

# A Brief Note on General Lending Patterns of Small to Medium Size Closed-end HMDA Reporters

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).<sup>1</sup>

---

<sup>1</sup> This report was prepared by Feng Liu and Alex Rodrigue.

# Table of contents

Table of contents.....	2
1. Introduction.....	3
2. Analysis.....	5
3. Conclusion .....	9
Appendix A: Figures .....	10

# 1. Introduction

The Home Mortgage Disclosure Act (HMDA) is a data collection, reporting, and disclosure statute. HMDA data are used to assist in determining whether financial institutions are serving the housing needs of their local communities; to facilitate public entities' distribution of funds to local communities to attract private investment; and to help identify possible discriminatory lending patterns. Institutions covered by HMDA are required to annually collect and report specified information about each mortgage application acted upon and mortgage purchased during the prior calendar year.<sup>2</sup> The 2015 HMDA Rule<sup>3</sup> required, among other things, that financial institutions that originated no fewer than 25 closed-end mortgage loans in each of the two preceding years and meet other reporting criteria such as asset and locational tests report their closed-end mortgage activities under HMDA. This "25-loan" closed-end reporting threshold applied to HMDA reporting of activity from 2018 and 2019. In May 2020, the CFPB raised this 25-loan threshold to 100-loans in the 2020 HMDA Rule, effective July 1, 2020.<sup>4</sup>

The annual volume of HMDA reporters varies substantially. This report uses the 2019 HMDA data, for which the 25-loan threshold still applied, to examine certain loan and borrower characteristics and general lending patterns of small to medium sized closed-end mortgage reporters of different origination volumes. Through this report, we aim to provide some observations that may help to shed light on the following questions:

- What are the loan and geographic characteristics of the data lost by increasing the reporting threshold from 25 loans to 100 loans?
- What are the demographic characteristics of borrowers with mortgage loans that will no longer be reported?
- Are there any systemic differences between the lending patterns of institutions with different lending volumes?

---

<sup>2</sup> The data include the disposition of each application for mortgage credit; the type, purpose, and characteristics of each home mortgage application or purchased loan; the census-tract designations of the properties; loan pricing information; demographic and other information about loan applicants, including their race, ethnicity, sex, and income; and information about loan sales.

<sup>3</sup> See Home Mortgage Disclosure (Regulation C), 80 Fed. Reg. 66127 (2015), available at <https://www.federalregister.gov/documents/2015/10/28/2015-26607/home-mortgage-disclosure-regulation-c>.

<sup>4</sup> See Home Mortgage Disclosure (Regulation C), 85 Fed. Reg. 28364 (2020), available at <https://www.federalregister.gov/documents/2020/05/12/2020-08409/home-mortgage-disclosure-regulation-c>.

In summary, the evidence suggests that there might be some differences in terms of the loan and borrower characteristics and lending patterns between the institutions whose origination volume falls below the 100-loan threshold and those whose origination volume is above that threshold. In general, those lenders newly exempted under the 2020 HMDA Rule (i.e., with annual origination volumes that exceed the 25-loan threshold but fall below the 100-loan threshold) do not appear to be more likely to lend to Black and non-White Hispanic borrowers than larger volume lenders. There is, however, some evidence that these lenders might be more likely to lend to non-natural persons, such as partnerships, trusts, or corporations. Their borrowers tend to have higher incomes than larger lenders' borrowers as well, and a higher percentage of their loans appear to be secured by properties in low-to-moderate income (LMI) census tracts, properties in rural areas, second liens, and investment properties.

This analysis is necessarily limited and preliminary and is not an assessment by the CFPB as to the effectiveness of the thresholds change in meeting HMDA's objectives.

## 2. Analysis

The analysis in this report is for closed-end loans only. We note that the 2020 HMDA Rule also raised the open-end line of credit reporting threshold from 100 to 200, effective in 2022. However, most open-end lenders with origination volumes below 500 per year were not required to report 2019 HMDA data for their open-end lines of credit due to the 500 temporary open-end threshold in place set by the 2017 HMDA Rule.<sup>5</sup> As a result, the 2019 HMDA data could provide little information on the detailed characteristics of open-end lines of credit by open-end reporters affected by the 2020 HMDA Rule.

The first step of analysis is to use the 2019 HMDA data, collapsed to reporter level. The information presented below is limited to originated loans that are not flagged as open-end lines of credit. There are in total 5,473 reporters in the 2019 HMDA data that reported at least one origination not flagged as an open-end line of credit, among which 4,532 reporters had origination volumes between one and 1,000. The focus of this report is limited to these 4,532 small to medium sized closed-end reporters. For each reporter, we obtained the total number of closed-end originations, share of borrowers in major demographic groups, share of loans secured by properties in low-to-moderate income (LMI) census tracts, share of loans secured by properties in rural areas, share of loans secured by manufactured homes, share of loans that are conventional, share of loans that are secured by a first lien, share of loans for principal residence, share of loans for investment properties, median loan amount, and median income. We also identified whether each reporter is a depository institution (DI), and for DIs, identified their assets.

We then present such information in a series of binned scatter plots, with loan origination volume on the x-axis and loan or borrower or reporter characteristics of interest on the y-axis. Binned scatter plots are a convenient way of observing the relationship between two variables, which is especially useful when working with large datasets.<sup>6</sup> To generate a binned scatterplot we grouped the x-axis variable into equal-sized bins, computed the mean of the x-axis and y-axis variables within each bin, then created a scatterplot of these variables.

---

<sup>5</sup> See Home Mortgage Disclosure (Regulation C), 82 Fed. Reg. 43088 (2017), available at <https://www.federalregister.gov/documents/2017/09/13/2017-18284/home-mortgage-disclosure-regulation-c>

<sup>6</sup> Similar techniques of binned scatter plots were used in previous CFPB HMDA Data Point articles. As an example, see “An updated review of the new and revised data points in HMDA”, CFPB, August 2020, available at <https://www.consumerfinance.gov/data-research/research-reports/revised-data-points-hmda/>. See Chetty, R., A. Looney, and K. Kroft (2009): “Salience and Taxation: Theory and Evidence,” *American Economic Review*, 99(4), for one of the earliest explicit appearances of a binned scatter plot in the applied microeconomics literature.

The best way to understand how a binned scatter plot works is through an example. For instance, Figure 1 presents a binned scatter plot of the share of borrowers who are Black vs. loan origination volume. As mentioned above, we limit this chart (as well as all subsequent charts) to closed-end reporters with origination volume between one and 1,000. We sort the reporters by the number of originations, and then place them into 20 groups, each group containing generally the same number of reporters. In other words, each reporter is grouped into one of the 20 quantiles, ranked by the origination volume.

Each group or quantile contains about 227 reporters. Within each quantile, we calculate the average of the share of borrowers identified as Black and the average origination volume. Each such group is represented by a circle in Figure 1. The value on the horizontal axis reflects the average number of originations for the reporters in a quantile. The value on the vertical axis reflects the average share of loans that were made to Black borrowers by the reporters in the same quantile. Because our focus is on the reporters with origination volume between 25 and 100, we added two vertical reference lines at origination volumes 25 and 100. These are the two dashed lines in the chart. The vertical dashed line on the left denotes loan origination volume of 25, the vertical dashed line on the right denotes 100. The groups that are most of interest in this analysis are represented by the dots between these two vertical reference lines.

A visual examination of such a chart reveals the patterns of average characteristics (represented by corresponding values on the vertical-axis) across different origination volumes. The goal of this analysis is to examine whether the dots between the two vertical reference lines are systematically different from the dots immediately adjacent to the right of them (beyond the reference line at 100) in terms of the average share of loans to Black borrowers (vertical axis). To aid the visual examination, we also plot a linear trend line.

We note several observations from Figure 1. First, there are more dots between the two vertical reference lines. That is not surprising since there are many more small lenders with an origination volume between 25 and 100 than with origination volumes greater than 100. Second, small lenders do not appear to be more or less likely to make loans to Black borrowers than the lenders with origination volume slightly above 100. Third, if we extend this comparison to even larger lenders (origination volumes above 500), a smaller percentage of loans by the lenders with an origination volume between 25 and 100 was made to Black borrowers than by the larger lenders with origination volumes above 500.

We observe a largely similar pattern regarding shares of loans made to non-White Hispanic borrowers, as shown in Figure 2. Figure 3 shows that lenders with an origination volume between 25 and 100 reported lower shares of loans made to borrowers identified as White compared to larger lenders. But this seemingly interesting pattern could be explained by Figure

4. Figure 4 shows the percentage of borrowers whose reported race/ethnicity is “not applicable.” As explained in Appendix B to Regulation C, other than purchased loans, those are loans taken out by non-natural persons. Figure 4 suggests that larger shares of loans by lenders with volume between 25 and 100 were made to non-natural persons than by larger lenders, which offset the lower shares of white borrowers by smaller lenders in Figure 3.<sup>7</sup>

Figure 5 shows that overall a higher percentage of loans made by lenders with origination volume between 25 and 100 were secured by properties located in LMI tracts relative to lenders that originated more than 100 loans. It is important to note that the location information reported under HMDA is based on the location of the property securing the transaction, and in the case of second residences and investment properties, the location of that property may not be the same as where the borrowers principally reside. This is relevant to Figures 10 and 11 later. Figure 6 shows that a relatively higher share of loans by lenders with origination volume between 25 and 100 are secured by properties located in rural areas.

Figure 7 shows that an overwhelming majority of loans made by lenders with origination volume between 25 and 100 are conventional loans, more so than even slightly larger lenders. Conversely, that means lenders with origination volume between 25 and 100 appear not to be engaged in non-conventional loan lending, i.e., loans insured or guaranteed by the Federal Housing Administration (FHA), Department of Veterans Affairs (VA), or USDA Rural Housing Service or Farm Service Agency (RHS or FSA), which are generally designed to serve low-income first-time home buyers.

Figure 8 shows that a slightly higher percentage of loans by lenders with origination volume between 25 and 100 are secured by manufactured homes than by lenders with origination volume over 300. But when they are compared to the lenders whose origination volumes are only slightly above 100 (between 100 and 300), we detect no difference in manufactured home shares. In addition, we note that both the number of all originations (between 25 and 100) and the share of those loans secured by manufactured home loans (around or below 5 percent) are fairly low.

Figure 9 shows that a relatively higher share of loans made by lenders with origination volume between 25 and 100 are secured by second liens. Figure 10 shows that a smaller share of loans made by lenders with origination volume between 25 and 100 are secured by principal residences. That observation is further explained by Figure 11, which suggests that a higher

---

<sup>7</sup> The higher share of non-natural person borrowers among smaller lenders similarly can at least partly explain lower shares of Black and non-White Hispanic borrowers among the same group of lenders illustrated in Figures 1 and 2.



share of loans made by lenders with origination volume between 25 and 100 appear to be secured by investment properties.

Figure 12 plots the median loan amount by loan volume. There is no apparent evidence to suggest systemic difference between lenders with origination volume between 25 and 100 and larger reporters in terms of median loan amount. On the other hand, Figure 13 suggests that the median income of borrowers who obtained loans from lenders with origination volume between 25 and 100 is higher than the median income of borrowers of larger lenders.

In terms of reporters' characteristics, Figure 14 shows that the overwhelming majority of lenders with origination volume between 25 and 100 are depository institutions, more so than larger lenders. Figure 15 further illustrates that those lenders tend to have much lower assets than larger lenders. Although not shown in the graphs, a visual exam of the lender list reveals they are mostly small community banks and credit unions.

# 3. Conclusion

Our analysis suggests that a higher share of loans by lenders with origination volume between 25 and 100 appear to be for investment properties, made to borrowers that are non-natural persons, and made to borrowers with higher incomes, compared to lenders with reported volume above 100. The relative higher percentage of loans in LMI areas and rural areas does not necessarily mean the borrowers are from those areas. In fact, the patterns we observe are consistent with a possible explanation that a large share of these loans are obtained by borrowers from outside of the LMI areas buying up properties in LMI areas. All these pieces of evidence in the charts are consistent with each other. For instance, the very low percentage of FHA/VA/RHS loans by those small lenders is consistent with our observations on occupancy type and borrower income.

We do observe that a slightly higher percentage of loans by lenders with origination volume between 25 and 100 are secured by manufactured homes than loans by lenders with origination volume over 300. However, reporters under the 100-loan threshold in 2019 did not look much different from reporters right above that threshold, in terms of manufactured home shares. Furthermore, the average share of loans made to manufactured home borrowers by lenders with total volume between 25 and 100 is about 4 to 5 percent. That translates to about 1 to 5 manufactured home loans per lender. In contrast, the shares of loans secured by investment properties are around 30 percent by those small lenders.

Additional analysis is needed to further understand all of these findings and to explore the impact of threshold changes on data available for specific markets. This analysis is necessarily limited and preliminary and is not an assessment by the CFPB as to the effectiveness of the thresholds change in meeting HMDA's objectives.

# APPENDIX A: FIGURES

Figure 1

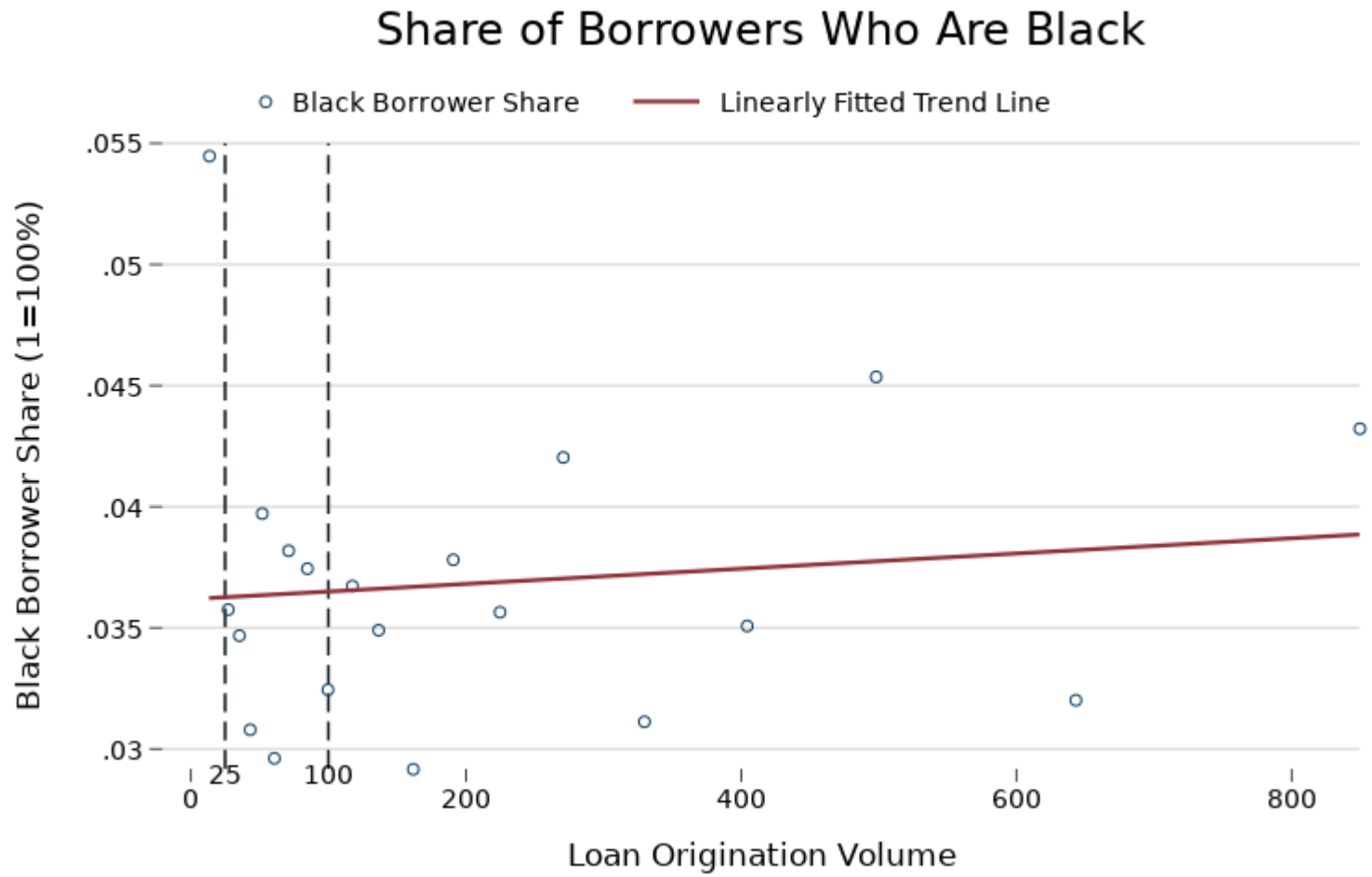


Figure 2

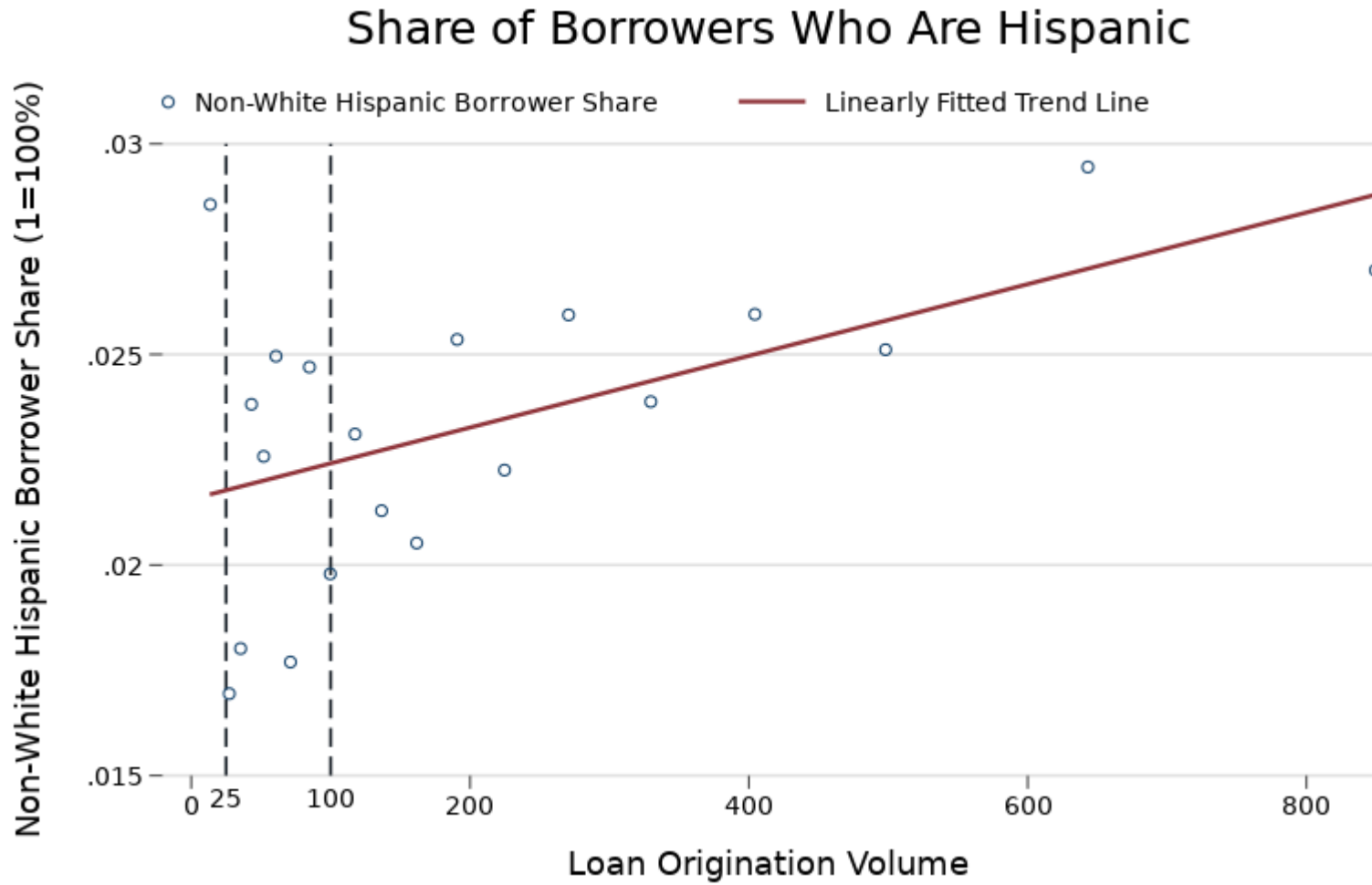


Figure 3

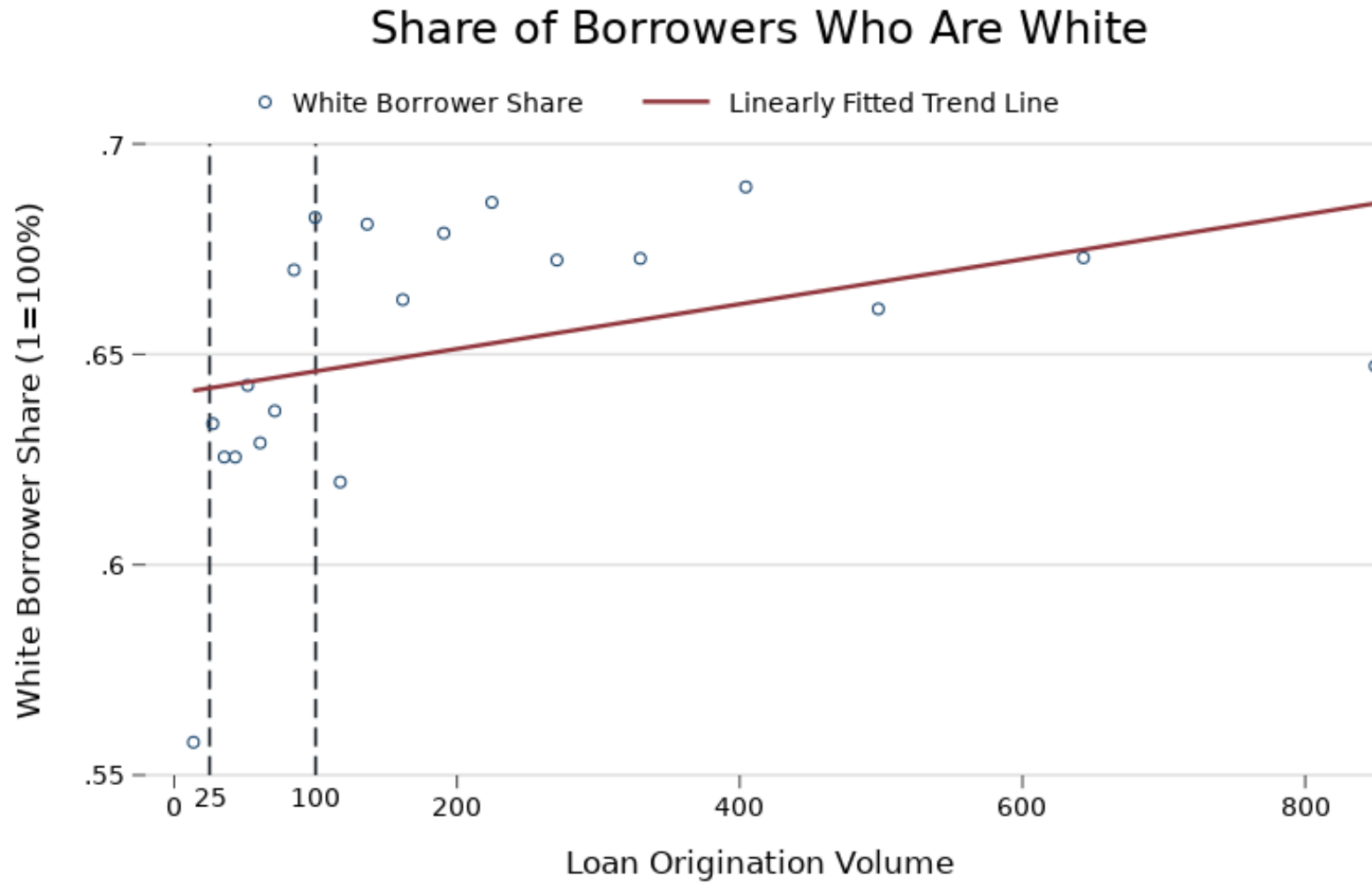


Figure 4

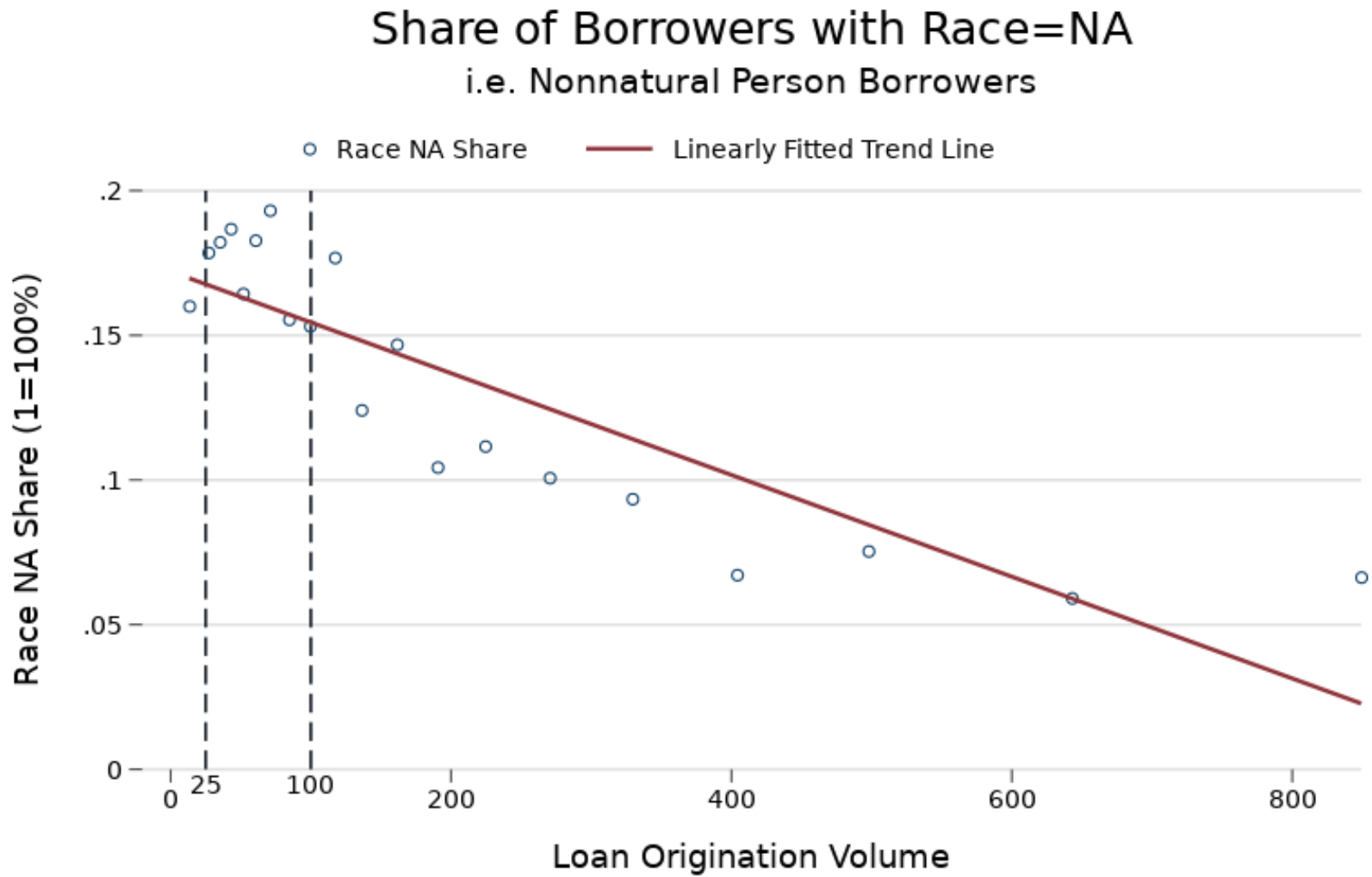


Figure 5

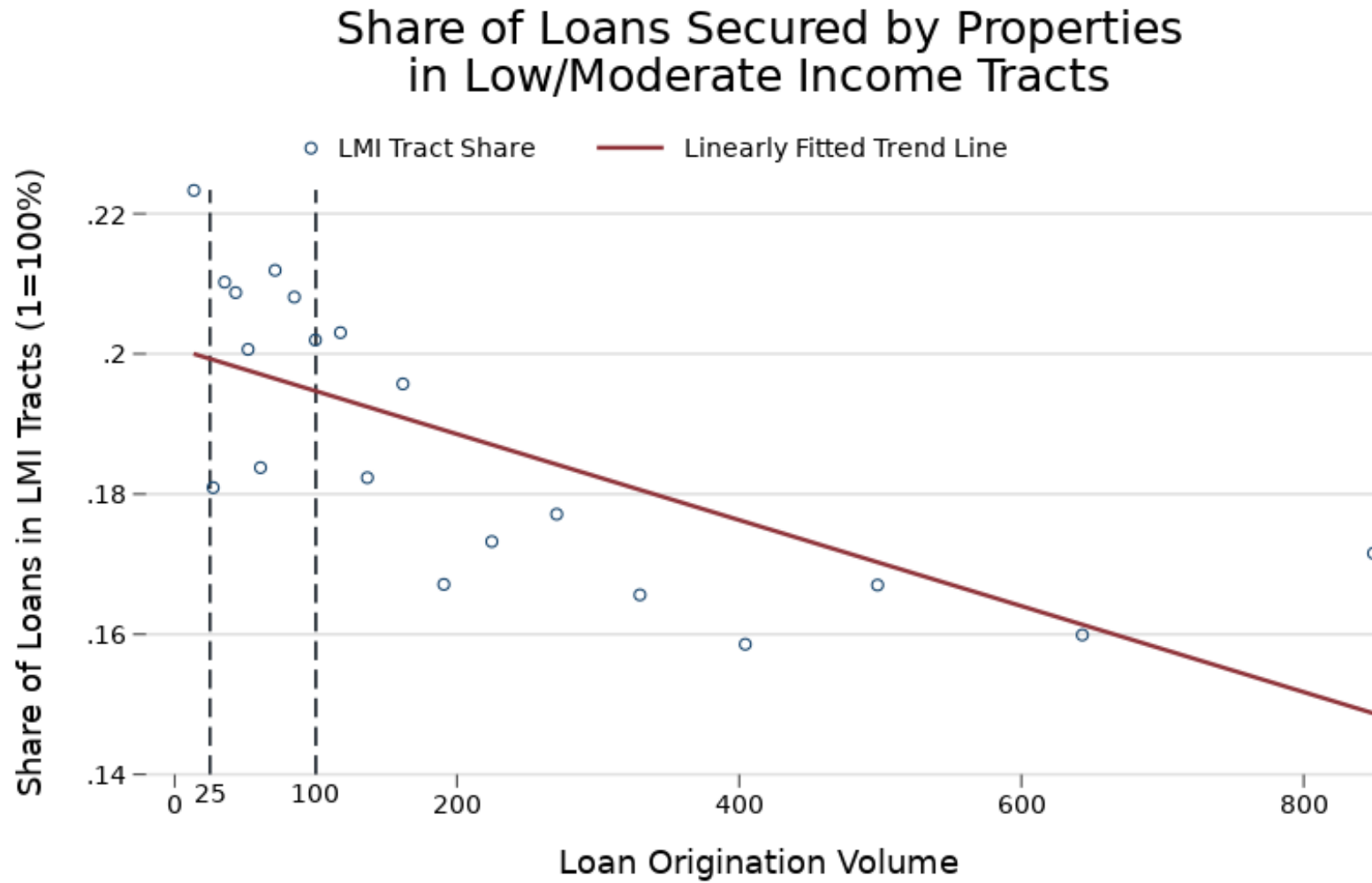


Figure 6

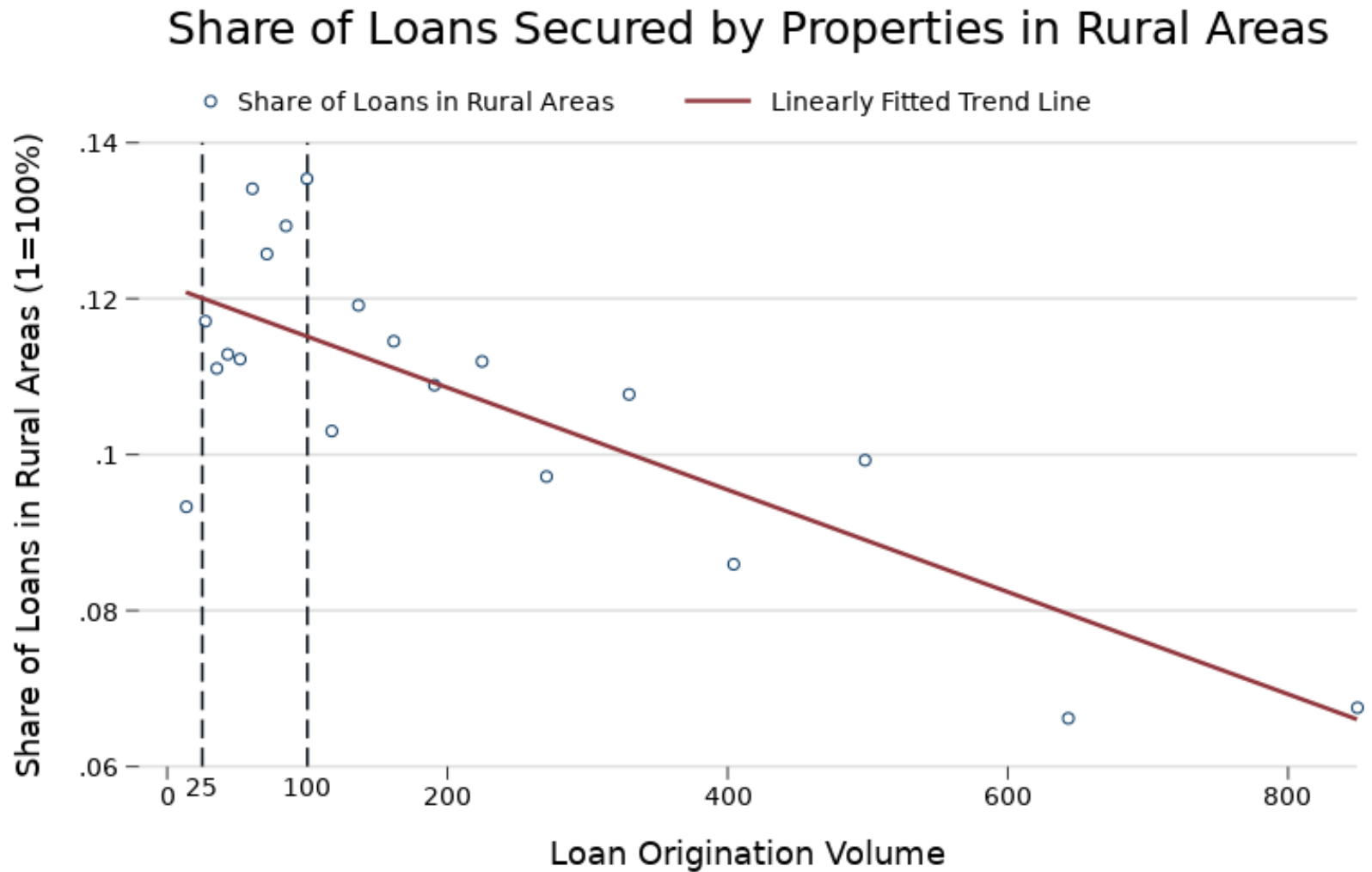




Figure 7

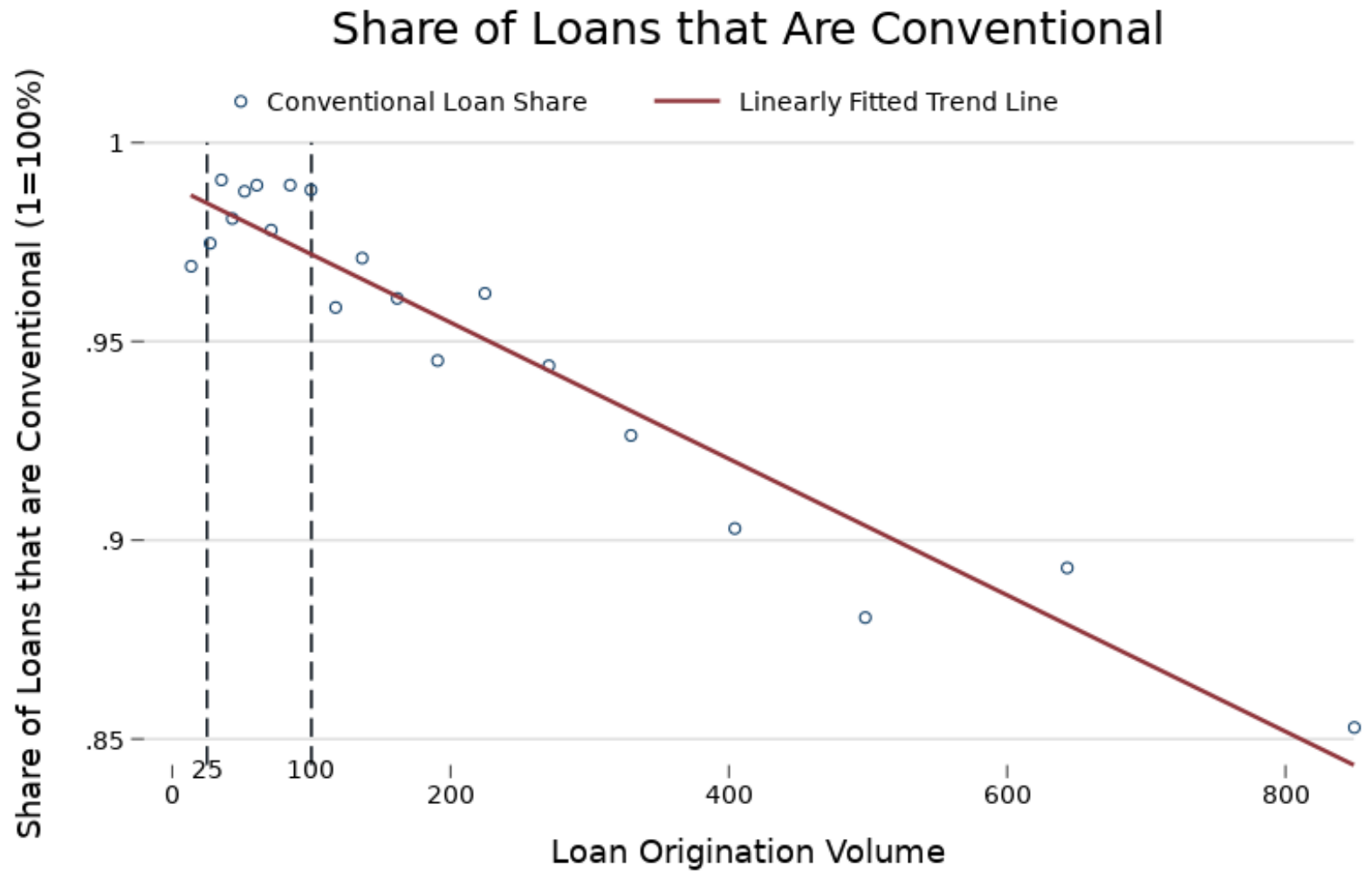


Figure 8

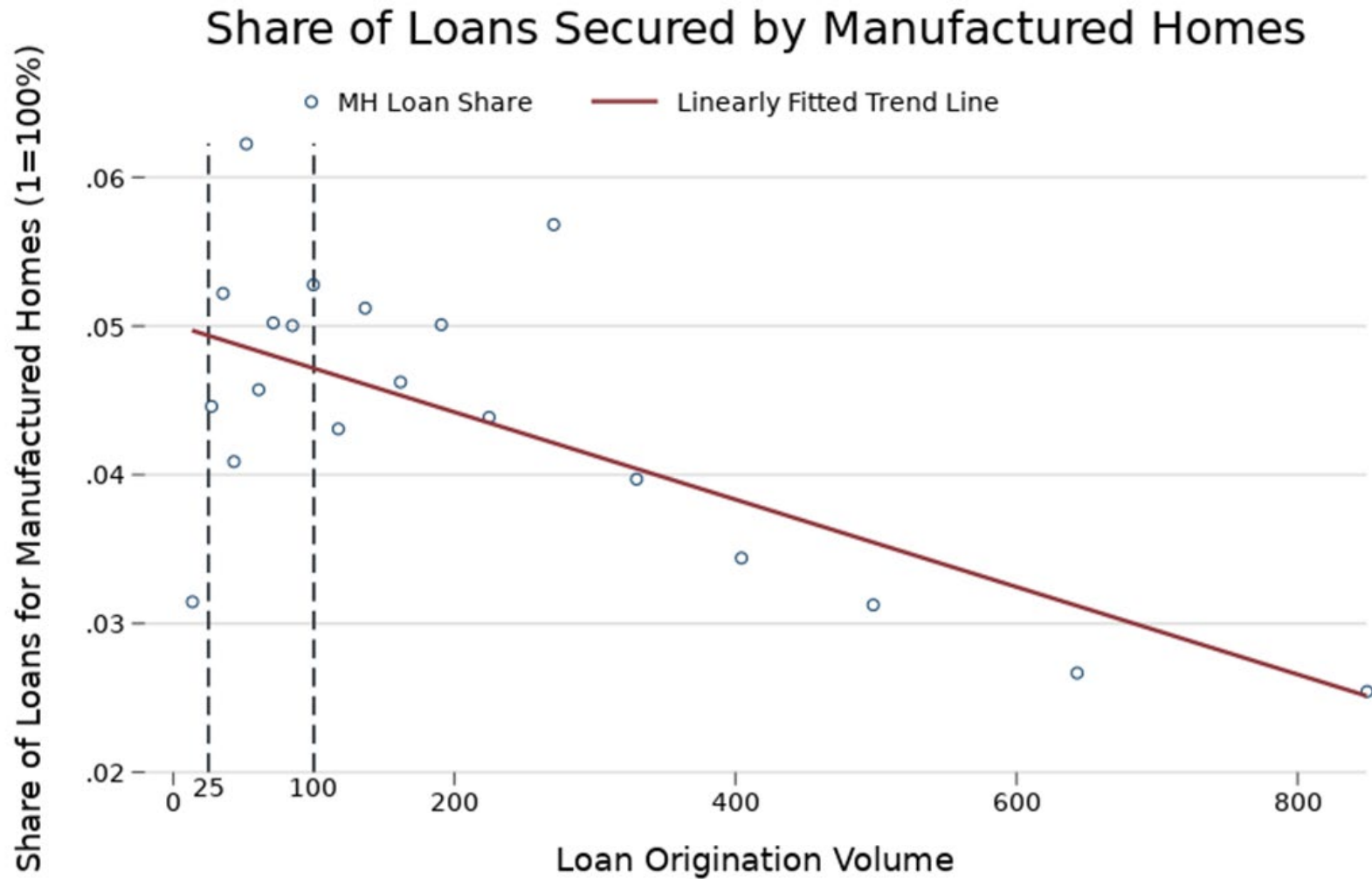


Figure 9

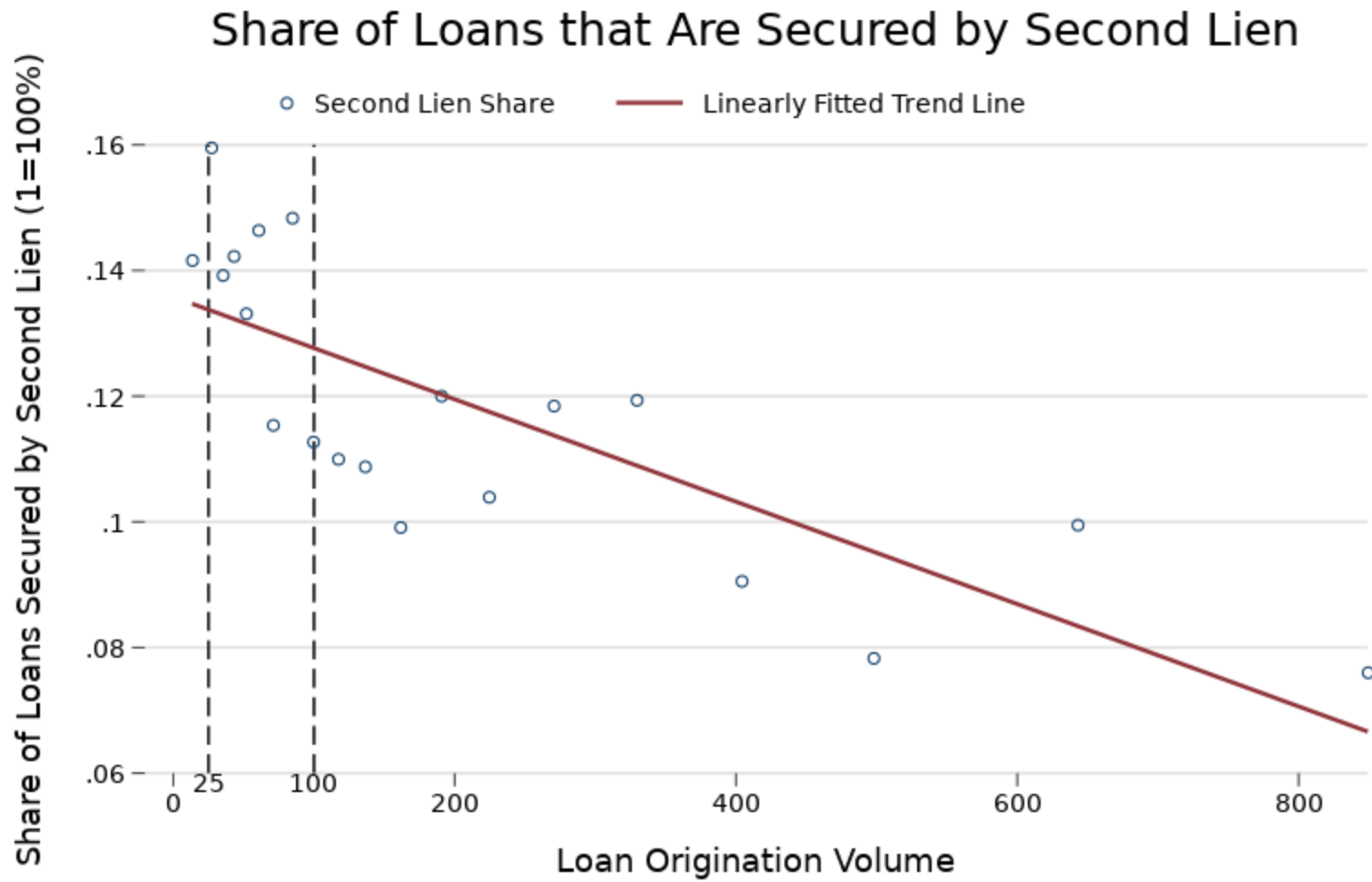


Figure 10

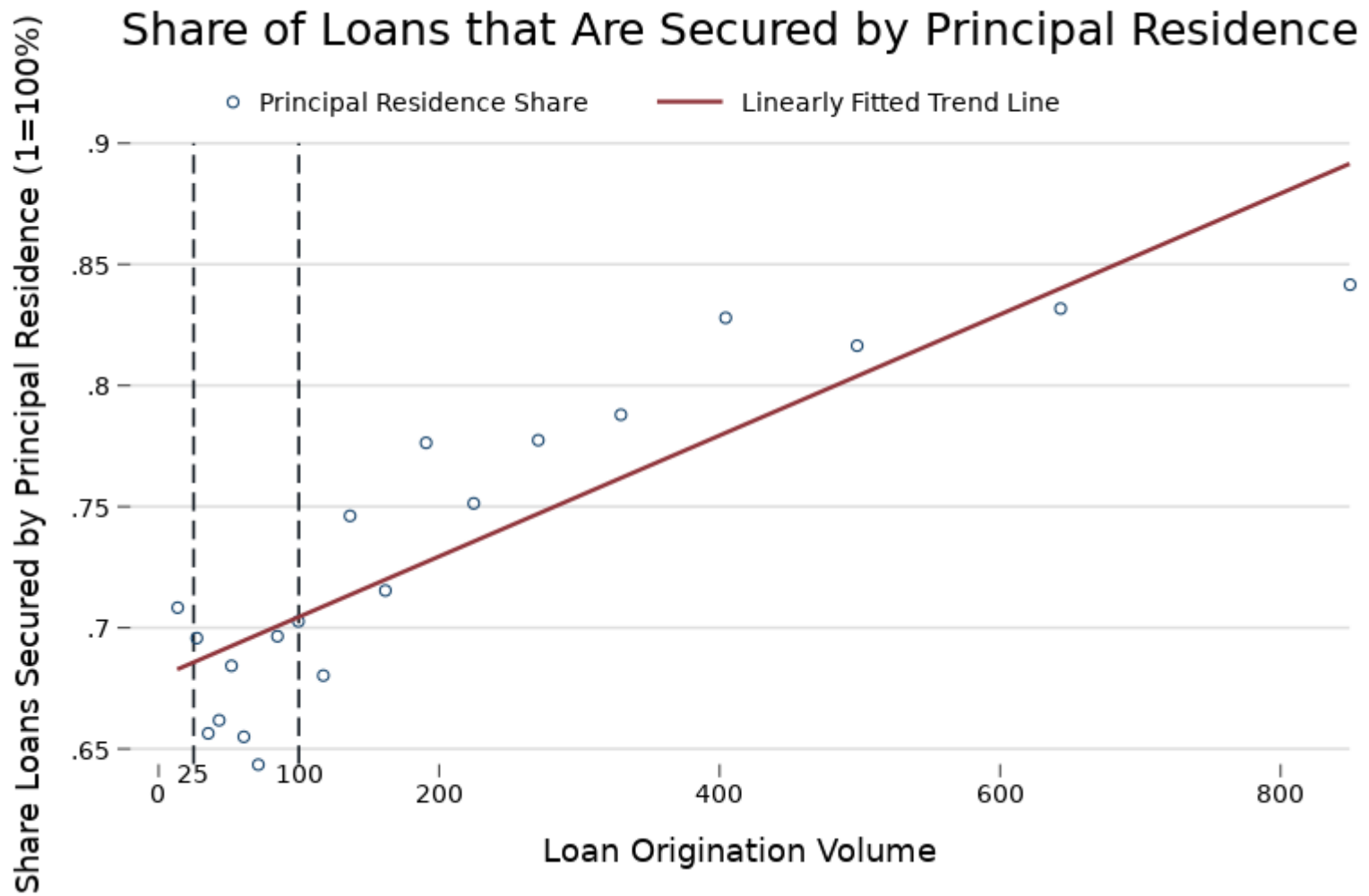


Figure 11

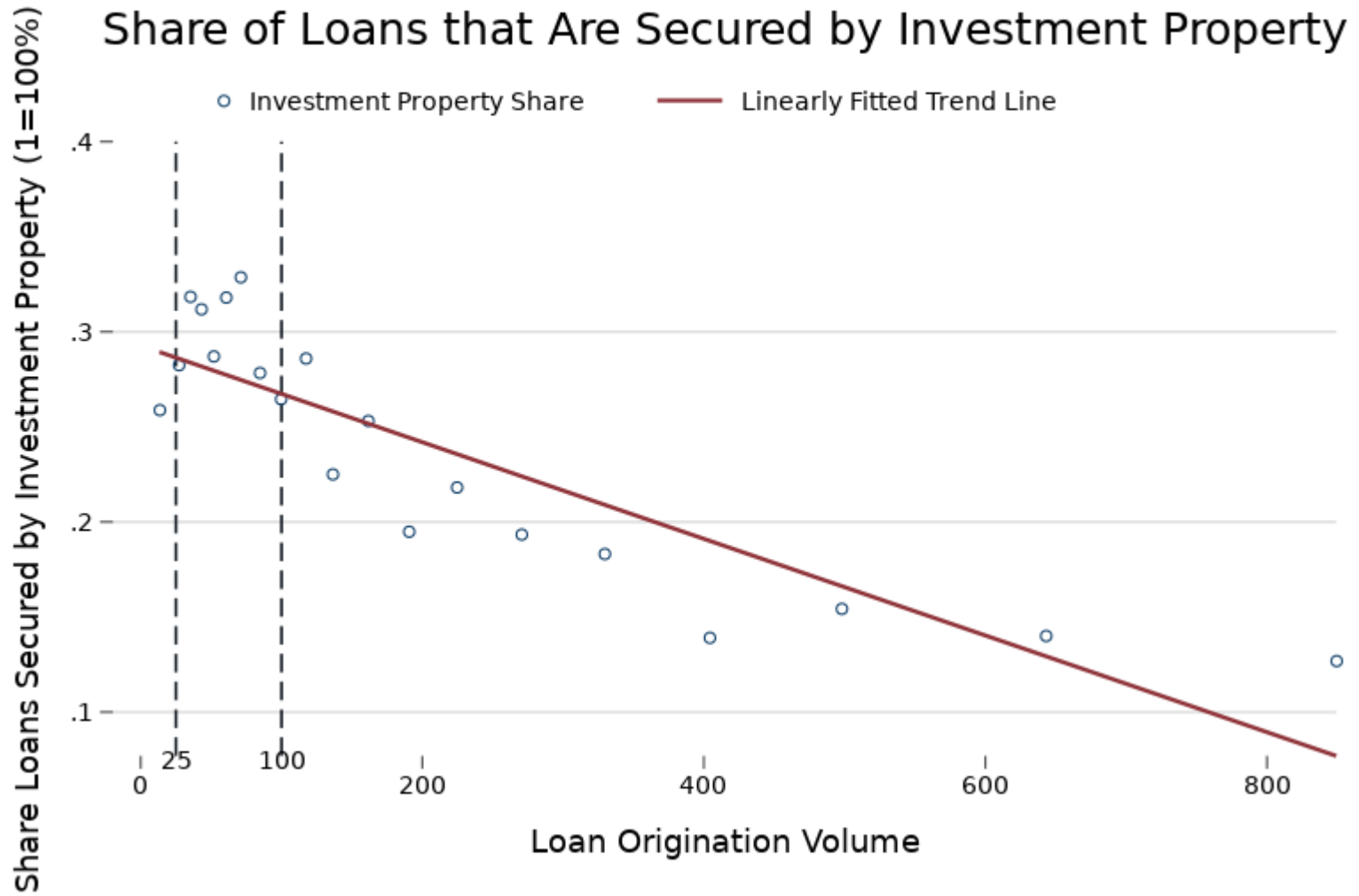


Figure 12

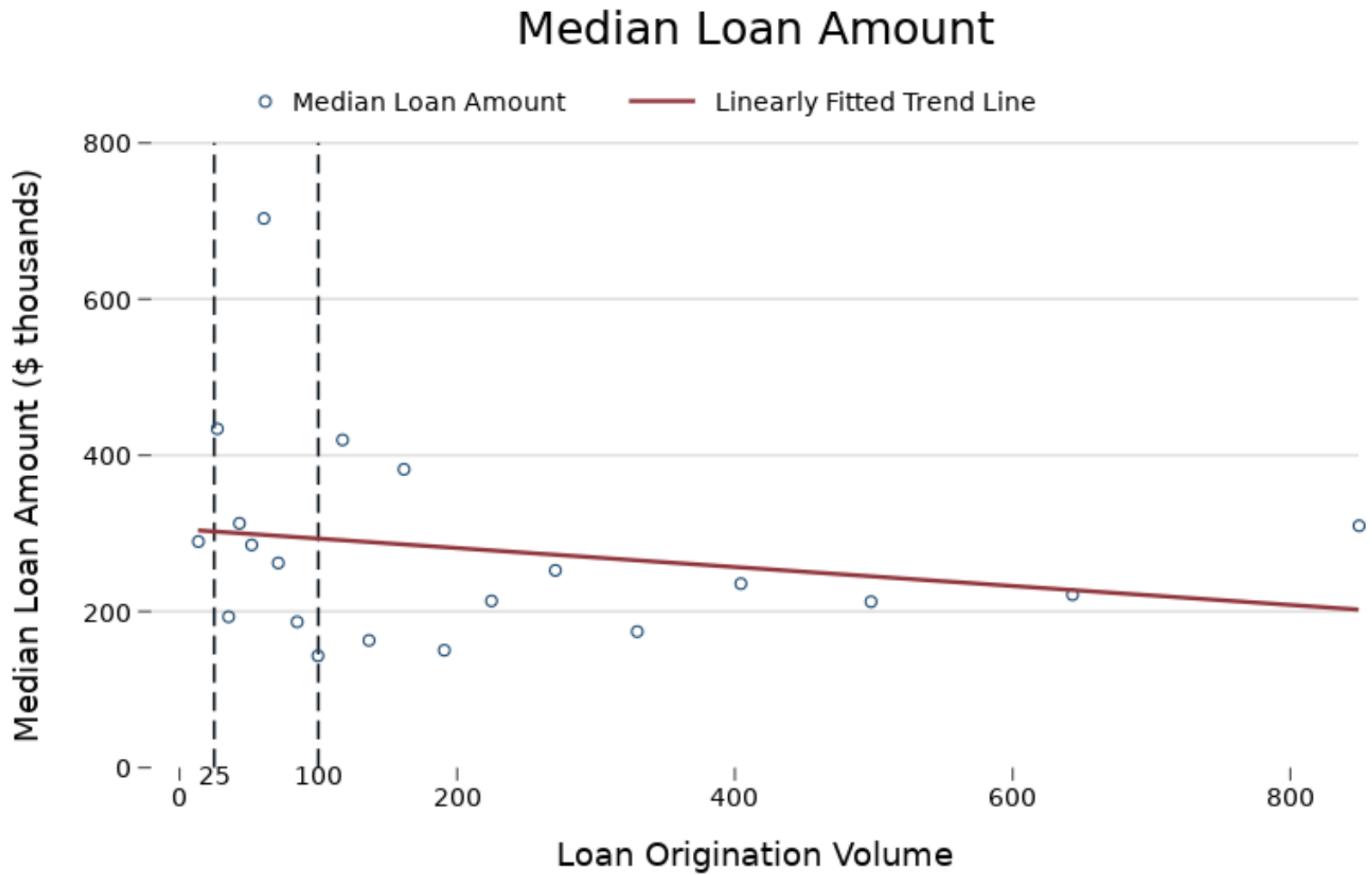


Figure 13

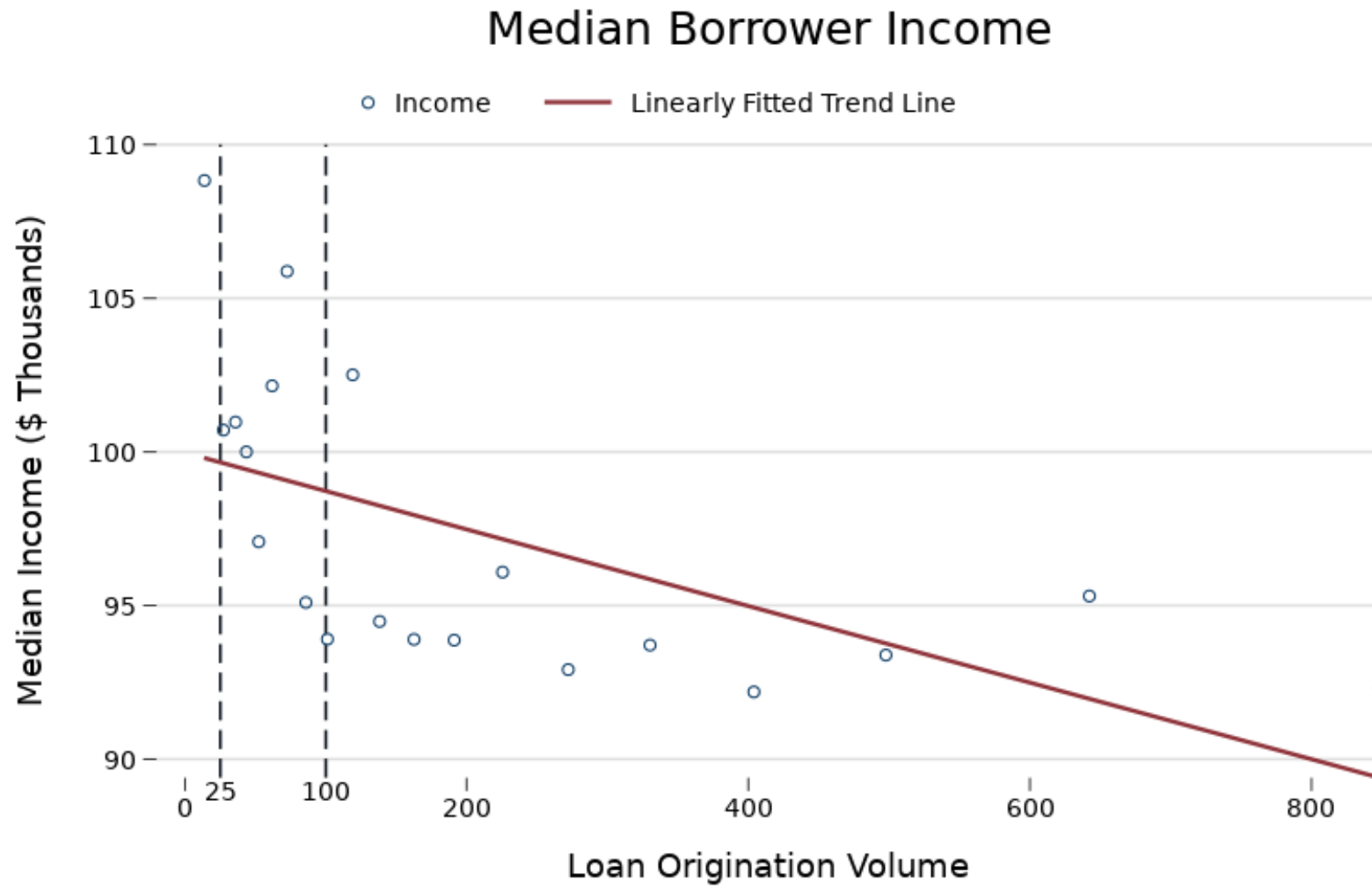


Figure 14

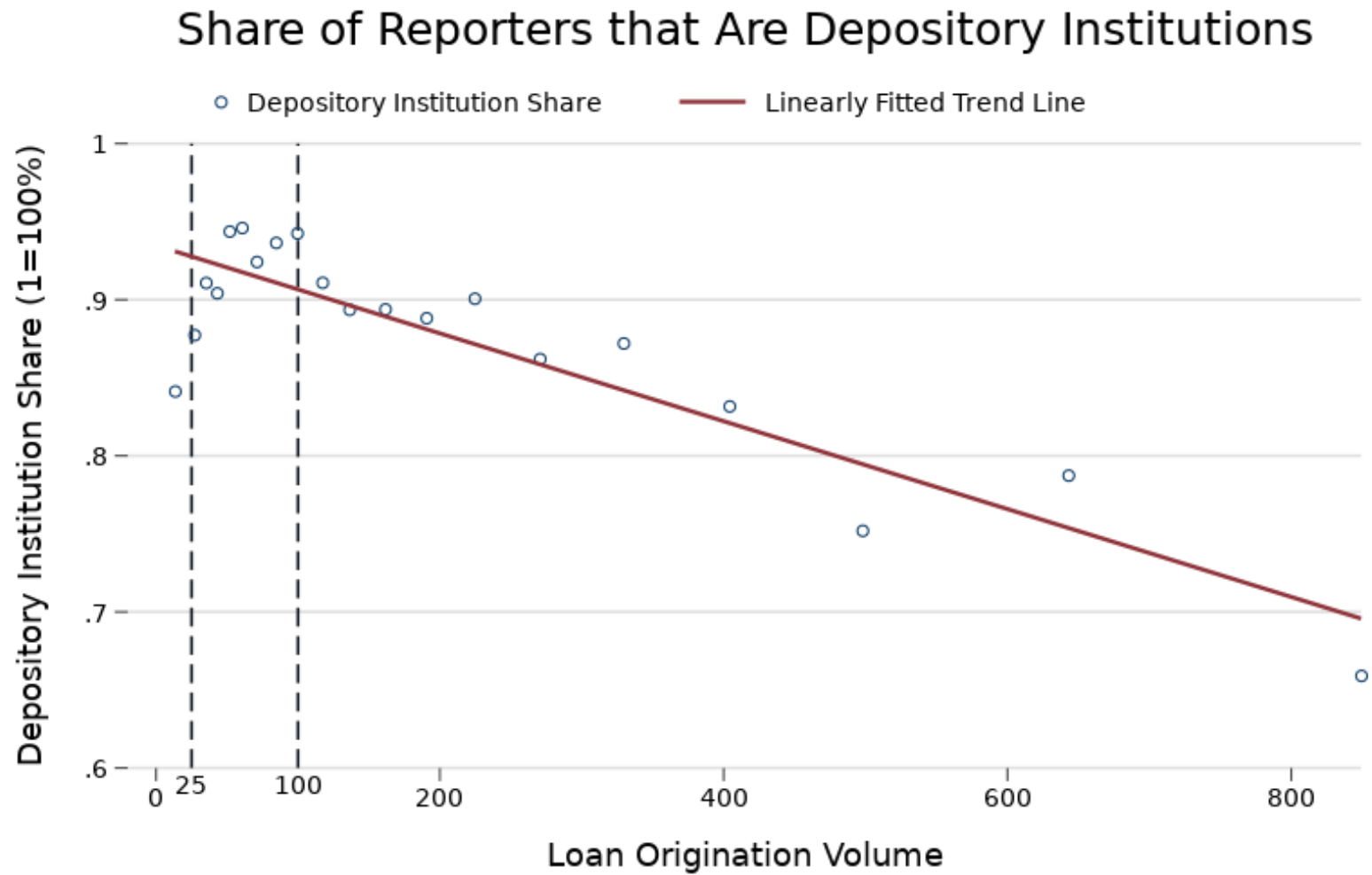




Figure 15

