CONSUMER FINANCIAL PROTECTION BUREAU | NOVEMBER 2019

Data Point: Servicer Size in the Mortgage Market

The Consumer Financial Protection Bureau's Office of Research

Consumer Financial Protection Bureau

This is another in an occasional series of publications from the Consumer Financial Protection Bureau's Office of Research. These publications are intended to further the Bureau's objective of providing an evidence-based perspective on consumer financial markets, consumer behavior, and regulations to inform the public discourse. See 12 U.S.C. §5493(b).[1]

[1] This report was prepared by Tim Critchfield, Erik Durbin, and Dominic Russel.

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1. Introduction

Mortgage servicers undertake the day-to-day management of mortgage loans. Servicers are responsible for collecting and applying borrower payments, maintaining escrow accounts, and communicating with borrowers about their loans. When a borrower becomes delinquent, servicers attempt to resolve the delinquency, including through a foreclosure sale if alternatives to foreclosure are not available. Servicers thus play a central role in homeowners' ability to manage their mortgage loans and keep their homes.

A diverse set of institutions operate in whole or in part as mortgage servicers. Some institutions service millions of loans, while others may service only a few hundred. Many servicers are banks or credit unions, which often service loans that they originated or own. Banks and credit unions also sometimes service loans for others, either because they purchase mortgage servicing rights or because they are hired as a subservicer. Other servicers are non-depositories, including some institutions that specialize in servicing loans for others and play no role in originating loans. In recent years, large non-depository institutions have taken on an increasing share of loans serviced, and at the end of 2018 six of the ten largest servicers were non-depositories.[2] Among small servicers, however, the Bureau understands that the typical servicer is a depository institution, usually a community bank or credit union, that services loans that it originated or owns.[3]

This report focuses specifically on comparisons between servicers of different sizes, where size is defined by the number of loans serviced. Most mortgage loans are serviced by large servicers. However, there are a large number of small servicers, including many community banks and credit unions, which service relatively few mortgage loans. Some evidence exists that there are differences between smaller and larger servicers other than the number of loans they service. For example, in interviews conducted for the Consumer Financial Protection Bureau's (Bureau) assessment of the RESPA mortgage servicing rule, smaller servicers stated they have a different business model and offer a more "high-touch" customer experience than larger servicers.[4]

To the extent that large and small servicers have different resources, capabilities, customer bases, and business models, they will be affected differently by consumer finance regulations. This makes it important for the Bureau to better understand the ways in which mortgage

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[2] Inside Mortg. Fin., *Latest from Inside Mortgage Finance*, https://www.insidemortgagefinance.com/ (last visited Dec. 19, 2018).

[3] *See* 81 F.R.72160, 72364 (Oct. 10, 2016).

[4] Consumer Financial Protection Bureau, *2013 RESPA Servicing Rule Assessment Report,* at 109-110 (2019), *available at* https://files.consumerfinance.gov/f/documents/cfpb_mortgage-servicing-rule-assessment_report.pdf.

servicers are the same and different. This report explores quantitative evidence on differences between servicers of different sizes and the characteristics of borrowers whose loans they service. This evidence can provide greater insight into developments in the mortgage market and into how the Bureau's rules are likely to affect servicers of different sizes.

This report considers servicers in three size categories, based on mortgage loans serviced as of September 30, 2018:

- "Small servicers" service 5,000 or fewer loans.[5]
- "Mid-size servicers" service between 5,000 and 30,000 loans.
- "Large servicers" service more than 30,000 loans.

As shown in the report, small servicers service around 14 percent of all mortgages outstanding and mid-size servicers service around 10 percent. However, the vast majority of servicers are small servicers. The Bureau estimates that over the last few years at least 95 percent of bank and credit union mortgage servicers serviced 5,000 or fewer loans.[6]

To compare borrower characteristics at servicers of different sizes and explore the role servicers of each size play in the mortgage market, this report uses the National Mortgage Database (NMDB®). The NMDB is a de-identified loan-level dataset drawn from a random 1-in-20 sample of all outstanding closed-end first-lien mortgage files. For each file, the data include detailed information on the mortgage, its performance, certain characteristics of the associated borrowers and properties, and a flag indicating the size category of the servicer that was reporting the loan to a major credit bureau as of September 30, 2018. This dataset allows us to study mortgage and borrower characteristics by servicer size, as well as certain trends over time. We also use information collected from the National Survey of Mortgage Originations (NSMO), a quarterly mail survey that draws its sample from newly originated mortgages that are part of the NMDB. These survey responses supplement the NMDB data for these borrowers and provide further insight into borrowers at servicers of different sizes, particularly related to their experiences getting a mortgage and their perceptions of the mortgage market.

Key findings of this report include:

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[5] Small servicers, as defined in this report, may be exempt from certain provisions of the Bureau's RESPA and TILA Servicing Rules in Regulations X and Z; however, the definition of small servicer used in this report is not the same as the definition of a small servicer used in those rules. This is discussed further in the next section of this report.

[6] CFPB analysis of call report data; *see also* 81 Fed. Reg. 72160, 72364–66 (Oct. 19, 2016) (estimating that, as of the fourth quarter of 2015, 94 percent of all servicers were small).

- A mortgage loan serviced by a small servicer is less likely to be a government-backed ("non-conventional") loan than a mortgage loan serviced by a larger servicer. Only 5 percent of loans at small servicers are insured by the U.S. Federal Housing Administration (FHA) or guaranteed by the Department of Veterans Affairs (VA), the Farm Service Agency (FSA), or the Rural Housing Service (RHS). These non-conventional mortgages make up over a quarter of loans at mid-size and large servicers.

- A mortgage loan serviced by a small servicer is also less likely to be serviced on behalf of the government-sponsored enterprises (GSEs) – i.e., the Federal National Mortgage Association (Fannie Mae) or the Federal Home Loan Mortgage Corporation (Freddie Mac). At small servicers, less than one-third of conventional loans are serviced for Fannie Mae or Freddie Mac. In contrast, at large servicers, over three quarters of conventional loans are serviced for Fannie Mae or Freddie Mac.

- Compared to larger servicers, a greater share of small servicers' mortgages are secured by homes in non-metro or completely rural counties.[7] Nationwide, 11 percent of mortgages are in non-metro or completely rural counties, but more than 23 percent of mortgages serviced by small servicers are in these counties. Small servicers service the majority of loans in a number of rural counties in the United States, particularly in certain Midwestern states.

- Delinquency rates on loans at servicers of all sizes increased substantially starting in 2008, but peak delinquency rates were much lower for loans at small servicers than for loans at large and mid-sized servicers. From 2012 to 2018, delinquency rates of loans at large and small servicers generally converged as delinquency rates on loans fell to pre-crisis levels.

- In response to questions about how they chose their mortgage lender or broker, borrowers with mortgages at small servicers are more likely to state that "having an established banking relationship" and "having a local office or branch nearby" were important factors.[8] For example, 74 percent of borrowers with mortgages at small servicers said having a branch or office nearby was important, compared to 44 percent of borrowers with mortgages at large servicers.

[7] For purposes of this report, "non-metro" counties are counties that are not in metropolitan areas but have at least one urban cluster of 2,500 or more people. *See* Section 3.3.

[8] These questions ask about the mortgage lender or broker rather than the servicer. Borrowers generally do not choose their servicers, and a servicer often is not the original lender. In Section 5 we further discuss the relationship between lender and servicer and the relevance of these NSMO results.

2. Data

This report relies on the data from the NMDB program, which is jointly funded by the Federal Housing Finance Agency (FHFA) and the Bureau. We make use of both the core NMDB data and the National Survey of Mortgage Originations (NSMO), a quarterly survey that has been conducted since 2014.

2.1 National Mortgage Database (NMDB)

The NMDB is a de-identified loan-level database of closed-end first-lien residential mortgages. It is representative of the market as a whole and contains detailed, loan-level information on the terms and performance of mortgages, as well as certain characteristics of the associated borrowers and properties.

The core data in NMDB are drawn from a random 1-in-20 sample of all closed-end first-lien mortgage files outstanding at any time between January 1998 and the present. A random 1-in-20 sample of newly reported mortgages is added each quarter. Mortgages are followed in the NMDB database until they terminate through prepayment (including refinancing), foreclosure, or maturity. The information on borrowers and loans is de-identified and does not include any directly identifying information such as borrower name, address, or Social Security number.[9]

The analyses in this report rely on a variable, added to the NMDB in version 4.0, that indicates the size of the institution servicing the loan as of September 30, 2018 – specifically, whether the institution serviced 5,000 loans or fewer (small servicers), between 5,000 and 30,000 loans (mid-size servicers), or more than 30,000 loans (large servicers). The variable was constructed by using the total number of closed-end mortgage credit records with positive balances for each institution as of this date. Thus, while the NMDB data used in this study include data on these servicers' loans going back to 2004, servicer sizes may be mischaracterized for periods before September 2018 for one of two reasons: first, the number of loans in a given servicer's portfolio may have increased or decreased over time; and second, loans may have been transferred between servicers of different sizes. In either case, the size category for a loan's servicer in

[9] More information about the NMDB, including background on how the data are constructed and updated, as well as an evaluation of the sample frame, is available in a Technical Report published in November 2018. Federal Housing Finance Agency and Consumer Financial Protection Bureau, *National Mortgage Database: Technical Report 2.4* (Nov. 8, 2018), *available at* https://www.consumerfinance.gov/data-research/research-reports/technical-reports-national-survey-of-mortgage-borrowers-and-national-mortgage-database/.

September 2018 may be different from the size category for the loan's servicer in earlier periods. We discuss this limitation more in Section 4.[10]

Small servicers, as defined in this report, may be exempt from certain provisions the RESPA Servicing Rule in Regulation X and the TILA Servicing Rule in Regulation Z because of their size.[11] For purposes of Regulation X and Regulation Z, small servicers are generally defined as servicers who, together with their affiliates, service 5,000 or fewer loans and only service loans that they or an affiliate own or originated.[12] In contrast, the term "small servicer" used in this report instead refers to any servicer that services 5,000 or fewer loans (the NMDB does not indicate whether a loan's servicer owns or originated the loan). However, we expect that servicers that service 5,000 loans or fewer are generally unlikely to service loans that they do not own and did not originate.[13]

Many of our analyses from the NMDB are focused on the characteristics of mortgages held by small, mid-size, and large servicers, as well as the associated borrowers. For these analyses, we focus on mortgages that were open (that is, loans that had outstanding balances) during the third quarter of 2018. There are more than 2.3 million of these loans in the NMDB. For robustness we also conducted each of these analyses for loans that were open during the third quarter of 2013. While there are some differences in the magnitudes of certain measures across servicer sizes, the results comparing measures between servicer sizes generally do not change.

2.2 The National Survey of Mortgage Originations (NSMO)

NSMO is a quarterly mail survey that draws its sample from newly originated mortgages that are part of the NMDB. The survey provides information for a nationally representative sample of newly originated closed-end first-lien residential mortgages, particularly about borrowers' experiences getting a mortgage, their perceptions of the mortgage market, and their future

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[10] In addition, we note that the servicer size is identified based on the number of loans serviced by the entity that furnishes data to the nationwide consumer reporting agency. If more than one servicer is involved in servicing a loan (such as when one institution owns the mortgage servicing rights and contracts with a "sub-servicer" to help service the loan), the size category will reflect the number of loans serviced by the entity that furnishes data on the loan.

[11] *See* 12 C.F.R. § 1024.30(b)(1); 12 C.F.R. § 1026.41(e)(4) (exempting small servicers from certain requirements).

[12] 2 C.F.R. § 1026.41(e)(4).

[13] *See* 81 F.R.72160, 72364 (Oct. 10, 2016).

expectations. Participation in the survey is voluntary, and respondents can either return the English-language questionnaire by mail or complete the survey online in English or Spanish.

Beginning with mortgages originated in 2013, a simple random sample of about 6,000 mortgages per quarter is drawn for NSMO from loans newly added to the NMDB. At present, each quarterly mailing ("Wave") reflects a sampling rate of roughly 1-in-15 from the NMDB (or 1-in-300 from all originations). Overall, in Waves 1 to 15 of NSMO there were 26,581 usable responses obtained from 94,546 mailed surveys (a response rate of 28.1 percent).

This report uses responses from NSMO Waves 1 to 15, which cover loans originated from 2013 to 2016, merged with the NMDB servicer size flag.[14] Because the servicer size flag was constructed as of September 2018, the amount of time between origination and the size categorization differs between waves. So, for example, a loan that was originated in 2013 and transferred from a small servicer and to a large servicer after three years would be categorized as serviced by a large servicer, whereas a loan that was originated in 2016 and transferred after three years would still be categorized as small. As a robustness check, we pulled every NSMO measure reported separately for Waves 1 through 7 and 7 through 15. The results reported generally did not change.

To ensure NSMO analyses are representative of the population as a whole, we use analysis weights which adjust for the sampling rates and non-response rates. More information about these weights, as well as the survey development, logistics, and response rate, is available in a technical report published in February 2019.[15] A public use file of the NSMO data was released on November 8, 2018 by the FHFA and CFPB.[16] The file is based on the first 15 Waves of the survey and excludes some fields to prevent the re-identification of personally identifiable information.

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[14] While some responses in NSMO Wave 15 were for loans originated in 2017, we exclude these from our analysis.

[15] Federal Housing Finance Agency and Consumer Financial Protection Bureau, *National Survey of Mortgage Originations: Technical Report 2* (Feb. 12, 2019), *available at* https://www.fhfa.gov/DataTools/Downloads/Documents/NSMO-Public-Use-Files/NSMO-Technical-Documentation-20190212.pdf.

[16] Press Release, Federal Housing Finance Agency, *FHFA and BCFP Release National Survey of Mortgage Originations* Dataset *for Public Use* (Nov. 8, 2018), *available at* https://www.fhfa.gov/Media/PublicAffairs/Pages/FHFA-and-BCFP-Release-National-Survey-of-Mortgage-Originations-Dataset-for-Public-Use.aspx.

3. Loan and borrower characteristics by servicer size

This section explores differences in the servicing portfolios of small, mid-size, and large servicers: first, differences in the types of loans they service; second, differences in the borrowers whose loans they service; and third, differences in the geographic distribution of the loans they service. This provides an overview of the role that servicers of each size play in the mortgage market. Most of the results in this section are based on mortgages outstanding as of the end of September 2018 in the NMDB and their associated borrowers. Some additional results are presented from NSMO data that includes only borrowers with mortgages originated between 2013 and 2016.

3.1 Loan characteristics

Figure 1 looks at the share of loans taken out for purchase and for refinance, separately by servicer size, for all borrowers with open loans in the NMDB as of September 2018.[17] The data show that a somewhat greater share of loans at large servicers are refinances compared to the share of refinance loans at small or mid-size servicers. At smaller servicers a greater share of open loans are purchase loans. These results are generally consistent with responses from NSMO borrowers with mortgages originated from 2013 to 2016 (not shown).[18]

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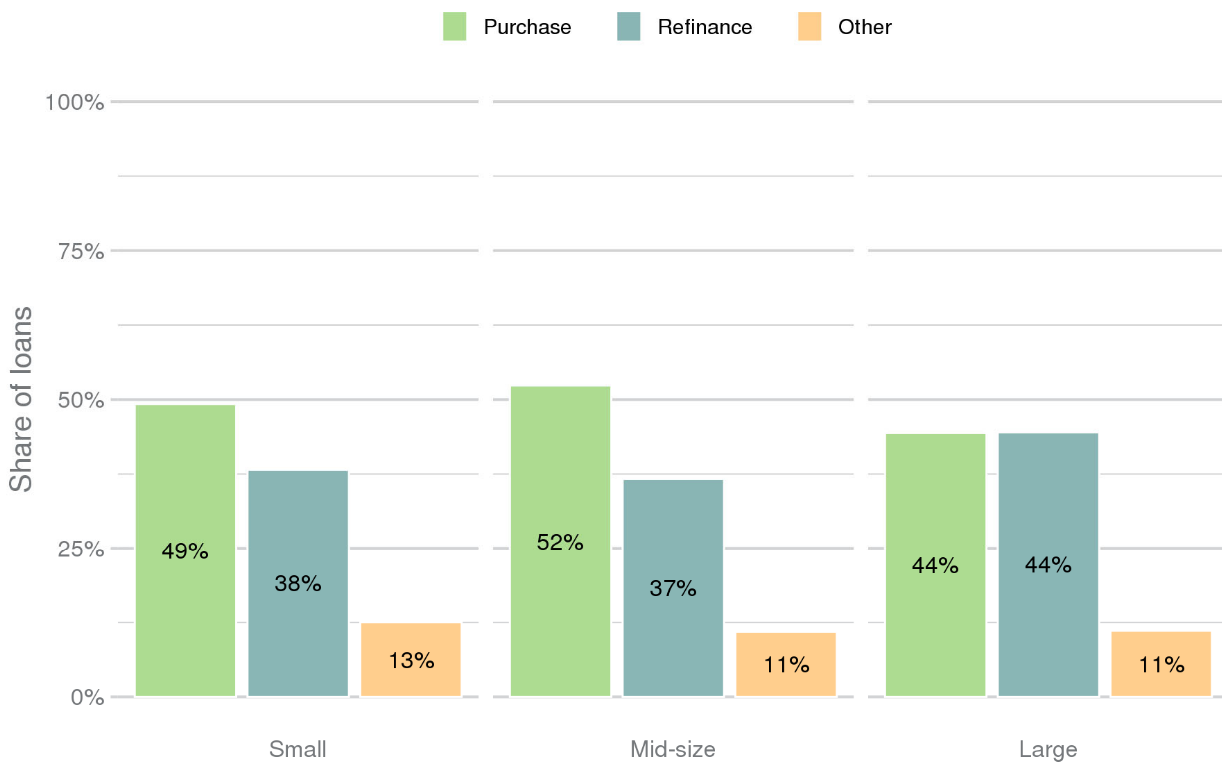
[17] The two other possible reasons for a mortgage in the NMDB are "to add/remove a co-borrower" and "to take out a new loan on a mortgage-free property."

[18] Additionally, in NSMO, borrowers at small servicers less often report that they are likely to refinance their mortgage in the next couple of years after origination. At small servicers, 21 percent of borrowers said they were "very" or "somewhat" likely to refinance in the next couple years, compared to 27 percent at mid-size and 26 percent at large servicers. Even when limiting to purchases, borrowers at small servicers less often state they are likely to refinance.

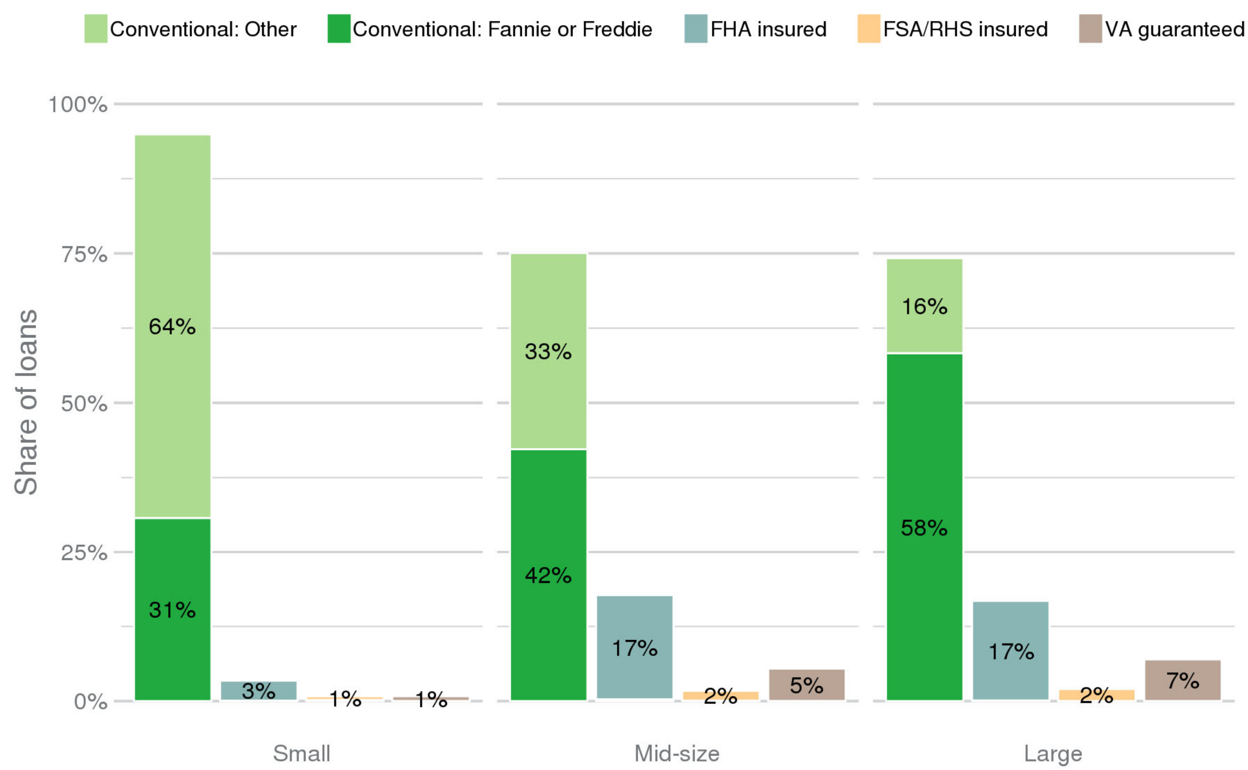
FIGURE 1: MORTGAGE PURPOSE BY SERVICER SIZE (LOANS OUTSTANDING IN NMDB SEPTEMBER 2018)



A mortgage serviced by a small servicer is also less likely to be a non-conventional (that is, government-backed) loan than a mortgage serviced by a larger servicer. Using the NMDB, Figure 2 shows that only 5 percent of loans at small servicers are insured by the FHA or guaranteed by the VA, the FSA, or the RHS. These non-conventional mortgages make up over a quarter of loans at mid-size and large servicers. For both mid-size and large servicers, the largest share of non-conventional loans are FHA insured, which are 18 percent and 17 percent of their servicing portfolios respectively.

Figure 2 also separates conventional loans by whether or not the mortgage was purchased by Fannie Mae or Freddie Mac. The data shows that at large servicers, compared to small or mid-size servicers, a greater share of conventional loans they service are owned by Fannie Mae or Freddie Mac. At small servicers, most loans are neither government-insured nor serviced for Fannie Mae or Freddie Mac. Although small servicers may service some of these loans for other owners, if small servicers are not servicing conventional loans for Fannie Mae or Freddie Mac, it generally means they are holding the loans on their own books.[19] At large servicers, most conventional loans are serviced for Fannie Mae or Freddie Mac and altogether 84 percent of the loans at large servicers are either government-insured or owned by Fannie Mae or Freddie Mac.

FIGURE 2: MORTGAGE TYPE BY SERVICER SIZE (LOANS OUTSTANDING IN NMDB SEPTEMBER 2018)

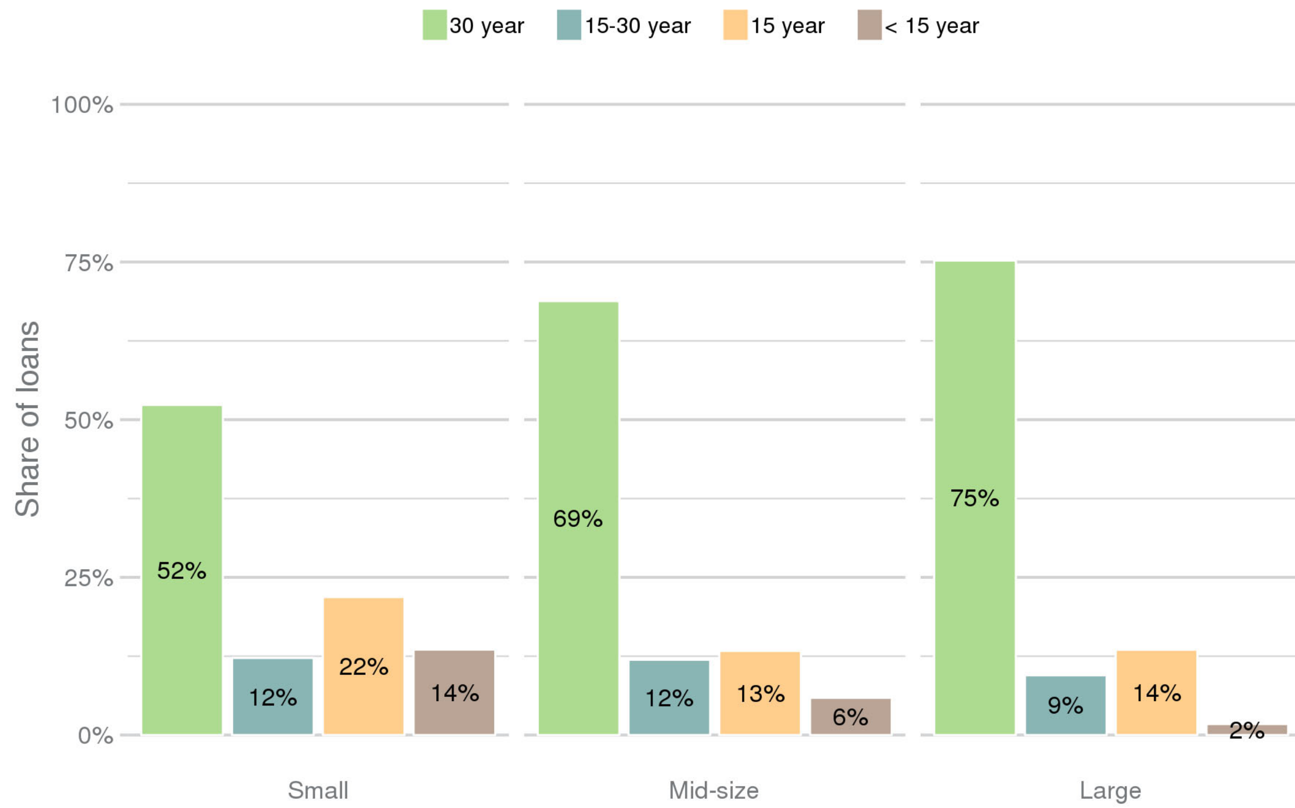


A greater share of mortgages at small servicers than at large servicers are for terms shorter than 30 years. Figure 3 shows that, according to the NMDB, more than three quarters of loans at large servicers have 30 year terms as opposed to around half for small servicers. Loans shorter than 15 years make up 14 percent of the loans serviced at small servicers, compared to 6 percent at mid-size servicers and only 2 percent at large servicers. In Appendix A we show that this difference between small and large servicers is not driven by differences in the share of loans for

[19] Some loans are not eligible for sale to Fannie Mae or Freddie Mac because of property or borrower characteristics. Even in cases where loans are otherwise eligible, there are different reasons that small servicers might choose to retain loans rather than sell them to Fannie Mae and Freddie Mac. Apart from balance sheet considerations, there are fixed costs associated with participating in these programs that may not be justified for some small institutions. Loans owned by the GSEs also must be serviced according to GSE guidelines, and some small servicers may value greater flexibility in how they service their loans.

purchase or refinance; in fact the differences are larger when limiting to either purchases or refinances.

FIGURE 3: TERM LENGTH BY SERVICER SIZE (LOANS OUTSTANDING IN NMDB SEPTEMBER 2018)



NSMO also provides more information about the type of property the mortgage covers. Table 1 shows that, for all servicer sizes, most mortgages they service are for single-family detached houses. Additionally, compared to a mortgage at a large servicer, a mortgage at a small servicer is much more likely to be for mobile home or manufactured housing or mobile home (4 percent of loans serviced at small servicers vs 1 percent at large servicers).

TABLE 1: PROPETY TYPE BY SERVICER SIZE (NSMO RESPONSES FOR LOANS ORIGINATED 2013-2016)

Property type (NSMO)	Small	Mid-size	Large
Single-family detached house	83%	83%	84%
Mobile home or manufactured housing	4%	3%	1%
Townhouse, row house, or villa	4%	4%	6%
2-unit, 3-unit, or 4-unit dwelling	3%	3%	2%

Property type (NSMO)	Small	Mid-size	Large
Apartment (or condo/co-op) in an apartment building	5%	5%	6%
Unit in a partly commercial structure or land only	1%	<0.5%	<0.5%
Total	100%	100%	100%

Table 2 displays summary statistics for four other descriptive measures: loan vintage and size from the NMDB as well as monthly payment and rate type from NSMO. Generally, the vintage of loans currently outstanding is similar across servicer sizes. Loans originated prior to 2009 made up between 17 and 22 percent of the servicing portfolio of servicers of each size, whereas loans originated since 2016 made up between 32 and 40 percent. Loan amounts and monthly payments are smallest at small servicers and largest at large servicers.[20] The median loan amount was $129,453 at small servicers and $174,530 at large servicers. The median monthly payment was $1,020 at small servicers and $1,300 at large servicers. Adjustable rate mortgages are more common at small servicers compared to larger servicers, making up 15 percent of mortgages at small servicers, 9 percent at mid-size servicers, and 5 percent at large servicers.

TABLE 2: VINTAGE AND LOAN SIZE BY SERVICER SIZE (LOANS OUTSTANDING IN NMDB SEPTEMBER 2018), AND MONTHLY PAYMENT AND RATE TYPE BY SERVICER SIZE (NSMO RESPONSES FOR LOANS ORIGINATED 2013-2016)

Vintage (NMDB)	Small	Mid-size	Large
2004 or earlier	5.8%	8.9%	8.1%
2005 - 2009	10.9%	11.3%	13.3%
2010 - 2011	9.3%	6.4%	9.4%
2012 - 2013	20.3%	16.7%	21.4%
2014 - 2015	17.7%	17.4%	15.5%
2016 - Sep. 2018	36.0%	39.3%	32.3%
Total	100%	100%	100%

[20] Monthly payments include the amount paid to escrow for taxes and insurance.

Loan Amount (NMDB)	Small	Mid-size	Large
25th Percentile	$75,500	$90,000	$112,917
Median	$129,453	$151,000	$174,530
Mean	$174,746	$197,348	$216,350
75th Percentile	$212,500	$247,920	$270,000

Monthly Payment (NSMO)	Small	Mid-size	Large
25th Percentile	$665	$871	$899
Median	$1,020	$1,255	$1,300
Mean	$1,271	$1,543	$1,556
75th Percentile	$1,535	$1,868	$1,900

Rate type (NSMO)	Small	Mid-size	Large
Adjustable	15%	9%	5%
Fixed	82%	88%	92%
Don't know	3%	4%	3%
Total	100%	100%	100%

Some of the differences in attributes for different servicer sizes may reflect the attributes themselves being related to each other. For example, the lower prevalence of Fannie Mae and Freddie Mac loans among small servicers may help explain why they are more likely to offer adjustable rate mortgages or shorter loan terms, either because they bear interest rate risk on the loans or because they do not have reason to tailor loan terms to the GSE market. Some differences in attributes for different servicer sizes may also be related to geographic differences noted below, with small servicers more prevalent in rural areas, where home prices may be lower.

3.2 Borrower characteristics at origination

This subsection looks at the same population of loans outstanding in September 2018 that was analyzed above, focusing on certain characteristics of borrowers at servicers of different sizes. These characteristics describe borrowers at the time the loan was originated, rather than at some later point while the loan is serviced.

Table 3 uses NDMB to explore a set of underwriting characteristics at origination for loans serviced in September 2018. This includes debt-to-income (DTI) ratios, combined loan-to-value (CLTV) ratios, incomes, and credit scores of borrowers at loan origination.[21] The table presents the 25th percentile, median, average, and 75th percentile for each characteristic and for each servicer size. It presents these measures both for all borrowers and for borrowers with conventional loans only.[22]

TABLE 3: DTI RATIO, CLTV RATIO, INCOME, AND CREDIT SCORE* AT ORIGINATION BY SERVICER SIZE (LOANS OUTSTANDING IN NMDB SEPTEMBER 2018)

DTI	Small, all	Mid-size, all	Large, all	Small, conventional	Mid-size, conventional	Large, conventional
25 percentile	24	26	27	24	25	26
Median	33	35	36	33	33	35
Mean	33	35	38	33	33	37
75 percentile	41	42	43	41	41	42

CLTV	Small, all	Mid-size, all	Large, all	Small, conventional	Mid-size, conventional	Large, conventional
25 percentile	56	64	67	55	58	62
Median	75	80	80	73	75	76
Mean	71	76	78	70	71	73
75 percentile	89	95	95	86	87	86

[21] When values are missing, CLTV, DTI, and income are imputed by regression. Appendix B shows that excluding mortgages with imputed values generally does not change the results in this section.

[22] Appendix C shows this analysis separately for purchases and refinances. In general, the trends between servicer sizes observed in this table hold when limiting to either purchases or refinances.

Income ($ Thousands)	Small, all	Mid-size, all	Large, all	Small, conventional	Mid-size, conventional	Large, conventional
25 percentile	46.7	45.8	49.8	47.4	48.0	53.0
Median	71.0	69.6	75.0	72.5	75.1	82.3
Mean	93.0	92.1	96.6	94.8	100.5	105.9
75 percentile	110.0	108.9	115.0	112.3	120.0	126.5

Credit Score*	Small, all	Mid-size, all	Large, all	Small, conventional	Mid-size, conventional	Large, conventional
25 percentile	689	660	676	694	682	698
Median	746	726	736	749	746	753
Mean	733	715	725	736	729	739
75 percentile	790	780	784	792	790	793

* Vantage Score 3.0 closest to, but not later than, origination date. Mean borrower score used if co-borrowers.

DTI and CLTV measures are lower at small servicers than at mid-size or large servicers when considering the full set of loans. However, when limited to only conventional loans, differences in DTI and CLTV by servicer size become smaller. This suggests that some of the differences in the overall population is explained by differences between conventional and government-insured mortgages.

The next table looks at three other borrower characteristics: age (from NMDB), race (from NMDB), and educational attainment (from NSMO). Table 4 shows that, compared to larger servicers, at small servicers a slightly higher share of borrowers are older than 40. Additionally, borrowers at small servicers are more likely to be non-Hispanic White than borrowers at either mid-size or large servicers. Finally, the table shows that borrowers at small servicers are less likely to have completed college or postgraduate studies (66 percent) than borrowers at mid-size servicers (71 percent) and large servicers (72 percent).

TABLE 4: PRIMARY BORROWER AGE AT ORIGINATION (LOANS OUTSTANDING IN NMDB SEPTEMBER 2018) AND SURVEY RESPONDENT EDUCATIONAL ATTAINMENT AT ORIGINATION (NSMO RESPONSES FOR LOANS ORIGINATED 2013-2016) BY SERVICER SIZE

Age (NMDB)	Small	Mid-size	Large
30s or younger	33%	39%	37%
40s or 50s	48%	45%	47%

Age (NMDB)	Small	Mid-size	Large
60s or older	18%	16%	16%
Total	100%	100%	100%

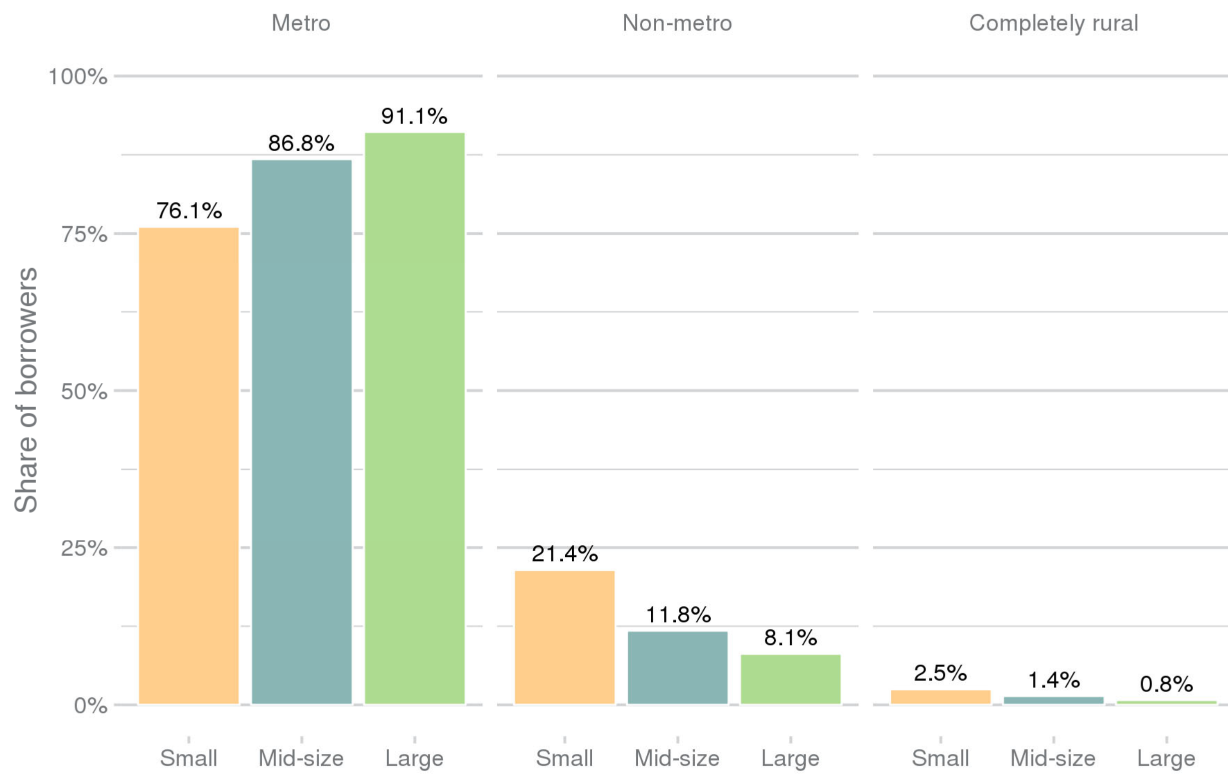
Race/Ethnicity (NMDB)	Small	Mid-size	Large
White (non-Hispanic)	87%	78%	76%
Hispanic	6%	11%	11%
Black (non-Hispanic)	3%	6%	7%
Asian (non-Hispanic)	3%	4%	5%
Other/Multi	1%	1%	1%
Total	100%	100%	100%

Educational Attainment (NSMO)	Small	Mid-size	Large
Some schooling	1%	1%	1%
High school graduate	10%	7%	6%
Technical school	5%	3%	4%
Some college	16%	17%	17%
College graduate	35%	37%	37%
Postgraduate studies	33%	34%	36%
Total	100%	100%	100%

3.3 The geography of servicer size

To look at differences in geography, we first classify counties into three groups based on the USDA's county-level Rural-Urban Continuum Codes (RUCC) from 2013: "metro" counties are in Metropolitan Statistical Areas (RUCC codes 1, 2, or 3); "non-metro" counties are not in metropolitan areas, but have at least one urban cluster of 2,500 or more people (RUCC codes 4, 5, 6, or 7); and "completely rural" counties have an urban population of less than 2,500 (RUCC codes 8 or 9).[23] Figure 4 shows the share of borrowers in metro, non-metro, and completely-rural areas by servicer size. More than 23 percent of mortgages serviced by small servicers are in non-metro or completely rural counties, compared to only 13 and 9 percent of mortgages at mid-size and large servicers, respectively. A loan at a small servicer is three times more likely to be in a completely rural county than a loan at a large servicer.[24]

FIGURE 4: SHARE OF MORTGAGED PROPERTIES IN METRO, NON-METRO, AND COMPLETELY RURAL COUNTIES BY SERVICER SIZE (LOANS OUTSTANDING IN NMDB SEPTEMBER 2018)

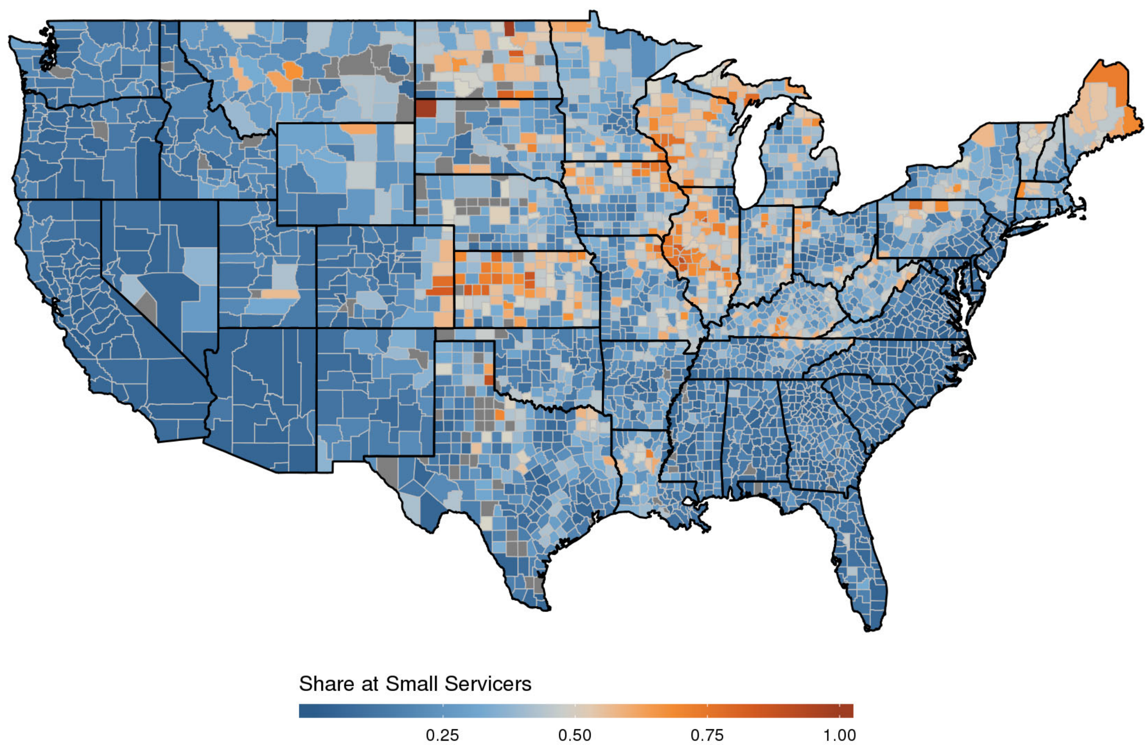


[23] These categories track those used in previous research using the NMDB. *See* Tim Critchfield et al., *Mortgage Experiences of Rural Borrowers in the United States: Insights from the National Survey of Mortgage Originations*, Citiscape Vol. 21, No. 2 (2019).

[24] The geographic footprint of servicers may contribute to the trends reported above. For example, the share of the population that is non-Hispanic White is higher in rural counties than in urban counties. *See* Kim Parker et al., Demographic and economic trends in urban, suburban and rural communities, (May 22, 2018), available at https://www.pewsocialtrends.org/2018/05/22/demographic-and-economic-trends-in-urban-suburban-and-rural-communities/.

We also map the share of loans serviced by small servicers at the county level to look more closely at these geographic trends. Figure 5 shows the share of outstanding mortgages at small servicers in each county.[25] While small servicers make up less than 15 percent of the overall servicing market, they service the majority of loans in a number of counties in the U.S. In the rural areas of some Midwestern states, including Illinois, Kansas, and Wisconsin, small servicers make up over 70 percent the market. North Dakota, Iowa, and Maine also include a number of counties where the majority of outstanding mortgages are serviced by small servicers.

FIGURE 5: SHARE OF MORTGAGED PROPERTIES AT SMALL SERVICERS BY COUNTY (LOANS OUTSTANDING IN NMDB SEPTEMBER 2018)



One factor contributing to these geographic trends may be the legacy effects of state banking laws in the United States. Prior to deregulation in the 1970s, there were a number of "unit banking" states, where each bank was allowed to operate only one office in a geographic area.[26]

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[25] Counties with fewer than 5 outstanding loans in the NMDB are excluded and colored in grey.

[26] Unit banking states were: Arkansas, Colorado, Florida, Illinois, Iowa, Kansas, Minnesota, Missouri, Montana, Nebraska, North Dakota, Oklahoma, Texas, Wisconsin, and West Virginia. *See* Erin Davis & Tara Rice, *The Branch*

Restrictions on branch banking across state lines persisted in many states until the 1990s.[27] As a lasting result of these restrictions, banks in former unit banking states may be smaller on average. To the extent that loans in a state are more likely to be serviced by a bank in that state, loans may be serviced by smaller servicers on average in states with a history of unit banking.

Banking Boom in Illinois: A Byproduct of Restrictive Branching Laws, Chicago Fed Letter No. 238 (May 2007) at footnote 3, *available at* https://www.chicagofed.org/publications/chicago-fed-letter/2007/may-238 (citing Stiroh & Strahan, *infra* note 27).

[27] Kevin J. Stiroh & Philip E. Strahan, *Competitive Dynamics of Deregulation: Evidence from U.S. Banking*, 801 Journal of Money, Credit and Banking Vol. 35, No. 5 (Oct. 2003).

4. Market trends by servicer size

This section provides an overview of certain mortgage servicing trends since 2004, with the results reported based on servicer size.

As noted in Section 2, servicer size is determined for each NMDB record using the number of loans in the servicer's portfolio as of September 2018. This method may not accurately reflect a servicer's size in earlier periods if: (1) the servicer has changed, or (2) the servicer is the same but its size has changed. In particular, consolidation of servicers or transfers of servicing portfolios could cause loans to move between servicers in different size categories.

Bearing those caveats in mind, Figure 6 below shows the share of mortgages serviced by servicer size for each quarter from March 2004 to September 2018.[28] The figure shows that in 2018 about 75 percent of mortgages outstanding were serviced by large servicers. This share appears to have decreased gradually since 2008, while the share of the mortgage market serviced by small and mid-size servicers appears to have increased gradually over that same period.[29] We should be cautious in relying on these trends because servicer size may be not be accurate for some loans in earlier periods; however, the general trends are consistent with other research finding that mortgage servicing assets for small banks increased from 2008 to 2015 while decreasing for large banks.[30]

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[28] Appendix D presents these trends excluding loans identified as having been transferred during the period, finding that the trends are generally similar when excluding these transferred loans.

[29] Recent years have also seen an increase in the share of loans serviced by non-depository mortgage servicers. One 2016 GAO report found that the share of home mortgages serviced by nonbanks has increased from 6.8 percent in 2012 to 24.2 percent in 2015. United States Government Accountability Office, GAO-16-278, *Nonbank Mortgage Servicers: Existing Regulatory Oversight Could Be Strengthened*, (March 2016), at 1, *available at* https://www.gao.gov/assets/680/675747.pdf. The NMDB data do not allow us to differentiate between depository and non-depository servicers; however, other research suggests that there has been recent grown in servicing by small and mid-size depository institutions. See note 30.

[30] Board of Governors of the Federal Reserve System, Federal Deposit Insurance Corporation, Office of the Comptroller of the Currency, and National Credit Union Administration, *Report to the Congress on the Effect of Capital Rules on Mortgage Servicing Assets*, (Aug. 2016), at 26-27, *available at* https://www.federalreserve.gov/publications/other-reports/files/effect-capital-rules-mortgage-servicing-assets-201606.pdf; *see also* United States Government Accountability Office, GAO-16-448, *Mortgage Servicing: Community Lenders Remain Active under New Rules, but CFPB Needs More Complete Plans for Reviewing Rules*, (June 2016), at 14-16, *available at* https://www.gao.gov/assets/680/677995.pdf (finding that the shares of all mortgages serviced by community banks and credit unions both increased from 2008 to 2015).

FIGURE 6: SHARE OF OUTSTANDING MORTGAGES SERVICED BY SERVICER SIZE 2004-2018 (NMDB)

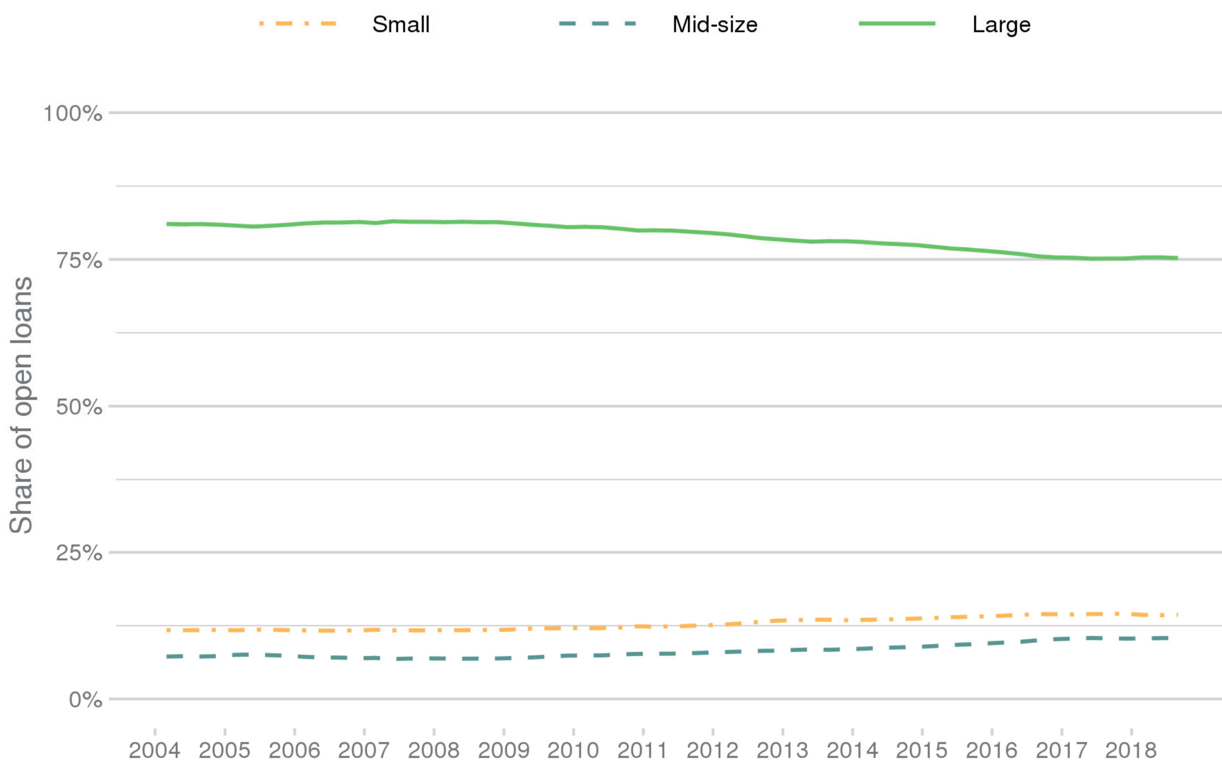
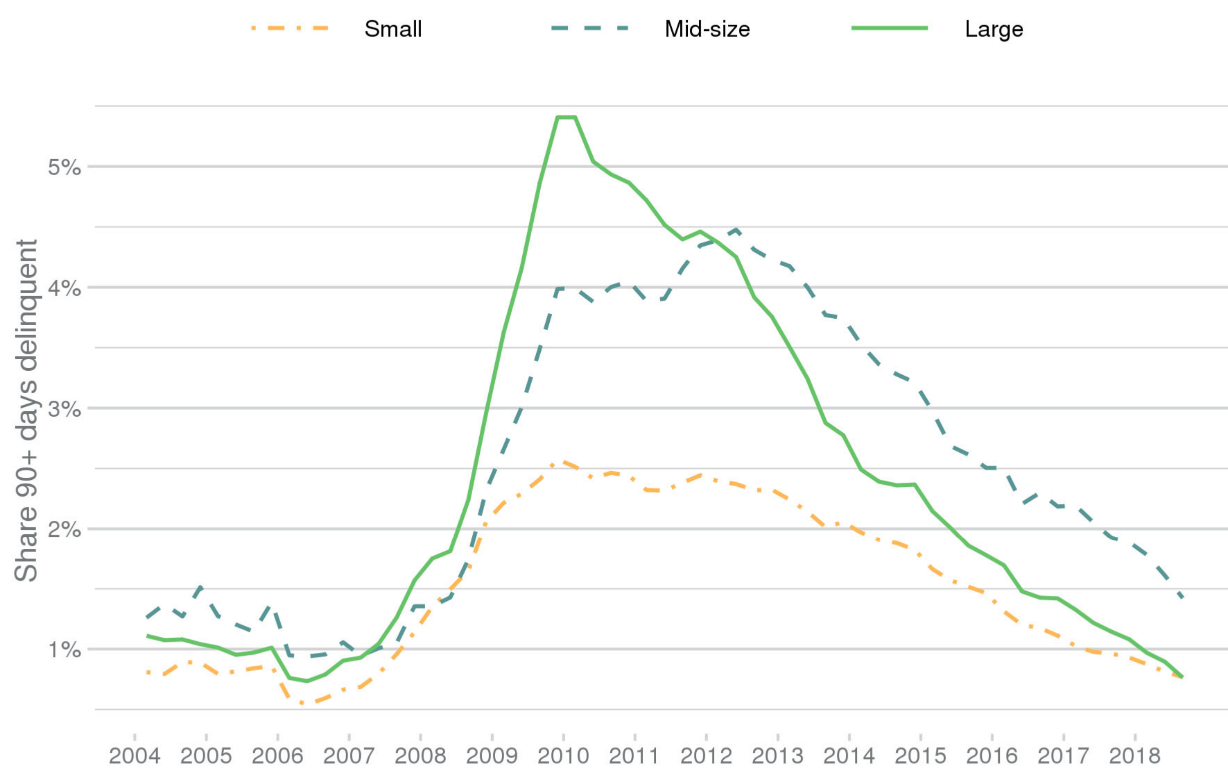


Figure 7 shows the 90-day delinquency rate over the same period, again broken out by servicers of different sizes.[31] From 2007 to 2012 the share of open loans that were 90 or more days delinquent was higher at larger servicers than mid-size or small servicers. Since late 2012, however, the 90-day delinquency rate on loans at mid-size servicers was higher than on loans at large and small servicers. While the 90-day delinquency rate for loans at both large and small servicers peaked in 2009, the rate for loans at mid-size servicers did not peak until 2012. At small servicers, the 90-day delinquency rate on loans remained lower than at mid-size and large servicers during the crisis, and the post-crisis reduction in delinquency rate has been more gradual than at large servicers. The 90-day delinquency rate on loans at small and large

[31] In its assessment of the 2013 RESPA Servicing Rule, the Bureau used the Mortgage Bankers Association Annual Performance Data to break out serious delinquency rates by servicer size for certain non-depository servicers. The data showed that, while the rate of serious delinquency fell in all size categories from 2012 to 2017, the decline was much less pronounced among non-depository servicers that serviced fewer than 50,000 loans, consistent with these results. *See* 2013 RESPA Servicing Rule Assessment Report, *supra* note 4 at 107-109. The Bureau also reports overall mortgage market performance trends using the NMDB, and the 90-day delinquency rate reported here is defined as it is therein. *See* Consumer Financial Protection Bureau, *Mortgage performance trends, available at* https://www.consumerfinance.gov/data-research/mortgage-performance-trends/.

servicers nearly converges by September 2018. Appendix D shows that these trends do not significantly change if the analysis is limited to only conventional loans.

FIGURE 7: SHARE OF MORTGAGES OUTSTANDING 90 OR MORE DAYS DELINQUENT BY SERVICER SIZE 2004-2018 (NMDB)



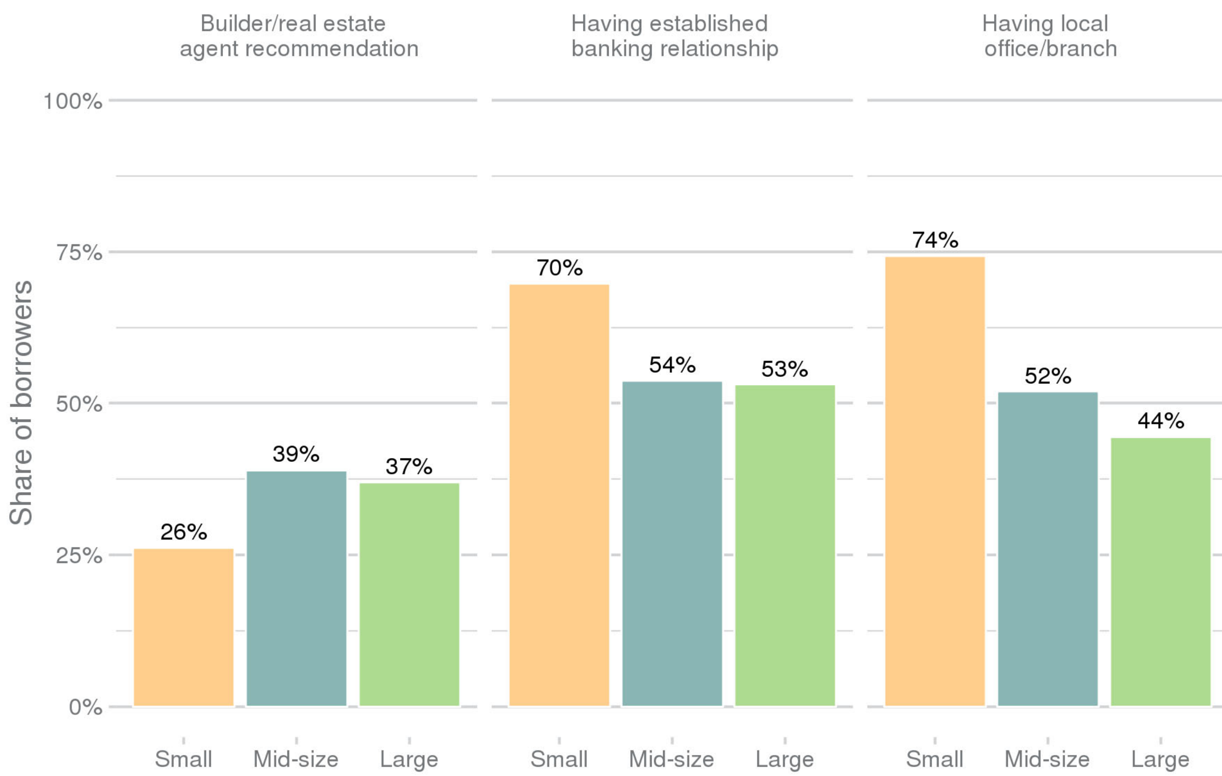
5. Borrowers' priorities in choosing a lender or broker

NSMO provides unique information about borrowers' experiences getting a mortgage and their perceptions of the mortgage market. This section uses the survey data to look at differences by servicer size in how borrowers choose their lender or broker. A loan may not be serviced by the institution that originated the loan, and borrowers may not know who the servicer will be when they take out a mortgage loan. However, as mentioned above, we expect that small servicers are generally unlikely to service loans that they did not originate.[32] As a result, borrowers who are choosing a lender may consider how they expect their loan to be serviced, as well as factors relating to origination. The NSMO responses to questions about origination may therefore tell us about whether borrowers at small servicers had different priorities when seeking a mortgage loan.

Figure 8 shows that the share of borrowers who considered certain factors important in choosing their lender or broker differs considerably between borrowers at different servicer sizes. The figure shows that borrowers with mortgages at small servicers less frequently report that a "recommendation from their real estate agent or builder" was important in choosing their lender or broker than at mid-size or large servicers. Additionally, borrowers with mortgages at small servicers are more likely to state that "having an established banking relationship" and "having a local office or branch nearby" were important when choosing the mortgage lender/broker they used to take out their mortgage. Seventy and 74 percent of borrowers with mortgages at small servicers said prior relationships with lenders and branches nearby were important, respectively, compared to only 53 and 44 percent of borrowers with mortgages at large servicers.

[32] NMDB data show that, of all loans serviced by small servicers, about 31 percent are serviced by credit unions, whereas credit unions service about 3 percent of loans serviced by mid-sized servicers and about 1 percent of loans serviced by large servicers. We expect that small credit unions are likely to service loans that they originated, and, to the extent that consumers have preferences regarding servicing as opposed to origination, consumers may borrow from a credit union expecting that credit union to service the loan.

FIGURE 8: SHARE OF BORROWERS WHO CONSIDER CERTAIN FACTORS IMPORTANT IN CHOOSING A LENDER/BROKER BY SERVICER SIZE (NSMO RESPONSES FOR WAVES 7-15)[33]



These results are consistent with borrowers with loans at small servicers choosing a lender based on their preferences regarding the originations process, servicing, or both. For example, borrowers might prefer a local lender at origination because they prefer to discuss their mortgage applications in person, and if that lender retains servicing of the loan that choice might also enable them to make payments or ask questions about the servicing of their loans at a local office.

[33] This figure uses only responses from NSMO Waves 7 to 15 (primarily, loans originated between 2015 and 2016), as different response options were used in Waves 1 to 6. Appendix E provides the results for Waves 1 to 6. The trends observed are generally the same.

6. Conclusion

Every servicer is no doubt unique in some respects, and size is only one of many ways in which servicers differ. That said, this report finds that small, mid-sized, and large servicers look notably different on average along some dimensions, suggesting that servicers of different sizes do play somewhat different roles in terms of the types of loans they service and the borrowers whose loans they service. These differences provide important context as the Bureau seeks to better understand developments in the mortgage market and the effects of its regulations.

APPENDIX A: TERM LENGTH BY SERVICER SIZE FOR REFINANCES AND PURCHASES

Figure 3 showed the breakdown of loan term lengths for outstanding loans at each servicer size. Figures 9 and 10, below, break this out further for purchases and refinances, respectively. While the trends between servicers remain the same, overall a much larger share of outstanding purchase mortgages are for 30 years than refinance mortgages. Figure 2 shows that a somewhat greater share of loans at large servicers are refinances compared to the share at small or mid-size servicers. Thus the differences in term lengths between servicers observed previously is being attenuated by underlying differences in the share of servicers' portfolios that are purchases and refinances.

FIGURE 9: TERM LENGTH BY SERVICER SIZE FOR PURCHASES (LOANS OUTSTANDING IN NMDB SEPTEMBER 2018)

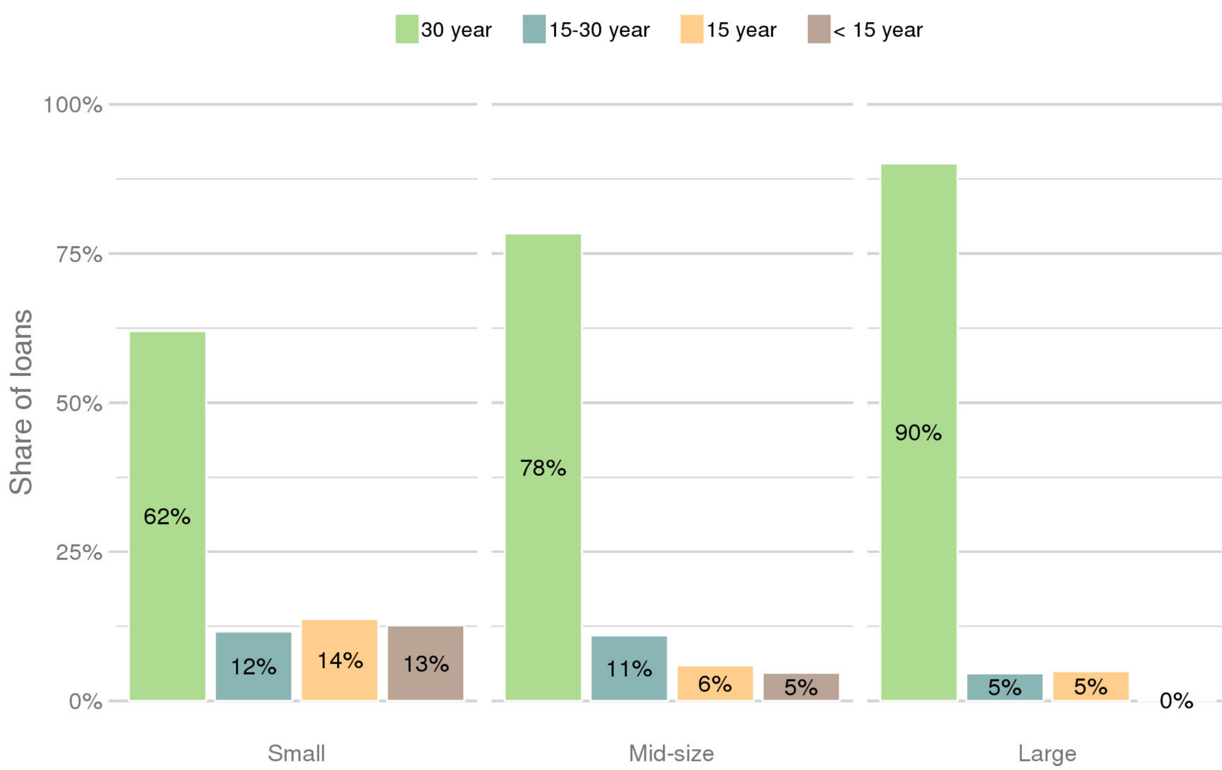
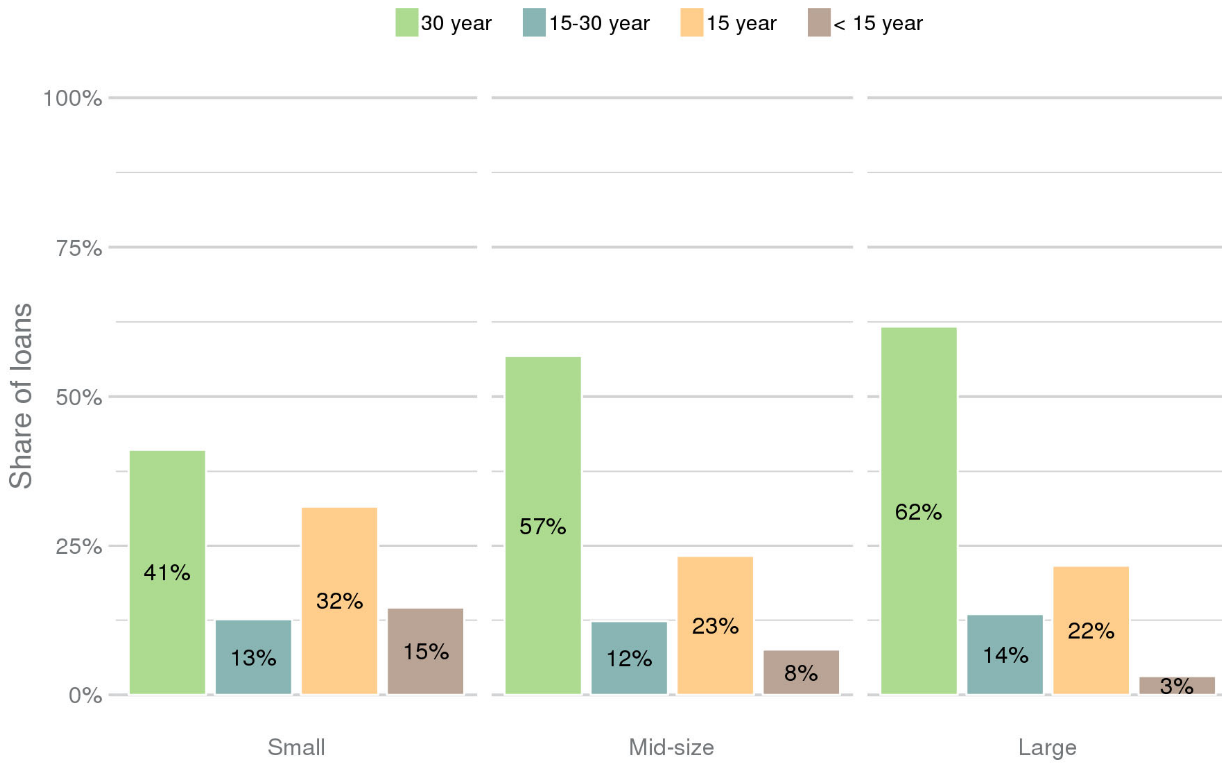


FIGURE 10: TERM LENGTH BY SERVICER SIZE FOR REFINANCES (LOANS OUTSTANDING IN NMDB SEPTEMBER 2018)



APPENDIX B: DTI, CLTV, AND INCOME IMPUTATION ROBUSTNESS CHECK

TABLE 5: NUMBER OF MORTGAGES WITH DTI IMPUTATION BY SERVICER SIZE (LOANS OUTSTANDING IN NMDB SEPTEMBER 2018)

Measure	Small	Mid-size	Large
Not imputed DTI	104,906	127,214	1,330,358
Imputed DTI	232,429	117,126	440,698
Total	337,335	244,340	1,771,056

TABLE 6: DTI AT ORIGINATION BY SERVICER SIZE FOR LOANS WITH NON-IMPUTED VALUES (LOANS OUTSTANDING IN NMDB SEPTEMBER 2018)

Measure	Small, Non-imputed only (all)	Mid-size, Non-imputed only (all)	Large, Non-imputed only (all)
25 percentile	25 (24)	28 (26)	27 (27)
Median	33 (33)	36 (35)	36 (36)
Mean	33 (33)	36 (35)	38 (38)
75 percentile	40 (41)	43 (42)	43 (43)

TABLE 7: NUMBER OF MORTGAGES WITH CLTV IMPUTATION BY SERVICER SIZE (LOANS OUTSTANDING IN NMDB SEPTEMBER 2018)

Measure	Small	Mid-size	Large
Not imputed CLTV	115,269	151,282	1,531,096
Imputed CLTV	222,066	93,058	239,960
Total	337,335	244,340	1,771,056

TABLE 8: CLTV AT ORIGINATION BY SERVICER SIZE FOR LOANS WITH NON-IMPUTED VALUES (LOANS OUTSTANDING IN NMDB SEPTEMBER 2018)

Measure	Small, Non-imputed only (all)	Mid-size, Non-imputed only (all)	Large, Non-imputed only (all)
25 percentile	64 (56)	71 (64)	68 (67)
Median	78 (75)	83 (80)	80 (80)
Mean	75 (71)	81 (76)	78 (78)
75 percentile	90 (89)	96 (95)	95 (95)

TABLE 9: NUMBER OF MORTGAGES WITH INCOME IMPUTATION BY SERVICER SIZE (LOANS OUTSTANDING IN NMDB SEPTEMBER 2018)

Measure	Small	Mid-size	Large
Not imputed income ($K)	201,264	168,125	1,451,962
Imputed income ($K)	136,754	76,828	319,094
Total	337,335	244,340	1,771,056

TABLE 10: INCOME AT ORIGINATION BY SERVICER SIZE FOR LOANS WITH NON-IMPUTED VALUES (LOANS OUTSTANDING IN NMDB SEPTEMBER 2018)

Measure	Small, Non-imputed only (all)	Mid-size, Non-imputed only (all)	Large, Non-imputed only (all)
25 percentile ($K)	47.7 (46.7)	45.6 (45.8)	48.5 (49.8)
Median ($K)	72.8 (71.0)	70.2 (69.6)	74.0 (75.0)
Mean ($K)	95.9 (93.0)	94.1 (92.1)	96.0 (96.6)
75 percentile ($K)	111.2 (110.0)	110.4 (108.9)	114.0 (115.0)

APPENDIX C: UNDERWRITING CHARACTERISTICS BY SERVICER SIZE, SEPARATELY FOR PURCHASES AND REFINANCES

TABLE 11: DTI AT ORIGINATION BY SERVICER SIZE, SEPARATELY FOR PURCHASES AND REFINANCES (LOANS OUTSTANDING IN NMDB SEPTEMBER 2018)

DTI	Small, purchases	Mid-size, purchases	Large, purchases	Small, refinances	Mid-size, refinances	Large, refinances
25 percentile	25	27	29	24	25	25
Median	33	36	37	32	34	34
Mean	33	35	37	33	34	39
75 percentile	41	43	43	41	42	43

TABLE 12: CLTV AT ORIGINATION BY SERVICER SIZE, SEPARATELY FOR PURCHASES AND REFINANCES (LOANS OUTSTANDING IN NMDB SEPTEMBER 2018)

CLTV	Small, purchases	Mid-size, purchases	Large, purchases	Small, refinances	Mid-size, refinances	Large, refinances
25 percentile	64	75	79	52	56	59
Median	80	90	91	67	73	74
Mean	76	82	86	66	70	72
75 percentile	94	96	96	80	85	85

TABLE 13: INCOME AT ORIGINATION BY SERVICER SIZE, SEPARATELY FOR PURCHASES AND REFINANCES (LOANS OUTSTANDING IN NMDB SEPTEMBER 2018)

Income ($ Thousands)	Small, purchases	Mid-size, purchases	Large, purchases	Small, refinances	Mid-size, refinances	Large, refinances
25 percentile	43.6	42.0	46.9	52.0	54.0	54.0
Median	65.8	62.8	70.0	78.4	80.0	80.8
Mean	88.4	85.1	91.7	99.9	103.4	102.8
75 percentile	103.8	99.0	108.3	118.2	121.9	121.6

TABLE 14: CREDIT SCORE AT ORIGINATION BY SERVICER SIZE, SEPARATELY FOR PURCHASES AND REFINANCES (LOANS OUTSTANDING IN NMDB SEPTEMBER 2018)

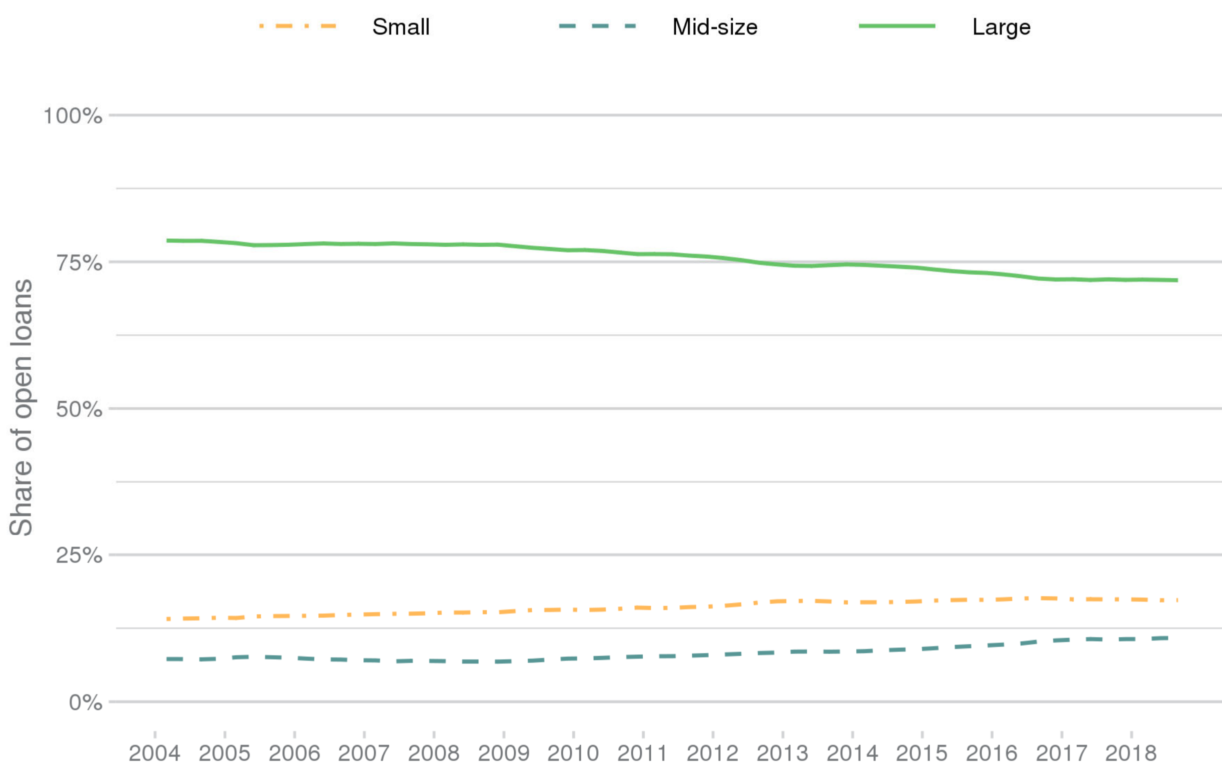
Credit Score*	Small, purchases	Mid-size, purchases	Large, purchases	Small, refinances	Mid-size, refinances	Large, refinances
25 percentile	678	651	670	706	679	686
Median	736	714	728	760	745	746
Mean	725	705	719	745	730	733
75 percentile	782	768	776	797	791	792

APPENDIX D: ROBUSTNESS CHECKS FOR TRENDS OVER TIME

As noted in Section 4, the servicer size flag in the NMDB will miscategorize loans that have transferred from a servicer in one size category to a servicer in another size category in the period before the final transfer. To explore this potential effect, the figures below exclude loans identified as transfers in either of two ways. The first is that 36 percent of loans in the NMDB can be matched to the commercially available "McDash" data set from Black Knight. Of these loans, the source for 20 percent (7 percent of all loans in NMDB) is "servicing right purchased or transferred." Second, the NMDB includes a monthly comment code field related to loan transfer. Twelve percent of loans have the comment code "transferred to another lender" or "account closed due to transfer" in some month. Nine percent of all loans were identified as transfers using method 2, but not method 1.

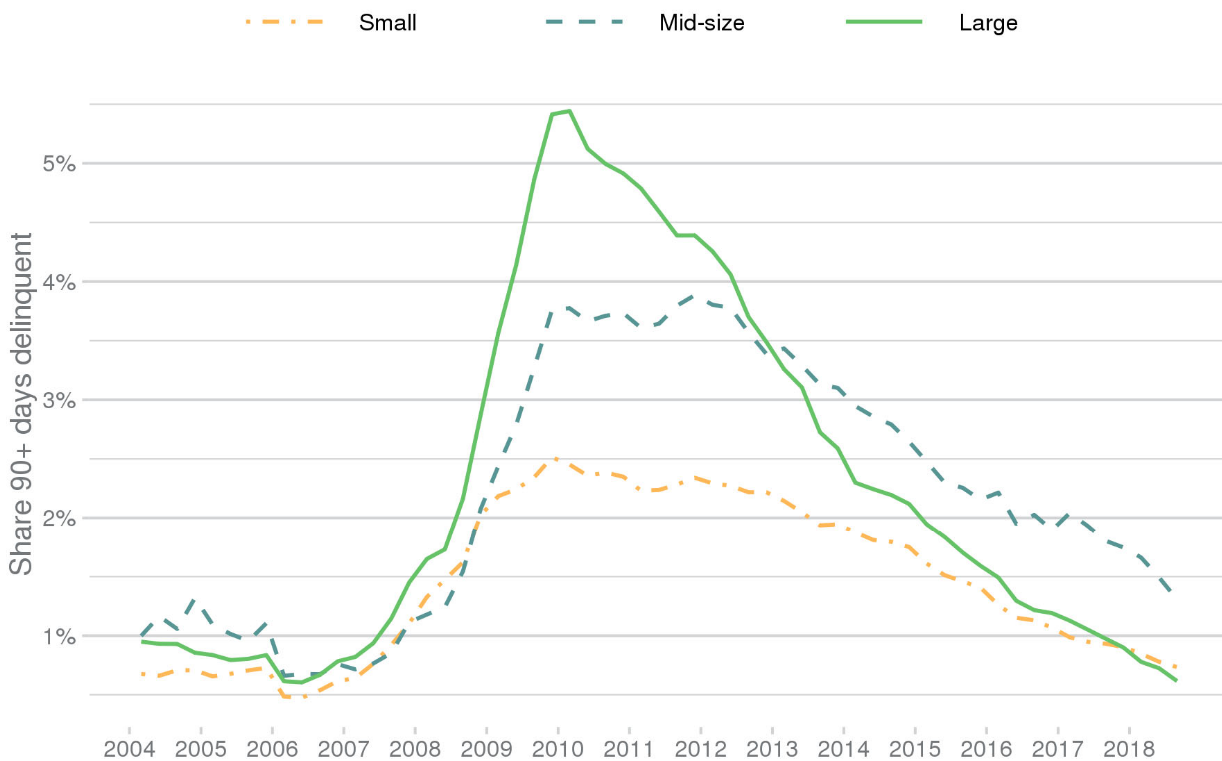
In total, 16 percent of loans are excluded because they were identified as transfers by method 1 or 2. While this measure may not pick up all transferred loans in the data, it is populated well enough to provide a reasonable robustness check. The figure shows that, while there was a smaller relative increase in the number of loans at mid-size and large servicers in from 2004 to 2009 when excluding these loans, the trends observed for all loans generally do not significantly change.

FIGURE 11: SHARE OF OUTSTANDING MORTGAGES SERVICED BY SERVICER SIZE 2004-2018, EXCLUDING LOANS WITH SOURCE "SERVICING RIGHT PURCHASED OR TRANSFERRED" (NMDB)



Additionally, in Figure 7 of Section 4 we look at 90-day delinquency rates over time. A potential question of interest is whether the trends reported in that figure are driven by conventional and non-conventional loan portfolios over time at servicers of each size. Below we show that the trends appear similar when limited to only conventional loans, though the delinquency rates are generally lower for all three servicer sizes. The difference between the 90-day delinquency rate for all loans and conventional loans during the crisis appears largest for mid-size servicers.

FIGURE 12: SHARE OF CONVENTIONAL MORTGAGES OUTSTANDING 90 OR MORE DAYS DELINQUENT BY SERVICER SIZE 2004-2018 (NMDB)



APPENDIX E: IMPORTANCE OF CERTAIN FACTORS IN NSMO WAVES 1-6

TABLE 15: BORROWER BELIEFS ON IMPORTANCE OF CERTAIN FACTORS IN CHOOSING A LENDER/BROKER BY SERVICER SIZE (NSMO RESPONSES FOR WAVES 1-6)

Importance of builder/real estate agent recommendation	Small	Mid-size	Large
Very	11%	21%	19%
Somewhat	14%	16%	15%
Not At All	75%	63%	66%
Total	100%	100%	100%

Importance of having established banking relationship	Small	Mid-size	Large
Very	59%	46%	42%
Somewhat	20%	23%	25%
Not At All	21%	32%	33%
Total	100%	100%	100%

Importance of having local office/branch	Small	Mid-size	Large
Very	56%	39%	31%
Somewhat	25%	27%	24%
Not At All	20%	34%	44%
Total	100%	100%	100%