Guest Editors' Introduction

National Survey of Mortgage Originations

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The views expressed in this article are those of the authors and are not necessarily those of the Consumer Financial Protection Bureau, the Federal Housing Finance Agency or any other agency of the U.S. Government.

In 2012, the Federal Housing Finance Agency (FHFA) and the Consumer Financial Protection Bureau (CFPB) began work on the National Mortgage Database (NMDB®) and a new quarterly mail survey called the National Survey of Mortgage Originations (NSMO) associated with it. In November 2018, the two agencies released a public use file covering the first 4 years (2013–2016) of mortgage originations in NSMO.[1] The public use file contains survey responses and key administrative data obtained from other sources. The availability of matched administrative and survey data offers researchers and policymakers a unique view of the U.S. mortgage market, arguably one of the most critical markets in the U.S. economy.

NSMO is unique for two reasons. First, it fills an information void. There is no other recurring nationally representative survey of borrowers who have just obtained a mortgage. The U.S. Department of Housing and Urban Development's (HUD) American Housing Survey and the Federal Reserve's Survey of Consumer Finances and Survey of Household Economics contain some information on mortgages, but the number of recent mortgage borrowers they capture is small because of the different focus of those surveys. The National Association of Realtors® annual survey of homebuyers and sellers covers home purchasers but not refinancers and is not generally available to the public.

[1] The public use NSMO data and documentation are available at https://www.fhfa.gov/nsmodata.

Second, NSMO provides access to high-quality administrative data, as NSMO's sampling frame is derived from the NMDB. The NMDB contains data for a 5-percent random sample of closed-end, first-lien residential mortgages active at any time in the credit files of one of the three national credit bureaus from January 1998 to the present. The database is updated each quarter with a 5-percent sample of newly reported mortgages—typically, those just opened. The quarterly NSMO sample is a randomly drawn subset of 6,000 borrowers associated with those newly reported mortgages.[2] Based on the quarterly cycle, the typical respondent fills out the questionnaire between 6 and 9 months after origination.

The NMDB data include origination and performance information for each NMDB sample mortgage—and credit information about the borrowers associated with those mortgages—from origination to closure. Although extensive, the credit bureaus' files do not contain information on a number of key mortgage features, such as the loan's purpose (home purchase or refinance), whether it had an adjustable or fixed rate, its securitization status, or whether it was backed by an owner-occupied property, vacation home, or investor property. That information is available from a variety of sources, including high-quality matches to administrative file records maintained by Fannie Mae, Freddie Mac, the Federal Housing Administration, the U.S. Department of Veterans Affairs, the Rural Housing Service, and the Federal Home Loan Banks, which collectively account for more than 70 percent of mortgages in the United States. Further information was obtained from other public and proprietary data sources, including deed record filings, Home Mortgage Disclosure Act filings, and commercially available servicing databases.

The NMDB database combines information from each of those sources into a single record for each mortgage. Data merging was conducted behind a protected firewall at the credit bureau, using information about the borrowers, such as their names, Social Security numbers, addresses, and dates of birth, to facilitate high-quality matches. Variable values for the small percentage of loans that could not be matched to any of those sources were imputed using a variety of methods. The resulting matched database, as delivered to FHFA and CFPB, is de-identified—it does not identify specific borrowers.

The availability of high-quality administrative data for each sample loan means that NSMO does not have to ask the respondents to provide factual information about the mortgage. Thus, the survey instrument focuses on obtaining information about the borrowers' experience, perceptions, and expectations—which are not readily available anywhere else. The survey asks sampled borrowers 94 questions (including more than 300 subquestions) about their experience shopping for and closing on a mortgage; their knowledge and perceptions of the mortgage market and the mortgage process; their use of housing counselors; and their future expectations about house price appreciation and critical household and financial events. The survey also asks about demographic details and household composition information that is not available in the NMDB.

[2] At the time of this writing, that figure represents a sampling rate of about 1 in 300 new mortgages in the nation. About one-half of the survey responses have been completed online and the other half by mail. The overall response rate of NSMO is about 33 percent, and the usable response rate is about 28 percent. The NSMO survey instrument was improved substantially in 2015, was refined moderately in 2016, and continues to receive minimal adjustments moving forward. In 2015, the NSMO was sent to additional borrowers associated with a special sample of 1,000 mortgages originated in 2014 in completely rural counties. That sample was used for one of the articles in this volume.

The public use NMSO data contain variables drawn from both the survey responses and the NMDB administrative data file[3] and consist of 24,847 loans originated from 2013 through 2016, with additional years to be added in the future. When appropriately weighted, the data should be representative of new mortgages originated over the 4-year period.[4]

The four articles in this volume use the public use NSMO data to address a set of related and important questions about the knowledge and behavior of borrowers in the U.S. housing market over the past few years.[5] To make informed choices about buying a home or choosing and closing on a mortgage, consumers need information on a multitude of factors, including their own financial situation, the state of the housing market in their area, the details of available loan products, an understanding of the various service providers, and the process involved in the mortgage transaction. Some of that information is provided by private sources, although search costs or agency costs could be a factor in borrowers' accessing that information; however, in some cases, policymakers have mandated that consumers, or at least certain consumers, be provided particular information.

The first two articles focus on questions related to information provided primarily by private sources. In the first article, "Mortgage Experiences of Rural Borrowers in the United States: Insights from the National Survey of Mortgage Originations," Tim Critchfield, Jaya Dey, Nuno Mota, and Saty Patrabansh use a special supplement of NSMO that oversampled borrowers in completely rural areas—those without a significant population center—to compare the experience of borrowers in those areas with borrowers in urban and larger rural markets. Rural mortgage markets have been a particular concern for policymakers and researchers.[6] One conjecture is that because rural markets are relatively thin, they suffer from a lack of scale in information, and thus, mortgages are more expensive to originate. For example, lack of scale may make it more difficult for lenders and the mortgage secondary market to properly assess home values and thus make markets less competitive. In this article, the authors indirectly test those conjectures.

Collectively, the 644 counties covered by the special sample account for only 1 percent of U.S. residential mortgage originations, but those are arguably the areas most likely to reveal informational problems. Indeed, Critchfield and his colleagues show that borrowers in the special sample were less likely than other borrowers to be satisfied with the mortgage closing process and the required disclosures. They also tend to be less confident or knowledgeable about some details of mortgages. Together, those findings suggest that perhaps supply conditions lead to a poorer

[3] Because mortgage filings are typically a matter of public record, releasing the detailed administrative data contained in the NMDB as part of NSMO with any degree of geographic detail would not have been possible without creating significant privacy concerns. Consequently, almost all geographic information is suppressed in the NSMO public use file. Unfortunately, those concerns did not allow for the data of the special supplemental sample of completely rural borrowers used for one of the articles in this volume to be included in the public release. County-level house price indices and economic factors used for another article also could not be included in the public use file for the same reason.
[4] The administrative data in the NMDB are used to calculate nonresponse adjustment weights for NSMO. Missing values for almost all variables in the public use file have been imputed using an iterative regression—or logistic model-based approach—that also relies heavily on administrative data. The incidence of missing values is less than 10 percent for almost all variables.
[5] Use of information not in the public use NSMO is explicitly noted in two of the articles.
[6] The congressional bill that established the FHFA mandated that it pay particular attention to rural markets in its regulation of Fannie Mae and Freddie Mac.

information environment in which these rural consumers are making their decisions. The authors also show that, collectively, the borrowers in the special sample have higher contract interest rates than otherwise comparable borrowers in other areas—another potential sign of higher costs or poorer decisionmaking.

In the second article, "Perceptions and Expectations of Mortgage Borrowers: New Evidence from the National Survey of Mortgage Originations," Chad Redmer examines how cognizant different types of borrowers are of changes in recent house prices in their communities and the extent to which borrowers' expectations of the future may help forecasters predict future price changes. He finds, first, that borrowers overall have a good understanding of recent house price changes, and second, that their future expectations seem to incorporate some knowledge beyond what is available in public macro indicators. The first finding is important because borrowers who have just obtained a mortgage (the sample frame for the NSMO) are the group for whom house price knowledge may be most important. Poor decisions in either house purchases or refinances can have long-term implications for consumers' well-being. Redmer further finds that first-time homebuyers, the group with the most potential vulnerability, actually are among the more informed borrowers.

The second finding—that borrower expectations have additional predictive power over macro indicators—is more difficult to interpret. It could mean that consumers have additional information about their local markets that is not incorporated into traditional economic measures. Alternatively, it could stem from a self-fulfilling process whereby borrowers with bullish views tend to drive up prices in their markets. More research must be done to understand this finding better.

The last two articles focus more specifically on market interventions mandated by statute and regulations aimed at improving the information available to borrowers. The interventions considered include (1) homebuying handbooks that government agencies mandate originators give to borrowers and (2) homeownership education and counseling which is required for certain homebuyers.[7]

More specifically, federal regulations require that purchase-mortgage borrowers get a "special information booklet" to assist in their decisions. CFPB, which is now in charge of implementing the regulations, changed the booklet in October 2015. In "National Survey of Mortgage Originations Survey Data on *Your Home Loan Toolkit*," Brian Bucks, Tim Critchfield, and Susan Singer treat this change as a "natural experiment" and use the time series component of NSMO to examine the effect of the booklet change. They find that the percentage of homebuyers who remember receiving information from their lender increased with the introduction of the Toolkit. That increase was larger for borrowers with lower credit scores, household income, education, or experiences with prior mortgages. The percentage of respondents asking followup questions also increased after the new Toolkit introduction so that the total number of borrowers "digging deeper" also seems to have increased with this change.

[7] One can also see mandated standardized disclosures, such as the Loan Estimate and the Closing Disclosure, as similarly aimed at improving the information available to borrowers.

The fourth and final article presents a comparison of the outcomes, satisfaction, and knowledge metrics of borrowers who underwent housing counseling and otherwise similar borrowers who did not. Using propensity score methods, Robert B. Argento, Lariece M. Brown, Sergei Koulayev, Grace Li, Marina Myhre, Forrest Pafenberg, and Saty Patrabansh, in "First-Time Homebuyer Counseling and the Mortgage Selection Experience in the United States: Evidence from the National Survey of Mortgage Originations," compare borrowers who did and did not undergo counseling. They find that first-time homebuyers who reported receiving homeownership education and counseling also reported better mortgage knowledge, more confidence in their ability to explain the mortgage process, and a higher level of satisfaction with the mortgage they received.

The four articles in this symposium each use the survey data from NSMO to begin to address important questions about consumer knowledge and understanding in the U.S. housing and mortgage markets. Although each of these articles is a first step in its respective area, they all find important variations by geography or borrower characteristics, and all offer new areas for additional research. The articles chosen for this volume were authored by members of the team that helped develop the NMDB and NSMO, but it is our hope that these articles will stimulate researchers in the greater academic and the policy analysis community to use the NSMO data for their own investigations.

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