/>	<input type="checkbox"/>
Moved within the area (less than 50 miles)	<input type="checkbox"/>	<input type="checkbox"/>
Moved to a new area (50 miles or more)	<input type="checkbox"/>	<input type="checkbox"/>

**92. In the last couple of years, have any of the following happened to you (or your spouse/partner)?**

	Yes	No
Layoff, unemployment, or reduced hours of work	<input type="checkbox"/>	<input type="checkbox"/>
Retirement	<input type="checkbox"/>	<input type="checkbox"/>
Promotion	<input type="checkbox"/>	<input type="checkbox"/>
Starting a new job	<input type="checkbox"/>	<input type="checkbox"/>
Starting a second job	<input type="checkbox"/>	<input type="checkbox"/>
Business failure	<input type="checkbox"/>	<input type="checkbox"/>
A personal financial crisis	<input type="checkbox"/>	<input type="checkbox"/>

**93. In the last couple years, how have the following changed for you (and your spouse/partner)?**

	Significant Increase	Little/No Change	Significant Decrease
Household income	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Housing expenses	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Non-housing expenses	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**94. In the next couple of years, how do you expect the following to change for you (and your spouse/partner)?**

	Significant Increase	Little/No Change	Significant Decrease
Household income	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Housing expenses	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Non-housing expenses	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**95. How likely is it that in the next couple of years you (or your spouse/partner) will face...**

	Very	Somewhat	Not At All
Retirement	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Difficulties making your mortgage payments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A layoff, unemployment, or forced reduction in hours	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Some other personal financial crisis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**96. If your household faced an unexpected personal financial crisis in the next couple of years, how likely is it you could...**

	Very	Somewhat	Not At All
Pay your bills for the next 3 months without borrowing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Get significant financial help from family or friends	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Borrow a significant amount from a bank or credit union	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Significantly increase your income	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>





*The Federal Housing Finance Agency and the Consumer Financial Protection Bureau thank you for completing this survey.*

*We have provided space below for any additional comments.  
If the COVID-19 (coronavirus) situation has affected or might affect your ability to make your mortgage payments, please tell us about it here.  
Please do not put your name or address on the questionnaire.*

**Please use the enclosed business reply envelope to return your completed questionnaire.**

**FHFA  
1600 Research Blvd, RC B16  
Rockville, MD 20850**

**For any questions about the survey or online access you can call toll free 1-855-339-7877.**



## Appendix B. Retired NSMO Questions

This appendix lists the NSMO questions that were retired after Waves 6, 10, 14, 18, 24, and 34.

### Questions Retired After Wave 6

13. How important were each of the following in choosing the lender/broker you used for the mortgage you took out?
- Lender is a community bank or credit union
  - Recommendation from a lending website
- Very
  - Somewhat
  - Not At All
19. In the process of getting your mortgage from your lender/broker, did you...
- Add a co-signer
- Yes
  - No
36. Many mortgages have discount points paid to the lender to get a lower interest rate. Did you pay any discount points?
- Yes
  - No
37. (If Yes in Q36) How many discount points did you pay?
38. Some lenders charge origination points to cover the cost of preparing a mortgage for closing. These are often expressed as a percentage of the loan amount. Did you pay any origination points?
- Yes
  - No
39. (If Yes in Q38) How many origination points did you pay?
40. Does your mortgage have any of the following features?
- Owner's title insurance
  - Credit life/debt suspension/debt cancellation insurance
- Yes
  - No
  - Don't Know
51. Which statement best describes the approach you took to purchase your house or property?
- Had a pre-approval or pre-qualification from a lender before I made the purchase
  - Shopped for a mortgage after making the purchase offer
  - Shopped for house and mortgage at the same time

53. (If Yes to Q52) How much money from the sale of this other property was used to purchase your property?

64. (If multiple units in Q63) How many separate living units does your mortgage cover?

70. Is anyone who currently lives in the property a co-signer on your mortgage?

- Yes
- No

75. Ever owned other residential properties besides this one:

You

Spouse/Partner

- Yes
- No

81. Besides you (and your spouse/partner), does anyone else live in your household or use your house as a permanent address?

- Yes
- No

82. (If Yes to Q81) How many of the other household members are 18 years of age or younger?

83. (If Yes to Q81) How many of the other household members are older than 18?

84. (If Yes to Q81) Do any of the other household members help pay for household expenses?

- Yes
- No

### Questions Retired After Wave 10

3. Including you, how many people signed or cosigned for this mortgage?

- 1
- 2
- 3
- 4 or more

19. In the process of getting this mortgage from your lender/broker, did you...

End up with better mortgage terms than you were originally offered

- Yes
- No

49. Did you compare the final loan costs to the final Good Faith Estimate you received from your lender?

- Yes
- No

50. Did you find any significant differences between the two?
- Yes
  - No

### Questions Retired After Wave 14

45. When was the interest rate set/locked on this loan?
- At application
  - Between application and closing
  - Around closing

### Questions Retired After Wave 18

14. How important were each of the following in choosing the lender/mortgage broker you used for the mortgage you took out?  
Lender/mortgage broker operates online
- Important
  - Not Important
45. At the time of application, did the lender give you the option to set/lock the interest rate so that it would not change before closing?
- Yes
  - No
  - Don't Know
52. Did you face any unpleasant "surprises" at your loan closing?
- Yes
  - No

### Questions Retired After Wave 24

14. How important were each of the following in choosing the mortgage lender/broker you used for the mortgage you took out?  
Could provide documents in my primary language, which is not English
- Important
  - Not Important
20. In the process of getting this mortgage from your mortgage lender/broker, did you...  
Get documents in your primary language, which is not English  
Have the lender/broker translate in your primary language, which is not English
- Yes
  - No
39. How did the total amount of your new mortgage(s) compare to the total of the old mortgage(s) and loan(s) you paid off?
- New amount is lower
  - New amount is about the same

- New amount is higher
- Property was mortgage-free

### Questions Retired After Wave 34

19. Did the “Your home loan toolkit” booklet lead you to ask additional questions about your mortgage terms?

- Yes
- No

22. Did the “Loan Estimate” lead you to...

Ask questions of your mortgage lender/broker  
Seek a change in your loan or closing  
Apply to a different mortgage lender/broker

- Yes
- No

35. What percent of the purchase price was the down payment to buy this property (including money from a prior home sale, gifts, etc.)?

- 0%
- Less than 3%
- 3% to less than 5%
- 5% to less than 10%
- 10% to less than 20%
- 20% to less than 30%
- 30% or more

## Appendix C. NSMO Public Use File Codebook and Tabulations

Because the codebook and tabulations contain a large number of pages, a separate document is available on [www.fhfa.gov/nsmodata](http://www.fhfa.gov/nsmodata).

## Appendix D. Select Weighted Tabulations, 2013 – 2021

Because the weighted tabulations contain a large number of pages, a separate document is available on [www.fhfa.gov/nsmodata](http://www.fhfa.gov/nsmodata).

