Regulating Secondary Loan Markets: Evidence from Small Business Lending *

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Abstract

The structure of secondary markets can shift incentives for lenders in markets with high rates of securitization. We study how regulation that increases standardization in secondary markets impacts loan originations, characteristics, pooling, and performance. Utilizing novel secondary market data on government-guaranteed Small Business Administration (SBA) 7(a) loans, we study the 2017 tightening of the Minimum Maturity Ratio (MMR) which restricts differences in loan maturities within a pool. We document new stylized facts showing that securitized pools that are more exposed to MMR regulation are more standardized and loans in those pools tend to sell at lower premia in the secondary market. To assess the causal effect of the reform on originations, we compare the effect of maturity ratio reform on lenders with more or less dependence on securitization prior to 2017. Results demonstrate that the reform decreases loan maturity by over a year. The reform also lowers the probability that a loan is securitized and decreases charge-off rates. The reform changed the composition of borrowers, away from physical-capital-intensive sectors and from majority Black counties. Our results suggest that standardization of secondary loan markets significantly impacts pool performance and changes the composition of lending in the primary market.

Keywords: Small Business, Securitization, Lending, SBA, Minimum Maturity Ratio, Maturity
JEL Classification: G20, G21, G23

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1 Introduction

Small businesses are widely considered the backbone of the US economy, comprising nearly 60% of net new jobs and 44% of GDP (Brown & Earle (2017*a*)).[1] The total small business debt in the United States is valued at over $1.4 trillion.[2] Small Business Administration (SBA) loans, which are partly guaranteed by the federal government are a significant fraction of the total market, with outstanding balances totaling to more than $400 billion. SBA programs are intended to facilitate access to capital for borrowers with limited private market options, including minority business owners.[3]

Small businesses have a variety of financial needs, including short term working capital financing and long term loans for acquiring fixed assets like machinery and real estate. All else equal, borrowers prefer long maturities to maximize repayment time (Argyle et al. (2020)), while lenders can better screen borrowers when maturities are shorter (Ortiz-Molina & Penas (2008)). In securitized markets, however, loan characteristics may be influenced by expectations of sale in the secondary market. If different maturities represent differences in loan types, aggregating more diverse maturities may allow more diverse loans to cross subsidize each other, increasing credit supply to a more diverse set of borrowers.

In our setting, we show evidence that pooling shorter-term loans with longer-term loans lowers the cost of originating longer-term (or harder to originate) loans. We study this question through the lens of the Small Business Administration's securitized lending market. Private lenders do the underwriting and origination of SBA 7(a) loans and retain the unguaranteed fraction. The SBA supports the sale and securitization of the guaranteed portion of loans in secondary debt markets to decrease both investor risk and lenders' costs of origination.[4] The structure therefore reflects other markets, like mortgages, where risk retention rules combat incentives for lenders to take significant risk. The SBA also promulgates a variety of rules about the formation of a pool, which are intended to create a diversified but profitable pool with minimal risk exposure.

We study a 2017 SBA reform that required loan maturities to be more similar within a pool of securitized loans, referred to as the "minimum maturity ratio" or MMR reform. The minimum maturity ratio is a lower bound on the ratio between the shortest and longest maturity of loans in a pool. In July of 2017, the SBA announced a change in MMR ratio applicable to all loans securitized as of October that year. There are two types of SBA securities, Weighted Average Coupon (WAC) or Standard pools, and the change shifted the

[1] See, e.g., https://advocacy.sba.gov/2019/01/30/small-businesses-generate-44-percent-of-u-s-economic-activity/

[2] Consumer Financial Protection Bureau, Key Dimensions of The Small Business Lending Landscape (May 10, 2017), https://www.consumerfinance.gov/data-research/research-reports/key-dimensions-small-business-lending-landscape/.

[3] https://www.sba.gov/business-guide/grow-your-business

[4] Nearly 50% of the SBA 7(a) loan market is securitized.

MMR differently on these pool types, increasing from 76% to 94% on WAC pools and from 80% to 94% on Standard pools. For example, pre-reform WAC pools that included a 10 year maturity loan could also include an 7.6 year loan, but post-reform could only include a 9.4 year loan as the shortest maturity. This effectively required all loans in a pool to share the same maturity structure in the post-period. No similar reform impacted loans that were held entirely on lenders' balance sheets. Our research design compares WAC to Standard pools to assess the impact of maturity ratio reform on SBA securitized pools, and then compares all securitized loans to loans held on lender balance sheets to assess the impact of maturity ratio reform on small business loan originations.

For liquidity, lenders depend on securitization in secondary markets, with the "originate-to-distribute" model of lending dominating a variety of consumer and commercial loan markets. To counteract potential for diminished monitoring, secondary market participants must comply with regulation such as risk retention rules, disclosure requirements, and restrictions on pool composition. An active debate exists about the appropriate design of secondary market regulation in high profile markets like mortgages.[5] Stringent rules can increase the cost of pooling loans and potentially decrease liquidity, but may combat lenders' incentives to make risky loans. Recent calls to make loans more available and affordable for borrowers have led lawmakers to consider loosening secondary market regulations. The causal effect of regulatory changes, first on secondary market liquidity, and then on primary market loan characteristics, screening, and borrower composition is at baseline challenging to predict. This is complicated by the implementation of many regulatory reforms, like Dodd-Frank's mortgage-backed securities regulation, resulting as an endogenous response to macroeconomic conditions.

The 2017 SBA maturity ratio reform acts as a natural experiment to assess the causal effect of secondary market regulation because it was enacted during non-crisis times and intended to help the SBA effectively structure their guarantee payouts, not as an endogenous response to macroeconomic conditions. The goal of the policy was not to change lender behavior or to impact originations, yet, it required pooled loans to be more similar to each other. We use this natural experiment to study two categories of impacts generated by secondary market reform. First, we assess whether rules increasing standardization in pools increases or decreases the cost of securitization. Questions of standardization are deeply relevant to secondary market pools of small business loans because they have different sources of collateral and highly varied risk across industries (*U.S. Department of the Treasury Releases Policy Brief on Small Business Financing* (2025)).[6] Second, we examine the extent to which secondary market rules have real impacts on loan originations, as opposed to limited effects

[5] Housing and Insurance Subcommittee Examine the Role of the Secondary Mortgage, Feb. 11, 2026, https://financialservices.house.gov/news/documentsingle.aspx?DocumentID=411028

[6] Recent regulatory developments, such as the rule making pursuant to Section 1071 of Dodd Frank that requires standardized reporting of small business loans, may move small business lending towards a new equilibrium.

isolated to the pooling of loans in an auxiliary secondary market.

To shed light on these impacts, we obtain novel SBA data on the price and age of loans sold into the secondary market through a Freedom of Information Act (FOIA) request. We further augment our data by merging on loan performance data from the Fiscal Transfer Agent (FTA) Wiki data. We enhance these data with the universe of 7(a) loans originated, both those securitized and unsecuritized, previously released by SBA and used extensively by researchers. We first document a new stylized fact: following the policy change, the volume and number of more intensely treated WAC loans fell sharply relative to Standard loans. Standard loans increased in volume and number, but did not compensate for the decrease in WAC loans, causing the pre-period upward trend in total SBA securitized lending to plateau following the policy change.

Our research design first establishes the differential effect of the maturity ratio reform on WAC pools relative to Standard pools. We estimate a difference-in-differences research design centered at the policy change and confirm that the more-treated WAC pools experience a disproportionate decrease in the standard deviation of loan maturities relative to Standard pools. Our stylized facts suggest that WAC pools shifted toward shorter maturity loans, while Standard pools shifted toward slightly longer-term loans, without fully compensating for the decline in WAC pools. The maturity ratio change caused a decrease in WAC loans' sale prices and increased their time to sale in the secondary market. Taken together, this suggests that intensity of treatment by the maturity ratio reform increases the cost to create WAC pools. The results also show that WAC pools have higher default rates after treatment. This could occur by one of two mechanisms - first, higher risk loans may be selected into WAC pools with no change in the underlying stock of loans, or second, higher risk loans are originated, consistent with the maturity ratio reform worsening screening.

We investigate these mechanisms by turning to the primary market to study the impact of the minimum maturity ratio on lending, with a focus on loan terms, performance, and borrower composition. We estimate a difference-in-differences regression on the 7(a) data using loans originated between 2014Q4 and 2019Q4, to study securitized loans, as the treated group, relative to unsecuritized loans, as the control group. We find that following the policy change, the maturity of securitized loans decreased significantly by 14.4 months relative to unsecuritized loans. While the reform was unlikely salient to borrowers, the reform could also impact selection into securitization, meaning that the impacts could be driven by differential loans selecting into securitization in the post period. To test this, we generate a predicted measure of securitization based on whether the lender was more reliant on securitization in the pre-period. To predict securitization, we regress an indicator for securitization on fixed effects for each lender, robust to including other controls, in the period prior to the reform. We use the resulting lender fixed effects to predict each lender's mean propensity to securitize during the entire sample period. This design relies on the fact that some lenders

have a higher propensity to securitize, likely related to their own liquidity needs. Replacing the indicator for securitized with a predicted propensity to securitize based on the lender's identity, we show that changing predicted securitization from 0% to 100% drives a significant decrease in maturity of 19.6 months, consistent with the results on observed securitization. This suggests that the differential impact of maturity ratio reform on securitized loans is driven by changes in origination behavior, rather than by differential sorting of the same loans into securitization.

Next, we study how loan and borrower characteristics shifted following the maturity ratio reform. We document that the maturity ratio reform decreased defaults in the primary market, in contrast with the results across securitized loans in the secondary market. Moreover, the reform shifted the composition of borrower industry. By regressing an indicator for NAICS sector on the difference-in-differences model, we show that the reform shifted the industries which received 7(a) financing. For instance, fewer firms in the Accommodation and Food Service sector and more firms in the Professional, Scientific, and Technical Services sector receive financing. We classify industries as highly capital intensive based on the pre-reform maturities on loans made in that industry, and show that highly capital intensive sectors receive fewer loans after the reform. The results are consistent with the maturity ratio reform lowering the supply of long term, large real estate loans, relative to short term working capital loans – suggesting that pooling longer term with shorter term loans lowers the cost of originating longer term loans in our setting. The results remain consistent using both actual and predicted securitization, alleviating selection concerns.

Finally, we study market-level effects of the reform. Aggregating our data to the county-lender quarter level, we merge in Census variables including demographic composition of each county. We find that while the maturity ratio reform does not affect overall loan volumes, it decreases the number of large loans and increases the number of small loans originated and fewer loans are made in counties with high Black share. Using our predicted securitization measure, we show that the shifts in loan characteristics and borrower composition are driven by changes in lender origination behavior, not by borrower selection into securitization. Taken together, the results show that regulatory reform in secondary loan markets impacts originations even when that is not the intent of the reform. Standardization of loan pools through tighter maturity ratio requirements increases the cost of originating longer-term, more diverse, loans but decreases overall default rates on securitized loans, consistent with an improvement in the signal provided by the maturity of a pool. The disproportionate deterioration in liquidity and default rates for WAC versus Standard pools suggests that tightening standardization requirements on securitized pools that are built to be more varied is more onerous. Our results show that the maturity ratio reform changes loan characteristics and the composition of borrowers, lowering maturities and decreasing access to capital for highly capital intensive industries, borrowers that need large loans, and Black counties.

Our analysis has several implications. First, it shows that secondary market regulation that incentivizes maturity standardization can significantly impact originations. The results suggest that regulations that impact loan maturity can have significant impacts, since in our setting, short maturity loans are less likely to be subject to adverse selection than long maturity loans, pooling the two together can reduce costs of originating longer maturities. Removing this subsidy by standardizing maturities in a pool reduces originations of harder to originate loans – which in our setting are longer-term loans. The reuslts imply that other rules that incentivize standardizing loan products, such as the CFPB's 1071 rule, may also shift originations. Second, it demonstrates that the structure of secondary markets can change screening of loans at origination and impact the government's bottom line. After the maturity ratio reform, the SBA guarantee was cheaper to provide due to lower charge off rates on securitized loans, however, previously more diverse WAC pools concentrated higher risk loans for investors and the SBA's fee revenue declined on these loans. Finally, our analysis shows that regulating secondary markets can shift credit differentially across sectors and demographic groups, with wider implications for local economies.

Literature Review

Our work builds on several lines of scholarship, including the literature discussing the role of secondary markets in increasing liquidity versus decreasing monitoring in the primary market. As background, early empirical work has shown that banks offer special services on their lending side (see e.g., James (1987), Lummer & McConnell (1989)) and traditional theories of financial innovation suggest in part that bank loans should be illiquid to create these special services, such as monitoring and certifying, by alleviating information asymmetry (Diamond (1984, 1991), Boyd & Prescott (1986)). However, when banks began selling loans in the 1980's a number of theoretical models arose to study the benefits and costs of loan resale in the context of banks' traditional theoretical roles as delegated monitors and liquidity providers. On the positive side loan resale benefits the lender and can facilitate risk management which can lead to price concessions in the primary market (see e.g. Güner (2006)), but on the negative side it can change the original lender's role from certifier and monitor to originator and distributor (Gorton & Pennacchi (1995), Parlour & Plantin (2008)).

On the positive effects of loan resale, while secondary markets are thought to be an auxillary market to the primary market, a significant body of literature finds that secondary market liquidity impacts primary market yields and pricing (see e.g., Kamstra et al. (2014), Gupta et al. (2008)). However, new work finds that the unprecedented policy support to corporate bond markets in 2020 had limited real impacts on firm outcomes such as investment (Li & Ringgenberg (2022), Darmouni & Siani (2025)). We innovate relative to this work by showing that changes in the secondary market have real effects on loan maturity, size, and

performance and create implicit "industrial policy effects" by changing access to credit among high- and low-capital intensive firms.

Regarding potential negative effects of loan resale such as diminished monitoring, important work around the Global Financial Crisis established that the development of securitization contributed to the expansion of the originate-to-distribute intermediation model, making lending less reliant on balance sheet financing DeMarzo (2005). Financial services have become unbundled by securitization, leading to a large literature on the costs and benefits of the originate-to-distribute model (see, for example, Keys et al. (2010)). Our paper contributes to this literature by studying whether standardizing characteristics of securitized loans further diminishes monitoring by exacerbating originate to distribute incentives.

We also contribute to the small but growing literature on maturity and the information it conveys. Van Soom et al. (2019) documents that aggregating different maturities across loans into a single unit of study obscures relevant information about the individual loans when different maturities embed information about the loan type. Huh & Kim (2023) shows that pooling loans with low and high prepayment risk lowers the cost of originating loans with high prepayment risk.

Within the broader literature on secondary markets, our work draws parallels to similar work on the structure of mortgage-backed securities, such as GSE securitization, and their secondary markets (DeFusco & Paciorek (2017), Alexandrov et al. (2024), Huh & Kim (2023)). We also draw on literature about the SBA 7(a) loan program (see for example, Bachas et al. (2021), Cespedes et al. (2024), Hotchkiss et al. (2024), Pan et al. (2021), Stillerman (2024)). Bickmore et al. (2024) studies the role that online lenders play in small business lending and uses the MMR change as a shifter to credit supply of online lenders, who are more reliant on securitization. Relative to this literature, we innovate by carefully documenting the comprehensive impacts of tightening the minimum maturity ratio on the SBA market, including loan maturity and loan characteristics such as loan default. We then establish the implicit "industrial policy effects" of the change, which channeled lending away from more-capital intensive industries and toward less-capital intensive industries.

Finally, we document aggregate effects that the policy change has on demographic groups that are more exposed to securitized small business lending. Our results suggest that standardizing maturities favors short-term maturities, likely due in part to difficulties screening longer term maturities (Ortiz-Molina & Penas (2008), Berger et al. (2005)), which diminish feasibility of originating and pooling several long-term loans conforming with the minimum maturity ratio.

2 Data and Institutional Details

2.1 Data

SBA 7(a) Data. Our data comes from the Freedom of Information Act (FOIA) data obtained from the SBA listing all 7(a) loans, limited to 2014Q4-2019Q4. For each loan, we observe information about borrower, such as zip and NAICS code, the identity of the lender, and loan characteristics including maturity in months (sometimes referred to below as loan term) and initial interest rate. The data includes charge off by 2024. Charge off is defined as a loss written off by the SBA, meaning that the lender has been made whole under the SBA guarantee and interest in the loan has passed to Treasury, where collections attempts are made to cover the SBA's losses. Most importantly, the data includes an indicator for the loan being securitized, or sold into the secondary market. Table 2 reports summary statistics of loans in our sample.

[Table 1 about here.]

Information on county level demographics and income were obtained from the US Census Bureau. The 2023 Census data was matched to the SBA 7(a) data using a point-in-polygon method to assign each borrower address to a 5 digit county FIPS code. The 7(a) data was then averaged at the lender-county-quarter level and merged by county and quarter to the Census data.

SBA 1086 and 1454 Data. We submitted a Freedom of Information Act (FOIA) request for data from forms 1086 and 1454. Form 1086 is used to document the initial transfer of the loan and collect information recording the sale of the guaranteed portion the loan. Form 1454 is used to collect essential details from pool assemblers on SBA-guaranteed loan pools. These data allow us to observe pricing details of the loans sold into the secondary market. The data include each loan's sale price, age at sale, SBA user fee, net spread, and certificate interest rate. We use these data to study how the maturity ratio reform affects the sale of SBA loans into the secondary markets.

We merge the 1086 and 1454 data using an exact match on the maturity date and original face amount. We require that the pool creation date (or issue date) minus primary sale date is greater than or equal to 30 days – under the assumption that a loan must be sold to the pool assembler before a pool can be issued.

Merged 1086, 1454, and 7(a) Data. To study how secondary market pricing and loan terms interact at the loan level, we construct a fully merged dataset by linking the 1086 and

1454 data to the 7(a) loan data. The merge is restricted to loans flagged as securitized in the 7(a) data. Because no common loan identifier spans all three datasets, we perform a fuzzy merge using several loan characteristics. Exact equality is required between the 7(a) gross approval amount and the 1086 original face amount.

When duplicates remain after applying these criteria, we apply sequential tie-breaking using the following criteria in order. We first minimize the percentage difference between the SBA guaranteed approval amount and the 1454 loan balance, requiring the closest match (as a share of the form 1454 value).[7] then minimize the combined origination and maturity date discrepancy within a six-month window, and finally minimizing the gap between the 7(a) initial and 1454 interest rates, with the 1086/1454 data used as the reference frame throughout.

FTA Wiki Data. To study loan performance, we utilize the Fiscal Transfer Agent (FTA) Wiki data published by the SBA which allows us to study paid off loans. We utilize data on loans paid off in October 2022 through January 2026. We merge the FTA Wiki data to our 1086 data using an exact match on the variables: Base (If Variable Rate), Date of Note, Maturity Date, and a fuzzy join that determines the closest pair on Face Amount. These data capture performance for the majority of loans in our 1086 and 1454 data originated between 2014Q4-2019Q4.

2.2 Institutional Details

Our institutional setting is the SBA 7(a) program, which supports a variety of loan types and allows, but does not require lenders to securitize their interests. Loans are originated and funded by private lenders, but each loan is guaranteed up to a cap by the SBA. Therefore, the lender's loss is limited to the unguaranteed portion of the loan, which can be as little as 15% of total loan balance.

Securitization of 7(a) loans occurs when pool assemblers, private third parties approved to create loan pools, purchase the guaranteed portion of the loan and combine it with their portfolio to create a pool.[8] Pools must satisfy a number of criteria, including a minimum total volume, maximum concentration in loan size and parallel interest rate reset patterns. Among the criteria is the MMR, which is defined as the ratio between the shortest and longest maturity loan in a particular pool. Thus the maturity ratio reform most directly impacts loan maturity. The pool's maturity is set to the longest maturity of the loans in that pool.

[7] The mean absolute difference between these two fields is 1.4% with a standard deviation of 9%

[8] Recently some successful securitizations have occurred of the unguaranteed portion of loans, which is authorized by the SBA but uncommon.

The SBA announced on July 19, 2017 that, effective on October 1, 2017, all the guaranteed portions of loans in a pool would be required to have a minimum maturity ratio of at least 94% for both Standard Pools and WAC Pools:

> For pools formed from October 2005 through September 2017, the MMR was 80%. For WAC pools that began in January 2009 up until to September 2017, the MMR was 76%. For all pools formed in fiscal year 2018 the MMR was 94%.
> -SBA Secondary Market Program and Securitizations Guide pg. 20

The policy change was intended to lower the SBA's costs associated with their timely payment guarantee. The timely payment guarantee requires that the SBA covers timely payments to investors even if a loan defaults. Increasing the MMR lowers the SBA's costs because it increases predictability of the amortization schedule of loans in a pool. Unpredictability increases the SBA's cost of funding guaranteed payouts, for example by decreasing ability to match investment income with the guarantee payouts, or to fund them with a stable funding source. Tightening the maturity ratio also decreases the administrative costs of estimating the amortization schedule of loans in a pool. Note that none of the rulemaking around MMR suggests that this reform was intended to change primary market lending behavior, or even to significantly impact liquidity in the secondary market.

Loans originated in the SBA's 7(a) program can be securitized into two types of pools, Standard pools or Weighted Average Coupon (WAC) pools. The policy change affected WAC and Standard pools differently: the MMR increased from 80% to 94% for Standard pools, but from 76% to 94% for WAC pools. Both for WAC and Standard pools, the underlying loans must be either all fixed rate or all variable rate loans, and if the pool has all variable rate loans, all loans must have the same base rate (i.e. Wall Street Journal Prime Rate, LIBOR Base Rate). All pools are closed-end securities. No loans may be added to a pool once the pool has been issued and substitution of loans in pools already established is also prohibited, such that underlying loans that prepay or default cannot be replaced.

Standard Pools. Standard pools can have a minimum of 4 loans in a pool. The largest underlying loan in the pool cannot constitute more than 25% of the total pool principal amount. The initial coupon interest rate on a pool certificate (pool rate) is equal to the lowest borrower's note rate (less all fees) on an underlying loan in the pool. If a loan has higher net rate than the pool rate, either the originator or the pool assembler is able to take a fee on the loan that adjusts the interest rate down to the initial net rate of the pool, resulting in very similar net rates across loans in the guaranteed portion of the pool.

Weighted Average Coupon (WAC) Pools. WAC pools can have a minimum of 10 loans in a pool. The largest underlying loan in a pool cannot constitute more than 10% of

the total pool principal amount. The coupon of the pool is calculated using the weighted average coupon (WAC) or interest rate of the loans in a pool, weighted by principal balance. The WAC on pool certificates resets monthly based on the balance on the pool's underlying loans, making WAC affected by principal prepayments and default of the underlying loans.[9] There is a 75 basis point maximum differential between the lowest net coupon rate and the highest net coupon rate for all underlying loans in a WAC pool. This differential gives pool assemblers the flexibility to pool loans with slight differences in the net interest rate yet prevents large swings in the pool coupon due to the prepayment or default of any one of the loans in the pool. Since prepaid or defaulted loans cannot be replaced, this helps ensure that if for example the largest loan in the pool prepays and the coupon is recalculated based on the remaining loans' interest rates, investors' coupon does not swing wildly.

3 Empirical Analysis of the Secondary Market

3.1 Stylized Facts

In order to understand how the policy change affects the sale of small business loans into the secondary market, we begin by utilizing our novel 1086 and 1454 data to study loans sold into securitized pools. Whether the introduction of the MMR policy reform reorganizes the secondary market – and thus lays the groundwork for changes to be passed along to the primary market – is an empirical question. The SBA's announcement of the policy change states that:

> "SBA has monitored Pools formed over the last 6 months, and has observed that many existing Pools have a minimum maturity ratio of at least 94%." -Federal Register, Vol. 82, No. 137, Wednesday, July 19, 2017, Notices

In Figure 1(a), we show that the average maturity ratio in the pre- and post-period for both WAC and Standard pools was close to 94% or above. However, in Figure 1(b), we show that the minimum of maturity ratios for WAC pools appear to be at exactly at their constraint iof 76% in the pre-period, suggesting that the constraint binds for at least some pools. If indeed the majority of pools had a maturity ratio of at least 94% and few pools had a maturity ratio of 76% prior to the reform, the reform should not have affected the secondary market or as a result, the primary market.

[Figure 1 about here.]

[9] See e.g., https://ctaggl.com/wp-content/uploads/2019/04/Secondary-Market-7a-Karen-Bean.pdf.

However, in figure Figure 2(a) we show that just over 40% of WAC pools were at the constraint of 76% maturity ratio in the pre-period. This suggests that a significant fraction of pools were below the 94% minimum maturity ratio and would thus the policy change would substantially change the organization of these pools in the post period.

[Figure 2 about here.]

In Figure 3 we present the stylized fact that, following the reform, originations decline for WAC pools measured both by number and total balance of loans originated. The decrease in WAC originations is partially offset by an increase in loans pooled into Standard pools, such that, relative to the period immediately pre-reform, the total volume of originations plateaus. However, the strong pre-period upward trajectory of small business lending attenuates, consistent with the policy change dampening total loan originations.

[Figure 3 about here.]

In Figure 2(b), we plot the distribution of loan terms for WAC versus Standard pools pre- and post-reform and report the total number of loans in each category. The statistics document that the number of loans in WAC pools halves in the post period, shedding close to 9,000 loans. Standard loans increase in volume partially substituting the loss of WAC loans but are an incomplete substitute, only compensating for about half the number of loans lost. The majority of the WAC pool decline is concentrated among 300 month loan terms, while the Standard pool increase is concentrated among 120 month loans terms. The results suggest that post-reform, there are fewer longer-term loans pooled in the secondary market.

3.2 Empirical Approach and Results

In order to causally determine whether the MMR reform altered the secondary market, we utilize heterogeneity among pools that should be disproportionately exposed to the policy change. We hypothesize that Weighted Average Coupon pools should be disproportionately affected by the policy change relative to Standard pools. While both pool types are collections of the guaranteed portion of SBA 7(a) loans, they differ in coupon rate structure and composition. As discussed in Section 2.2, WAC pools have a larger minimum number of loans in a pool than Standard pools (10 instead of 4), making it potentially more challenging to match maturities across a larger number of loans. WAC pools also experience a larger tightening of the MMR policy change, moving from a 76% to 94% MMR, while Standard pools moved from 80% to 94% MMR.

To isolate the effect of tightening of the MMR ratio, we employ a difference-in-differences research design to test differential effects of the MMR change for WAC versus Standard pools actually created. This design measures the differential change in outcome variables for loans in WAC pools (treated group) relative to Standard pools (control group), post- relative to pre-policy change. We estimate the specification:

$$Y_p = \mu WAC_p + \beta Post_t \times WAC_{p(i)} + \alpha_a + \theta_t + \varepsilon_p. \tag{1}$$

We first estimate the specification at the pool level (p). At the pool level, the Y_p dependent variable is standard deviation of maturity and interest rate in a pool. $Post_t$ is an indicator variable for whether a loan was originated in 2017Q3 or after (inclusive), to indicate the period of the reform announcement and after. α_a and θ_t are assembler and quarter fixed effects respectively.[10] Standard errors are heteroskedasticity-robust.

The results report, separately for WAC and Standard pools, the standard deviation of maturity within a pool pre- versus post-policy change. The standard deviations should decline in the post-period since the MMR change was intended to standardize the maturities of loans in a pool. Figure 4 and Table 2 report the pool level results of Equation 1 and Equation 2, which analyze the effect of the MMR change on pool characteristics. Figure 4(a) shows that although post-reform, the standard deviation of maturities within pool falls for both Standard and WAC pools, it falls disproportionately more for WAC pools. The sharp decline among WAC pools suggests that pre-reform, loans in WAC pools were more varied in term and thus following the change, needed to reform by more to meet the tighter 94% MMR. In panel (b) we causally estimate the effect by estimating the difference-in-differences research design in Equation 2. The figure and static result in Table 2 confirm that the standard deviation of loan maturities within a pool falls by 2 months more for WAC pools, relative to Standard pools, following the policy change.

[Figure 4 about here.]

[Table 2 about here.]

Following the tightening of the MMR, we show that pools with more homogeneous maturities are more likely to have more homogeneous interest rates. Figure 5 reports, separately

[10] We estimate the dynamic version of Equation 1 here:

$$Y_p = \mu WAC_p + \sum_T \beta_T \, WAC_p \times \mathbb{1}_{t=T} + a + \theta_t + \varepsilon_p. \tag{2}$$

for WAC and Standard pools, the standard deviation of net spread within a pool pre- versus post-policy change. Panel (a) shows that post-reform, the standard deviation of net rates within pool falls disproportionately more for WAC pools than for Standard pools. The relative decline among WAC pools suggests the standardization of maturities post-reform also increased standardization of net rates disproportionately for WAC pools. In panel (b) we causally estimate the effect by estimating the Equation 2 at the pool level. The figure confirms that the standard deviation of net rate within a pool falls disproportionately more for WAC pools, relative to Standard pools, following the policy change. This increase in homogeneity of interest rates suggests that there are spillovers among loans within a pool. In other words, not only a single borrower's characteristics matter for originating a loan, but the borrower characteristics among loans that the borrower may be pooled with also matter.

[Figure 5 about here.]

The relative decrease in standard deviation of maturity and interest rate within WAC pools is consistent with the MMR reform imposing a larger standardization hurdle for WAC pools. Additionally WAC pools require a minimum of 10 loans in a pool, while Standard pools require a minimum of 4, making it mechanically harder to closely match maturities across all loans. In order to establish the effect that this has on the price that assemblers are willing to pay for loans, we study loan level pricing data at the point of their sale into the secondary market, or in other words sale from their originator to the pool assembler.

However, the reform may change the way that assemblers' sort loans into WAC versus Standard pools. Thus to estimate the effect of the reform on loans that would have been pooled into WAC pools in absence of the policy change, we re-estimate the specification in Equation 1 using predicted WAC. To do this, we first predict WAC by regressing an indicator for either WAC pool, (p), or WAC loan, (i), on assembler and lender fixed effects, utilizing only pre-period data to ensure our predictions utilize WAC assemblers' and lenders' business model prior to the policy change.

$$WAC_{p(i)} = \alpha_a + \delta_j + \varepsilon_{p(i)}. \tag{3}$$

We save the coefficients on the assembler and lender fixed effects and use them to predict whether a loan (or a pool) is a WAC loan (or pool) across the entire sample of data, both in the pre- and post-period as a function of its lender and assembler.

We then re-estimate Equation 1 using the predicted measure $\widehat{WAC_{p(i)}}$ both at the individual loan level (i) and at the pool level (p), in the following regression specification:

$$Y_{p(i)} = \mu\widehat{WAC_{p(i)}} + \beta Post_t \times \widehat{WAC_{p(i)}} + \alpha_a + \delta_j + \gamma_z + \eta_{3DigNAICS} + \theta_t + \varepsilon_{p(i)}. \tag{4}$$

Using predicted WAC as a treatment measure allows us to strip out any potential effects of assembler's sorting loans in WAC versus Standard pools differently in the post period, and isolate the effect of the 4% harsher maturity ratio change experienced by WAC pools.[11]

At the loan level, we utilize our fully merged 1086, 1454, and 7(a) data and regress the dependent variables of interest on the predicted WAC value. At the loan level the dependent variables of interest, Y_i, consist of $PricePaid_i$ the price paid for the loan as a percent of par, $AgeAtSale_i$ the number of days that it takes the loan to sell in the secondary market, $NetRate_i$ the interest rate net of fees, WAC_i whether a loan is actually pooled into a WAC pool, $OriginatorFee_i$ a fee charged only on Standard loans, and $ChargeOff_i$ an indicator for whether a loan defaults. At the pool level, Y_p represents the number of two digit NAICS codes in a pool – to indicate the dispersion of industries contained in a pool. $\widehat{WAC}_{p(i)}$ is the predicted probability of being a WAC loan or pool. $Post_t$ is an indicator variable for whether a pool was created, or a loan was originated in the period following the MMR change. α_a and θ_t represent assembler and quarter fixed effects for the quarter of creation – either loan origination or pool creation quarter. Where pool creation quarter is constructed using a pool-level issue date, constructed as the year–quarter corresponding to the latest Note Date among loans in the pool. Assembler fixed effects control for heterogeneous funding costs and other demand side differences across secondary market buyers.

Table 3 and Figure 6 report the loan level results of Equation 4 and Equation 5, which analyze the effect of the MMR change on loan characteristics. Table 3 and Figure 6(a) show that moving from 0% to 100% predicted probability of being in a WAC pool drives a significant 1.5 percentage point decrease in price paid as a percent of par. The decline in the price that assemblers pay for loans that were predicted to be WAC loans relative to those predicted to be Standard loans is consistent with the reform disproportionately decreasing the value of WAC loans sold into the secondary markets. Panel (b) indicates that moving from zero to 100% predicted probability of being in a WAC pool drives a significant 184 day increase in age at sale, relative to loans predicted to be in Standard pools. These results are consistent with WAC loans becoming disproportionately slower to for originators to sell into the secondary market. These results suggest that increased standardization binds more for WAC loans, relatively decreasing their value and increasing the amount of time that they take to sell.

Figure 6(c) indicates that loans that are predicted to be sold into WAC pools are 53 percentage points statistically significantly less likely to actually be pooled into WAC pools

[11] We estimate the dynamic version of Equation 1 here:

$$Y_{p(i)} = \mu \widehat{WAC}_{p(i)} + \sum_T \beta_T \widehat{WAC}_{(i)} \times \mathbb{1}_{t=T} + a + \theta_t + \varepsilon_{(i)}. \tag{5}$$

in the post period. Panel (d) shows that these loans also have a statistically significantly higher originator fee in the post period. Since originator fees can only be taken on loans pooled into Standard pools, these results are consistent with the pool assembler choosing to place what would previously have been WAC loans in Standard pools and take the originator fee on these loans, rather than attempting to pool several WAC loans together to fetch a price for the security that more than compensated for the sum of originator fees on each loan. Panel (e) shows that loans predicted to be in WAC pools experience a decline in net interest rate, net of fees like originator fee, consistent with the a decline in the loan payments passed through to the investor. These results are consistent with the reform increasing the difficulty of pooling loans into WAC pools, leading pool assemblers to place loans that previously would have been pooled into WAC pools into Standard pools.

[Figure 6 about here.]

[Table 3 about here.]

Table 3 and Figure 6(c) report the results. The research design isolates the differential response of default for WAC pools relative to Standard pools post- relative to pre-policy change. Loans in WAC pools are disproportionately more likely than those in Standard pools to experience default. The results indicate the following the policy change, WAC loans are statistically significantly 3.3 pp more likely to experience default, consistent with loans in WAC pools disproportionately declining in quality following the policy change. The slight delay shown in Figure 6(c) is consistent with WAC pools formed immediately following the reform being originated prior to the reform and thus not as effected by increased standardization in term as pools originated a few quarters after the policy change.

Figure 7 reports the coefficient of interest from Equation 5, documenting the effect of the policy change on number of two digit NAICS codes in a pool. Following the policy change, the number of two digit NAICS sub-sectors pooled together fell significantly by 3, meaning there were fewer NAICS code for WAC pools relative to Standard pools. This suggests that the diversification in more treated pools fell statistically significantly in the post-period, consistent with a tightening of the maturity ratio decreasing the amount of cross subsidization across industries provided by a pool.

[Figure 7 about here.]

These above results are consistent with the maturity ratio reform increasing the costs to lenders and assemblers associated with pooling loans into more treated pools. We document

an increase in time to sale, a decrease in price, and higher fees charged on loans that were predicted to be more treated. We also establish that the loans within a pool become less diverse, with lower standard deviaitons in maturity and interest rates and fewer industry sectors within a pool. If lenders internalize the effect of the reform on their ability to sell a loan in the secondary market, they may shorten or lengthen loan maturities or otherwise distort loan characteristics to increase the probability that loans satisfy the new pooling requirements and can be sold into securitization in a timely manner. To examine whether these changes in the secondary market influence the originations in the primary market, we turn to the origination margin.

4 Empirical Analysis of the Primary Market

In Section 3 we document that the cost of pooling WAC loans in the secondary market increases following the policy change. In this section, we test whether originators internalize the effect of the reform on their ability to sell loans into the secondary market and change their lending behavior in the primary market.

4.1 Effect of the Reform on Loan Characteristics

Effect of the Reform on Maturity. We assess whether the MMR reform affects primary market originations of securitized versus unsecuritized loans, consistent with lenders being forward looking and internalizing changes in their ability to sell loans to pool assemblers in the secondary market. If lenders are not forward looking or do not coordinate lending behavior with secondary market activity, SBA rules on securitization, like MMR, may have no impact on the primary lending market.

If however, lenders are forward looking, such that they internalize the effect of the MMR change on their ability to sell a loan into the secondary market, there may be impacts on the primary market. However, the magnitude and direction of the effect are theoretically uncertain. A tighter MMR may cause lenders to decrease maturity, if it is easier to match maturities among shorter-term loans, or increase maturity if the opposite is true. The effect of MMR on primary-market maturities therefore reveals how maturity is valued in the secondary market: by revealed preference, a maturity shortening implies that lenders view longer-maturity loans as harder to sell in secondary markets. However, even if loans selected into securitization have different maturities following the policy change, there may be a countervailing effect on unsecuritized loans, such that the two effects offset each other. In this way the magnitude of the effect on the primary market is also ambiguous.

To understand the direction and magnitude of the MMR change, we first document

stylized facts about loan maturities. Figure 8(a) shows that maturities for securitized loans shifted downward, while maturities for unsecuritized loans shifted upward during 2013Q3 through 2020Q1, converging closer to securitized loans. This pattern is also observed in Figure 8(b), which also shows that securitized and unsecuritized maturities converged post-2017, especially toward 10-year, or 120-month, loan terms. Pre-2017, unsecuritized loans had larger mass at terms 100 months and below, this mass decreased post-reform and larger mass points appeared at longer terms such as 120 and 300 months. Pre-2017, securitized loans had bi-modal mass points at 120 months and 300 months. Post-reform, the mass at 300 months shrank while the mass at 120 months increased.

Anecdotally, many SBA loans fit into two categories, working capital and real estate loans. Real estate loans typically have longer maturities and likely comprise many of the 300 month maturities, while working capital loans typically have shorter maturities.

[Figure 8 about here.]

To study whether the MMR reform disproportionately affected the loan terms of securitized loans, we study the causal effect of the MMR policy change on the loan maturities of securitized relative to unsecuritized loans. We estimate the following difference-in-differences (DiD) regression on the 7(a) data using securitized loans as the treated and unsecuritized loans as the control group:

$$\begin{aligned} Term_i &= \kappa Securitized_i + \beta Post_t \times Securitized_i + \upsilon GrossApproval_i \\ &+ \omega InterestRate_i + \lambda JobsSupported_i + \theta_t + \gamma_z + \delta_j + \eta_{3DigNAICS} + \epsilon_i. \end{aligned} \quad (6)$$

Where $Term_i$ is the maturity of loan i. $Post_t$ is an indicator variable for whether a loan was originated in 2017Q3 or after (inclusive),[12] and $Securitized_i$ is an indicator variable for whether the loan was securitized. $GrossApproval_i$ is the logged loan amount, $InterestRate_i$ is the interest rate on a loan, $JobsSupported_i$ is the number of jobs created and retained by loan i. θ_t are fixed effects for the quarter of loan origination, γ_z are fixed effects for the borrower zip code, δ_j are fixed effects for the j^{th} lender on a loan, and $\eta_{3DigNAICS}$ are fixed effects for the three digit NAICS sub-sector of a loan. Standard errors are clustered at the borrower ZIP code level.

[12] We also estimate the dynamic version of Equation 6 here:

$$\begin{aligned} Term_i &= \kappa Securitized_i + \sum_T \beta_T Securitized_i \times \mathbb{1}_{t=T} + \upsilon GrossApproval_i + \omega InterestRate_i + \lambda JobsSupported_i \\ &+ \theta_t + \gamma_z + \delta_j + \eta_{3DigNAICS} + \epsilon_i. \end{aligned} \quad (7)$$

[Table 4 about here.]

[Figure 9 about here.]

The results are reported in Figure 9(a) and Table 4. Following the policy change, relative to unsecuritized loans, the maturity on securitized loans decreased significantly and sharply by 14 months in column 4, the most saturated specification corresponding to Equation 7. This specification controls for interest rate, loan amount, jobs supported, and includes fixed effects for 3 digit NAICS code, quarter, borrower zip code, and lender fixed effects. The fixed effects strip out industry, geographic, and time trends in borrower demand as well as lender specific characteristics. Our results also hold in the less saturated specifications reported. Figure 9(a) plots β the coefficient of interest on the indicator for securitized interacted with the indicator for the post period from Equation 7 and exhibits pre-period parallel trends, mitigating the concern that that pre-trends among securitized loans are driving the result. The plot shows that immediately following the policy change, securitized loans experience an instantaneous drop in maturity of over a year.

Effect of the Reform on Loan Characteristics. We now seek to understand the effect of the MMR policy change on other loan characteristics. We document above that the MMR change shifts access to secondary markets, consistent with an increase in the cost of lending, and decreases maturity, which could thus alter interest rates. However, if loan characteristics like interest rate are sticky and unaffected by loan maturity, they may be unaffected by the MMR reform. To study the impact of the reform on loan characteristics, we estimate the following regression on actual securization status:

$$Y_i = \kappa Securitized_i + \beta Post_t \times Securitized_i + \theta_t + \gamma_z + \delta_j + \epsilon_i. \quad (8)$$

Where Y_i represents $ChargeOff_i$, the default status of loan i. All other variables are defined as in Equation 6.[13]

[Table 5 about here.]

Table 5 and **??**(b) report the results for $ChargeOff_i$. Following the policy change, our most saturated specification in column 3 shows that securitized loans experience a significant

[13] We estimate the dynamic version of Equation 8, where $\mathbb{1}_{t=T}$ is an indicator for the quarter, here:

$$Y_i = \kappa Securitized_i + \sum_T \beta_T Securitized_i \times \mathbb{1}_{t=T} + \theta_t + \gamma_z + \delta_j + \epsilon_i. \quad (9)$$

1.0 pp decrease in loan defaults relative to unsecuritized loans, despite there traditionally being a correlation between short maturity loans (which increase following the policy change) and high charge off. The decrease in default as maturity decreases is thus consistent with theories that short debt maturity is associated with lower levels of asymmetric information, allowing lenders to screen more effectively on the loans that are originated – consistent with lenders shifting toward loans that are easier to screen.

4.2 Predicting Reform Exposure and Effects on Loan Characteristics

4.2.1 Predicting Exposure to the Reform

The regression above reports the impact of the reform on loans that are selected to be securitized. However, the choice of a lender to securitize a loan is not random. To separately identify the effect of the MMR reform on loan originations, holding constant securitization behavior, we calculate a loan's predicted securitization based on pre-period lender fixed effects (δ_j). This predicts a loan's pre-period securitization propensity and we then regress outcomes of interest on this predicted measure. To do this we estimate the following regression using only pre-period loan originations:

$$Securitized_i = \delta_j + \epsilon_i. \tag{10}$$

Where $Securitized_i$ is an indicator for whether loan i was securitized or not and δ_j are fixed effects for the j^{th} lender on a loan. The regression is estimated using loans originated in the pre-period only. We use the lender fixed effects from this regression to predict a given loan's pre- and post-period securitization. By predicting securitization given lender fixed effects, δ_j, we capture predicted securitization driven entirely by supply side factors without selection on loan characteristics. The interpretation of our results is that once we predict securitization using lender fixed effects, we isolate the part of securitization that is influenced by the lender's need to securitize a loan due, for example, to a lender's cost of capital and need for the additional liquidity that the secondary market provides. We plot a histogram of our predicted securitization measure in Figure 10. Standard errors are clustered at the borrower ZIP code level.

[Figure 10 about here.]

As a robustness to Equation 11, we estimate the following regression, again only on the pre-period data:

$$\begin{aligned} Securitized_i &= \delta_j + \omega InterestRate_i + \upsilon GrossApproval_i + \lambda JobsSupported_i \\ &+ \theta_t + \eta_{3DigNAICS} + \gamma_z + \epsilon_i. \end{aligned} \tag{11}$$

Where $Securitized_i$ is an indicator variable for whether loan i was securitized or not, δ_j are fixed effects for the j^{th} lender on a loan, $InterestRate_i$ is the interest rate on a loan, $GrossApproval_i$ is the logged loan amount, $JobsSupported_i$ is the number of jobs created and retained by loan i, θ_t are fixed effects for the quarter of loan origination, $\eta_{3DigNAICS}$ are fixed effects for the 3-digit NAICS sub-sector that a loan is in, and γ_z are fixed effects for the borrower zip code. After stripping out all other variables, we remove factors that may be driven by borrower demand. Standard errors are clustered at the borrower ZIP code level. Figure 11 plots the predictions generated by both Equations 10 and 11 and shows that they are highly correlated. Thus we use Equation 10 as our main specification.

[Figure 11 about here.]

4.3 Effect of Predicted Reform Exposure on Loan Characteristics

Effect of Predicted Reform Exposure on Maturity. To understand the MMR reform's implications for borrowers' access to credit supplied by the secondary markets, we test whether loans that are predicted to be securitized experience shifts in maturity after the MMR reform. Equation 12 estimates the difference-in-differences regression in Equation 6 but replaces securitization on the right hand side with predicted securitization. By predicting securitization, the specification removes any potential confounding effect of observable characteristics that may be correlated with securitization. We report results using the prediction method in Equation 10. For robustness we also estimate the following analyses using prediction methods from Equation 11 and the results match closely. Specifically, we estimate the following regression:

$$\begin{aligned} Term_i &= \kappa \widehat{Securitized}_i + \beta Post_t \times \widehat{Securitized}_i + \upsilon GrossApproval_i \\ &+ \omega InterestRate_i + \lambda JobsSupported_i + \theta_t + \gamma_z + \delta_j + \eta_{3DigNAICS} + \epsilon_i \end{aligned} \quad (12)$$

Where $Term_i$ is the maturity of loan i. $\widehat{Securitized}_i$ is securitization probability predicted using the lender fixed effects generated in Equation 10. All other variables are defined as in Equation 6. Standard errors are clustered at the borrower ZIP code level.[14]

[14] We estimate the dynamic version of Equation 12 here:

$$\begin{aligned} Term_i &= \kappa \widehat{Securitized}_i + \sum_T \beta_T \widehat{Securitized}_i \times \mathbb{1}_{t=T} + \upsilon GrossApproval_i + \omega InterestRate_i \\ &+ \lambda JobsSupported_i + \theta_t + \gamma_z + \delta_j + \eta_{3DigNAICS} + \epsilon_i \end{aligned} \quad (13)$$

We report the effect of predicted securitization on $Term_i$ in Table 7 and the dynamic effects in Figure 12(a). Using predicted securitization in Equation 12 isolates the plausibly-exogenous effect of lenders changing the loan terms in response to the policy change and alleviates potential concerns that the policy change alters borrower demand for securitization in a way that changes loan terms demanded. The results show that a 100% increase in predicted securitization drives a 19.6 month decrease in maturity, consistent with the 14 month decrease in response to an actual change in securitization, documented in Figure 9 and Table 4. These results are consistent with significant impacts of the MMR reform on both the rate of securitization and on the maturities of loans originated.

[Figure 12 about here.]

[Table 6 about here.]

[Table 7 about here.]

Effect of Predicted Reform Exposure on Loan Characteristics. To understand the MMR reform's implications for borrowers' access to credit supplied by the secondary markets, we test whether loans that are predicted to be securitized experience shifts in actual securitization probability after the MMR reform.

Equation 14 estimates the difference-in-differences regression in Equation 8 but replaces securitization on the right hand side with predicted securitization to remove any potential confounding effect of observable characteristics that may be correlated with securitization. In order to test that our results on loan characteristics are not driven by different borrowers selecting into securitization following the policy change, we estimate the following regression which replaces actual securitization in Equation 8 with predicted securitization:

$$Y_i = \kappa \widehat{Securitized}_i + \beta Post_t \times \widehat{Securitized}_i + \theta_t + \gamma_z + \delta_j + \epsilon_i. \quad (14)$$

Where Y_i is $Securitization_i$, the actual securitization status of loan i, and $ChargeOff_i$, the default status of loan i. $\widehat{Securitized}_i$ is securitization probability predicted using the lender fixed effects generated in Equation 10. All other variables are defined as in Equation 6. Standard errors are clustered at the borrower ZIP code level.[15]

[15] We estimate the dynamic version of Equation 14 here:

$$Y_i = \kappa \widehat{Securitized}_i + \sum_T \beta_T \widehat{Securitized}_i \times \mathbb{1}_{t=T} + \theta_t + \gamma_z + \delta_j + \epsilon_i \quad (15)$$

We report the effect of predicted securitization on actual $Securitization_i$ in Table 7 and the dynamic effects in Figure 12(a). The results show that a given loan is significantly 10% less likely to be securitized after the reform in our most staurated specification in column 2 with quarter, borrower zip code, and lender fixed effects. This impact is consistent with a higher cost of securitizing a loan driven by the MMR reform making it more challenging for a lender to create a compliant pool of securitized loans in the post period.

?? reports the results and shows that the effects charge off rate, documented in Table 5, remain largely unchanged when actual securitization is replaced with predicted securitization. **??** column 1 reports the result for interest rate controlling for quarter, borrower zip code, and lender fixed effects and shows that interest rates on loans with higher predicted securitization experience a significant 9.3 basis point increase following the reform. These results are consistent with the effects documented in Table 5, suggesting the MMR change increases costs to securitize loans and lenders pass those costs through to borrowers. **??** column 2 reports the results for charge off. Following the policy change, securitized loans experience a significant 2.0 pp decrease in charge offs relative to unsecuritized loans. These results are consistent with the effects documented in Table 5.

5 Industrial and Aggregate Effects

5.1 Industrial Effects

We study whether the policy change differentially affects specific industries by altering access to the SBA lending market for borrowers from different industries. Certain industries require longer maturity or capital intensive loans. Thus, if tightening the MMR ratio increases lenders' cost of lending for longer maturity loans such that the securitization market moves away from that maturity (suggested by Figure 8(b)), this may more harshly impact industries that rely on longer maturity loans and benefit industries that rely on shorter maturity loans.

To test the effect of the MMR policy on industries, we study indicators for the following two digit NAICS sectors: Accommodation and Food Services, Administrative Support Waste Management and Remediation Services, Agriculture Forestry Fishing and Hunting, Arts Entertainment and Recreation, and Professional Scientific and Technical Services. We estimate the static regression in Equation 8 and its dynamic equivalent Equation 9, as well as the equivalent regressions using predicted securitization in Equation 14, with indicators for these two digit NAICS codes as the dependent variable.

The dynamic results from Equation 9 are reported in Figure 13 and in the static results from Equation 8 are reported in Table 8. The Accommodation and Food Services

sector and the Agriculture Forestry Fishing and Hunting sectors both experience an overall decrease in loan originations in the post-period. Following the policy change, our most saturated specification in column 3 reports 1.6 pp and 0.2 pp fewer loans are made to these sectors respectively. Conversely, the Professional, Scientific, and Technical Services sector, the Administrative Support Waste Management and Remediation sector, and the Arts, Entertainment, and Recreation sector all experience an overall increase in loan originations in the post period. Specifically, 1.1 pp, 0.8 pp, and 0.86 pp more loans are made to these sectors respectively. These results are consistent with real estate heavy industries such as hospitality and agriculture focused sectors receiving relatively less credit from the secondary market, while industries that may rely less on longer-term real estate loans receiving relatively more credit.

[Figure 13 about here.]

[Table 8 about here.]

To alleviate the concern that the results are driven by shifts in the composition or borrowers who select into being securitized in the post-period, we estimate the specification in Equation 14. This regression replaces the indicator for securitization with the predicted probability of securitization, predicted by lender fixed effects in Equation 10.

Table 9 reports the results. The results utilizing our measure of predicted securitization remain consistent with the results reported in Table 8. The second column for each sector reports the most saturated specification and we find that moving from 0% to 100% predicted securitization significantly decreases post-period lending to the Accommodation and Food Services sector and the Agriculture Forestry Fishing and Hunting sector by 1.4 and 0.3 pp, respectively. Conversely, the same change in predicted securitization significantly increases lending to the Professional Scientific and Technical sector, the Administrative Support Waste Management and Remediation sector, and the Arts Entertainment and Recreation sector by 0.8, 1.2, and 1.2 pp, respectively. The shift that we document is consistent with loans being channeled away from highly capital intensive industries, like accommodation and agriculture, into industries with less reliance on real estate and other physical capital.

[Table 9 about here.]

5.2 Aggregate Effects

To study the aggregate effect of the policy change, we aggregate the data to the lender-county-quarter level and study whether the policy change has distributional effects on the

borrowers who receive loans. If unsecuritized loans compensate for changes among securitized loans, simply aggregating to the county-quarter level alone could mask the effect of treatment in the post period – for example lenders who often securitize loans reduce lending, but lenders who rarely securitize expand lending such that total originations do not change. Thus, we aggregate the data to the lender-county-quarter level and utilize our predicted securitization measure to create a treatment intensity research design that studies more- versus less-treated lenders' originations in a given county and quarter, post- relative to pre-policy change.

We collapse our data to the lender-county-quarter level and utilize the following difference-in-differences setting, which allows us to compare a lender's originations in a given county in the post-period relative to the same lender's lending in that county in the pre-period. The design studies whether following the policy change, lenders with higher predicted securitization disproportionately change their lending, relative to their pre-period lending in a given county. We estimate the following regression:

$$\begin{aligned} Y_{j,c,t} &= \kappa \widehat{Securitized}_j + \beta Post_t \times \widehat{Securitized}_j + \upsilon GrossApprovalAvg_{c,t} \\ &+ \omega InterestRateAvg_{c,t} + \lambda JobsSupportedAvg_{c,t} + \theta_t + \delta_j + \epsilon_{j,c,t}. \end{aligned} \tag{16}$$

Where $Y_{j,c,t}$ is either $Black_{j,c,t}$ or $White_{j,c,t}$, where $Black_{j,c,t}$ for example is the fraction of inhabitants that identify as Black in a county, for a lender-county-quarter triple if a lender originates one or more loan in that county and quarter.[16] $\widehat{Securitized}_j$ is securitization probability predicted using the lender fixed effects (δ_j) generated in Equation 10. It is assigned to the lender-county-quarter level if the lender operates in that county and in that quarter. $GrossApprovalAvg_{j,c,t}$ is the logged average loan amount across loans in a lender-county-quarter, $InterestRateAvg_{j,c,t}$ is the average interest rate weighted by total loan amount across loans in a lender-county-quarter, $JobsSupported_{j,c,t}$ is the average number of jobs created and retained, weighted by total loan amounts across loans in a lender-county-quarter. θ_t is a quarter fixed effect.[17]

We report our results in Figure 14 and Table 10. Aggregating to the county-lender-quarter level reveals that counties that are more heavily populated with Black inhabitants receive a significant and disproportionate decrease in SBA lending following the MMR policy change. Counties that are more heavily populated with white inhabitants receive no significant change in SBA lending following the MMR rule change. Taken together, the results in

[16] The data on the racial makeup of a county is from the 2023 Census data. We merge the racial makeup variables to the SBA 7(a) loan origination data by 5 digit FIPS code.

[17] We estimate the dynamic version of Equation 16 here:

$$\begin{aligned} Y_{j,c,t} &= \kappa \widehat{Securitized}_j + \sum_T \beta_T \widehat{Securitized}_j \times \mathbb{1}_{t=T} + \upsilon GrossApprovalAvg_{j,c,t} \\ &+ \omega InterestRateAvg_{j,c,t} + \lambda JobsSupportedAvg_{j,c,t} + \theta_t + \delta_j + \epsilon_{j,c,t} \end{aligned} \tag{17}$$

this paper suggest that by increasing standardization in the secondary market, the reform increases interest rates and decreases lending to longer-maturity loans, which has a disproportionately negative net effect on lending in majority Black counties, relative to majority white counties. Thus, our results show that secondary market reforms can cause significant distributional consequences for the primary market.

[Figure 14 about here.]

[Table 10 about here.]

5.3 Discussion

The results of our analysis shed light on the mechanisms by which secondary market regulation impact primary markets. The evidence is consistent with lenders being forward looking and strategic in originations, since maturities, as well as loan and borrower characteristics, shifted with the MMR reform. The direction of the effect, namely the decrease in maturity, suggests that short maturity loans are easier to pool than long maturity loans. They may be more profitable, in part due to the lower levels of asymmetric information previously documented in short maturity lending. Changes in loan characteristics demonstrate that lenders reprice in response to MMR reform, and either implicitly or explicitly target different borrower populations as a result. The evidence suggests that lender welfare increases, since interest rates increase while defaults decrease. Borrower welfare is less clear, since prices increase and some industries and demographic groups have decreased access to small business loans.

We have demonstrated how secondary market regulations impact lending in the government-guaranteed SBA 7(a) lending markets. These impacts are likely to be even larger if they are implemented in non-guaranteed markets, such as asset-backed securities pooling auto loans, student loans, and other assets, or if they are implemented in other guaranteed markets, for example regulating the market for specified pools (spec-pools) of GSE mortgages so that they more closely resemble TBA pools.

The example of the MMR regulation provides a case study where standardizing loan products within a pool can stabilize coupon payments to investors and increase originations among easier-to-screen borrowers. However, it comes at the cost of decreased incentive to extend credit to difficult-to-screen, but profitable borrowers, or at the cost of restricted ability for lenders to engage in profitable activity – such as small business lending with maturities that are hard to pool under strict MMR rules. If regulation such as the CFPB's 1071 rule are implemented, further standardization of the loan market may occur exacerbating these effects.

6 Conclusion

We study the effect of secondary market regulation that standardizes securitized pools of small business loans. We find that WAC pools are differentially affected by the policy change causing a disproportionate decrease in the creation of WAC pools relative to Standard pools. Standard pools attempt, but fail to fully compensate for WAC pools, leading to an overall decline in secondary market volume, relative to its pre-period increasing trend. The loans that are sold into WAC pools sell at lower prices, take longer to sell, and have higher default rates consistent with decreased value of loans in WAC pools. We find that WAC loans have higher interest rates consistent with lenders passing increased cost of securitization through to borrowers. The results demonstrate that requiring loans sold into the same pool to have similar maturities decreases the loan maturity of new originations, driven by a shift in lender behavior rather than a shift in borrowers selecting into securitization. As a result, fewer loans are securitized, there are fewer total charge offs, and higher interest rates on securitized loans after the reform. Ultimately, the reform shifts small business lending away from real estate-reliant sectors such as hospitality and towards low-capital-needs sectors like professional, scientific, and technical services. Finally, the reform shifts the allocation of loans away from Black counties. Secondary market regulation has significant real impacts, both on loan characteristics and borrower composition.

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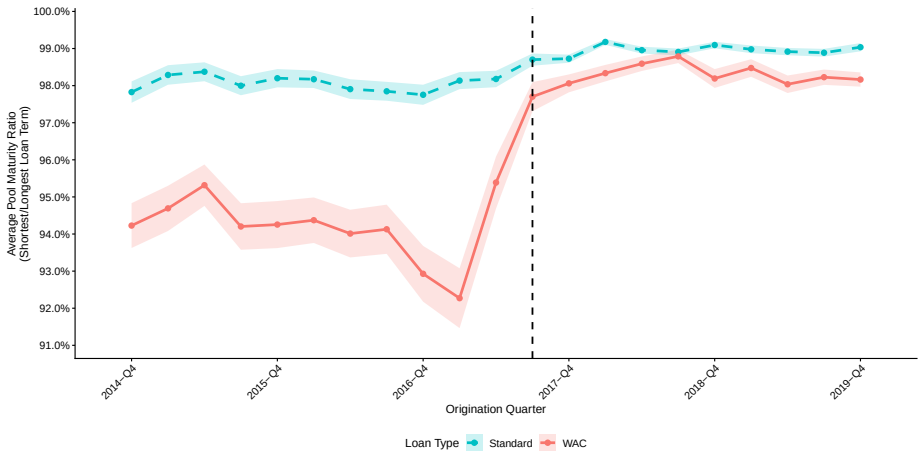
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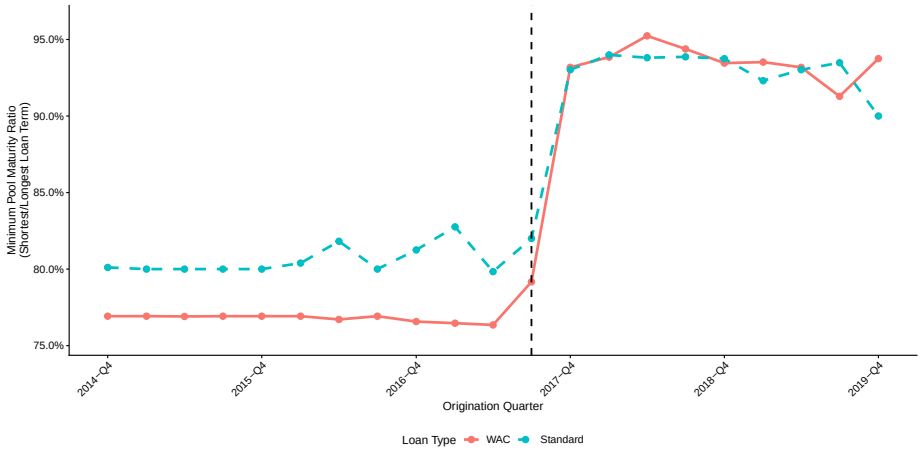
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Figure 1. Maturity Ratio: WAC vs Standard Pools



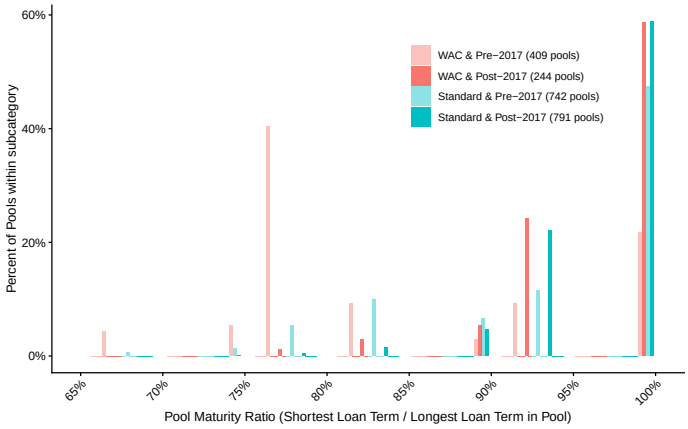
(a) Average Maturity Ratio



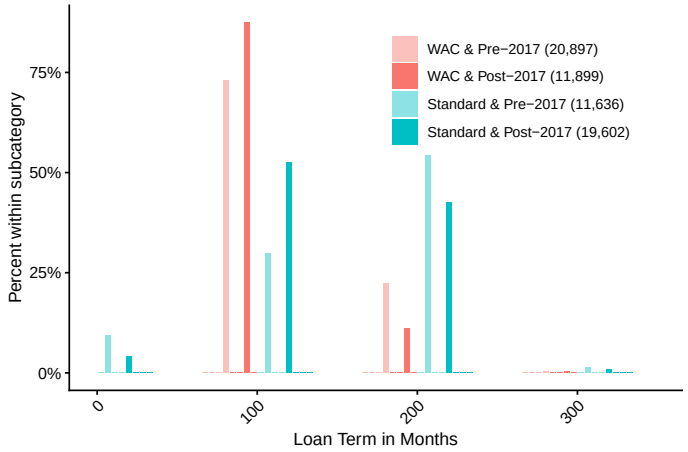
(b) Minimum Maturity Ratio

Notes: This figure shows the average (panel a) and minimum (panel b) maturity ratio for WAC and Standard pools over time. The vertical dashed line marks the implementation of the 2017 MMR policy change. The horizontal dashed line marks the 94% MMR threshold.

Figure 2. WAC vs Standard Pool Distributions



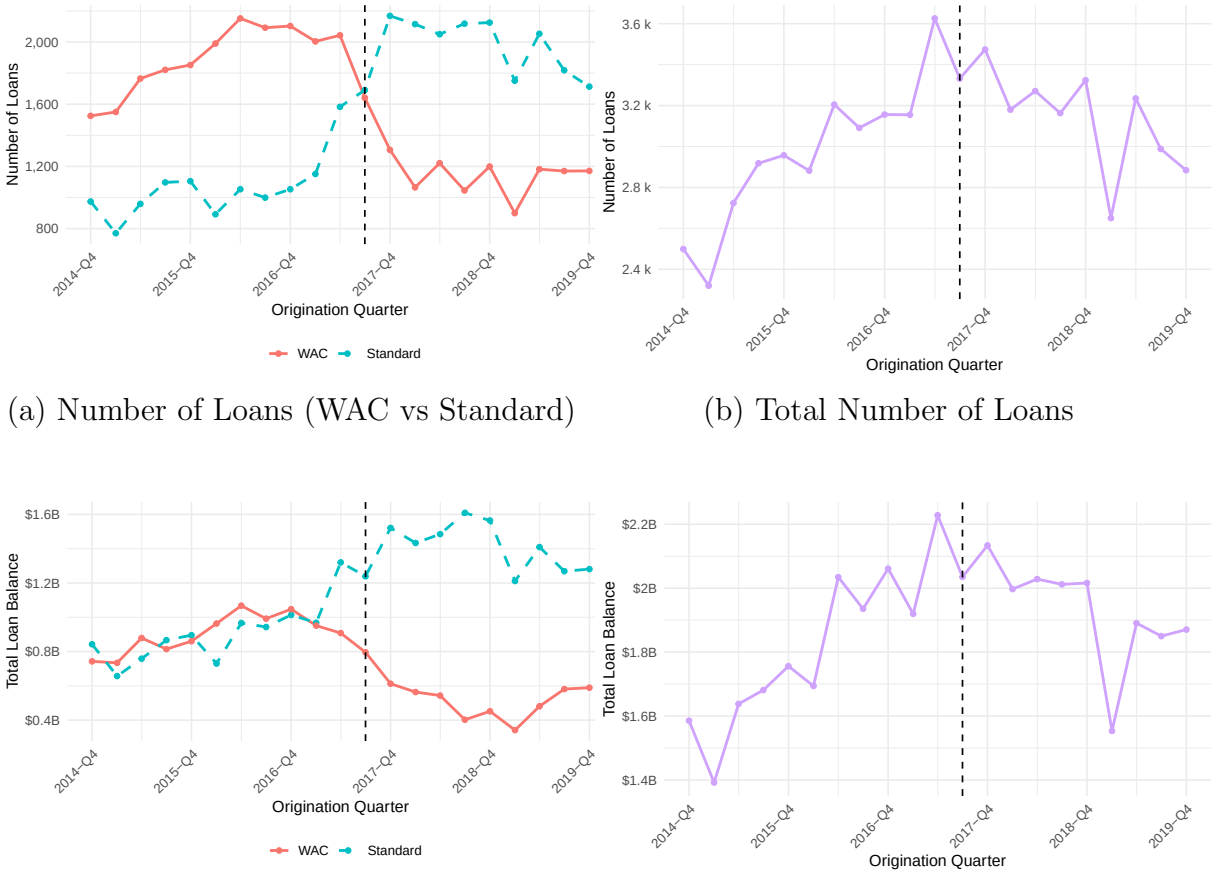
(a) Pool Maturity Ratio Distribution



(b) Loan Maturity Distribution

Notes: Panel (a) shows the distribution of maturity ratios (MMR) for WAC and Standard pools pre- and post-reform. Panel (b) shows the density of loan maturities grouped by whether the loan was in a WAC or Standard pool. The plot uses binwidth 100 meaning that loan terms 100-199 are recorded at bin 100.

Figure 3. WAC vs Standard Pool Loan Volume



(a) Number of Loans (WAC vs Standard)

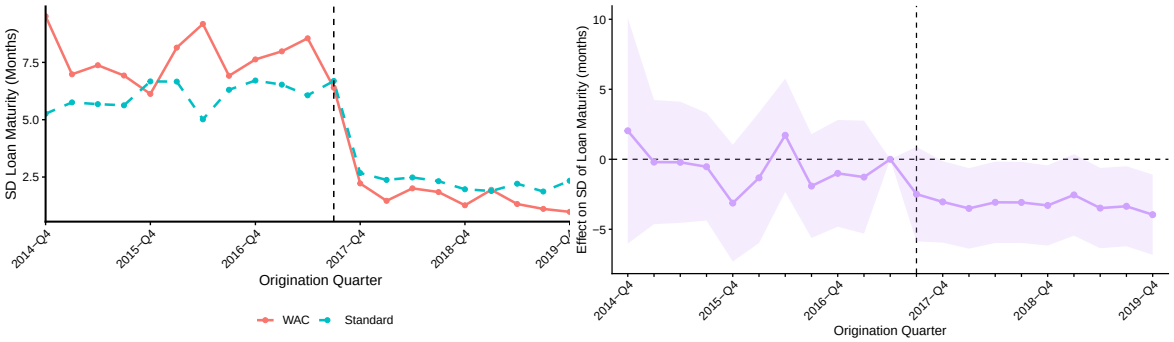
(b) Total Number of Loans

(c) Loan Balance (WAC vs Standard)

(d) Total Loan Balance

Notes: This figure presents the total number of loans and total loan balance originated in WAC versus Standard pools as well as the sum across both types, centered around the policy change.

Figure 4. WAC vs Standard Pool Maturity

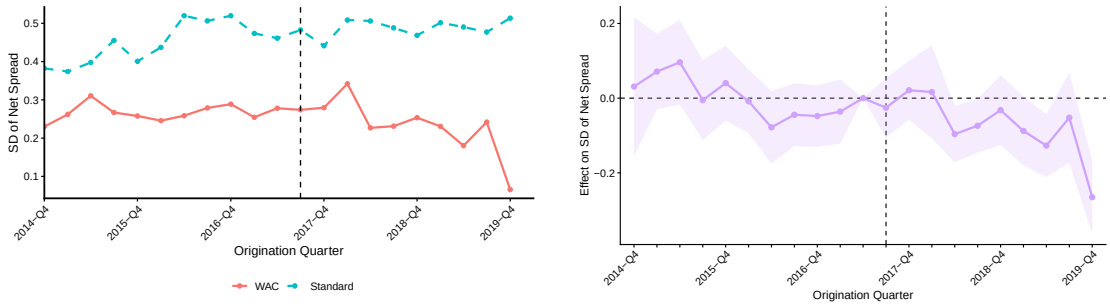


(a) Standard Deviation of Maturity - Data

(b) Standard Deviation of Maturity - DiD

Notes: This figure presents summary statistics and dynamic estimates of the dispersion of loan maturity for WAC and Standard pools during 2014Q4-2019Q4. Panel (a) shows the standard deviation of loan maturity (in months), computed at the pool level from loan-level data drawn from SBA Forms 1086 and 1454 and aggregated by pool issue year–quarter and pool type. The vertical dashed line marks the implementation of the 2017 policy change. Panel (b) reports dynamic difference-in-differences estimates of the effect of WAC pool status on the standard deviation of loan maturity. Coefficients are obtained from pool-level regressions interacting WAC status with pool issue year–quarter indicators, controlling for pool issue quarter fixed effects. Shaded areas denote 95% confidence intervals constructed using heteroskedasticity-robust standard errors.

Figure 5. WAC vs Standard Pool Net Spread

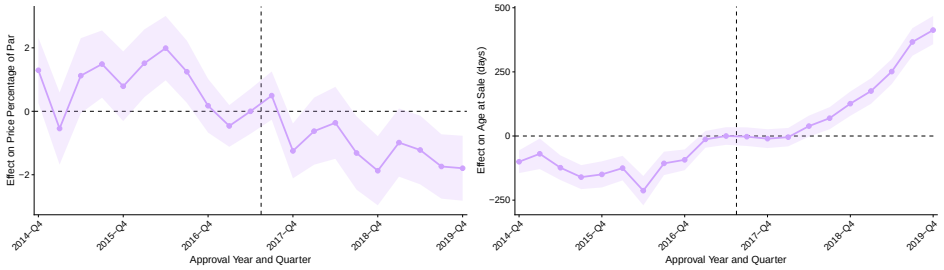


(a) Standard Deviation of Net Spread - Data

(b) Standard Deviation of Net Spread - DiD

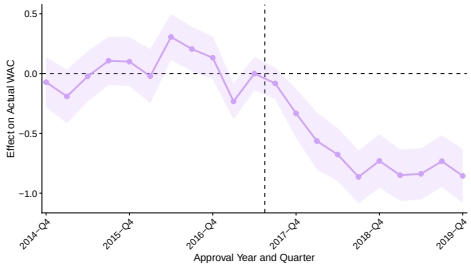
Notes: This figure presents summary statistics and dynamic estimates of the dispersion of net spread of WAC and Standard pools during 2014Q4-2019Q4. Panel (a) shows the standard deviation computed at the pool level from loan-level data drawn from SBA Forms 1086 and 1454 and aggregated by pool issue year–quarter and pool type. The vertical dashed line marks the implementation of the 2017 policy change. Panel (b) reports dynamic difference-in-differences estimates of the effect of WAC pool status on the standard deviation of net spread. Shaded areas denote 95% confidence intervals constructed using heteroskedasticity-robust standard errors.

Figure 6. MMR Effect on WAC Pools

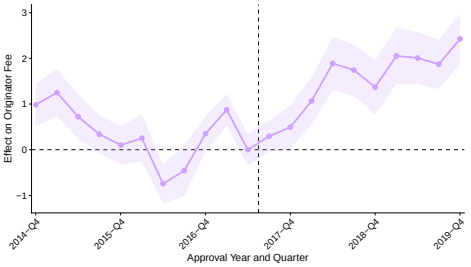


(a) Price Paid as Percent of Par

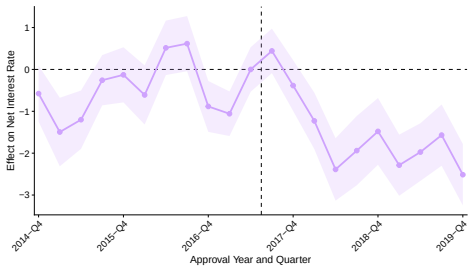
(b) Age at Sale



(c) Actual WAC



(d) Originator Fee



(e) Net Interest Rate

Notes: Figure plots the dynamic response of the coefficient of interest β_t from Equation 2, the dynamic equivalent of regression Equation 1 by subcategory during 2014Q4-2019Q4. Data are from forms 1086 and 1454 FOIA requested from the SBA and merged with the 7(a) data. Regressions are estimated at the loan level with assembler and lender fixed effects.

Figure 7. Number of 2 Digit NAICS Codes in Pool

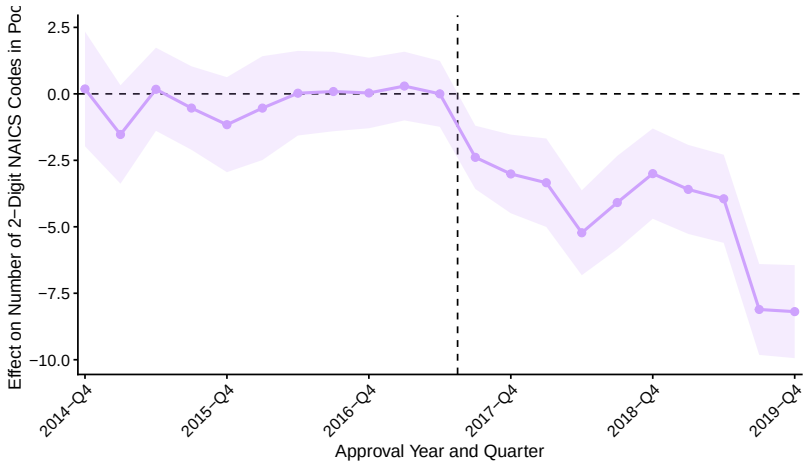
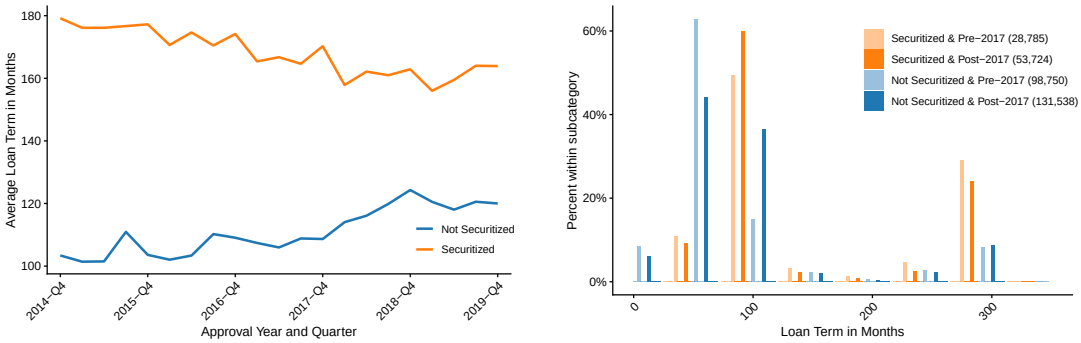


Figure 8. Descriptive Statistics on 7(a) Loans

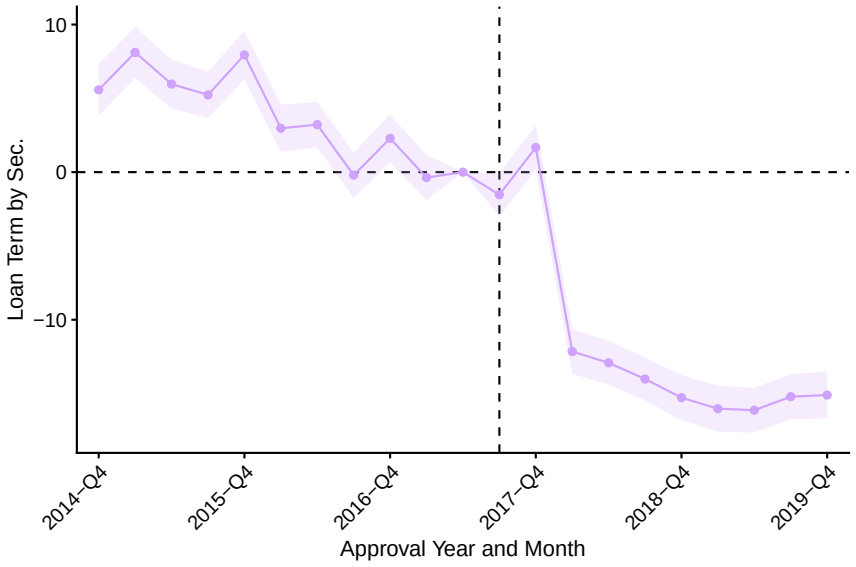


(a) Average Loan Maturity by Securitization

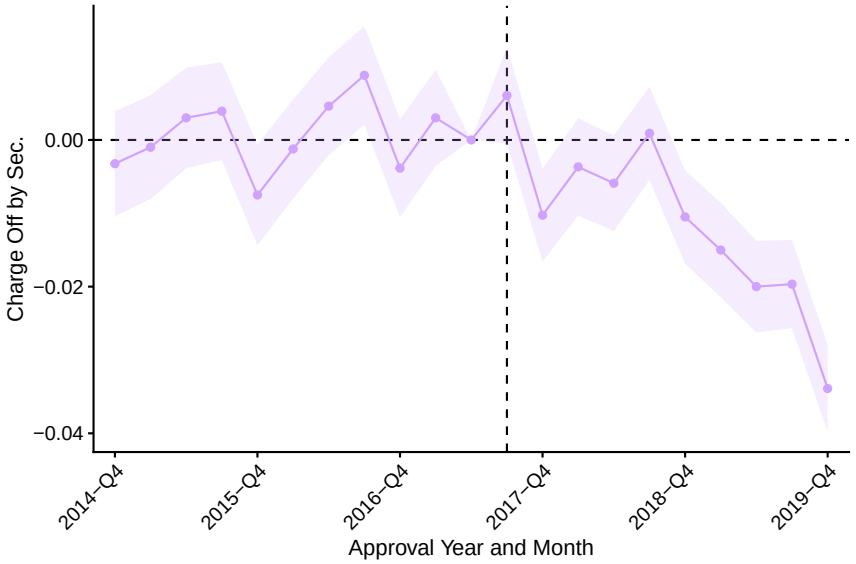
(b) Loan Maturities by Securitization and MMR

Notes: This figure presents loan characteristics for all loans approved in the period 2014Q4-2019Q4. Panel (a) shows the average loan maturity on the quarterly time series grouped by whether the loan was securitized. Panel (b) shows the density of loan maturities grouped by whether the loan was securitized and whether the loan was originated after MMR. Shorter term loans are more likely to be working capital loans which may not be secured while longer term loans are more likely to be real estate loans, secured by the real estate asset.

Figure 9. Loan Maturity on Actual Securitization



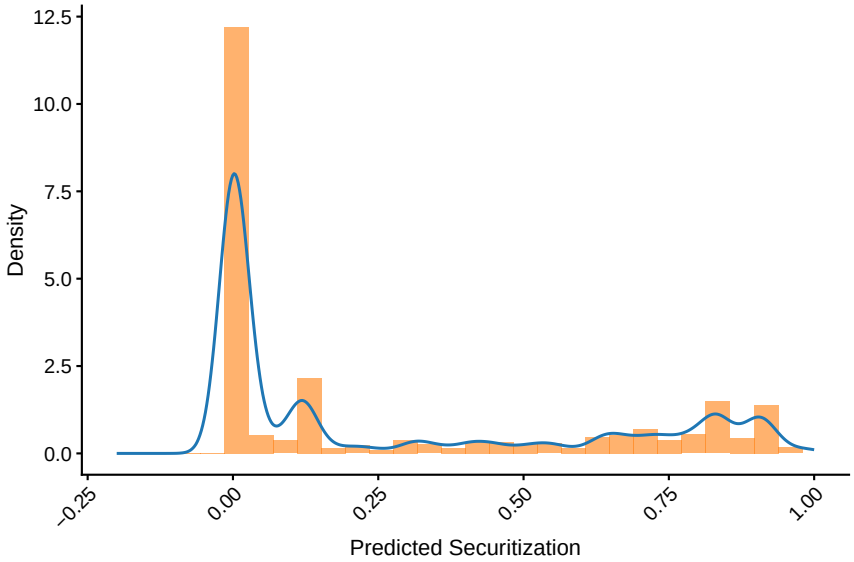
(a) Loan Maturities



(b) Default Status

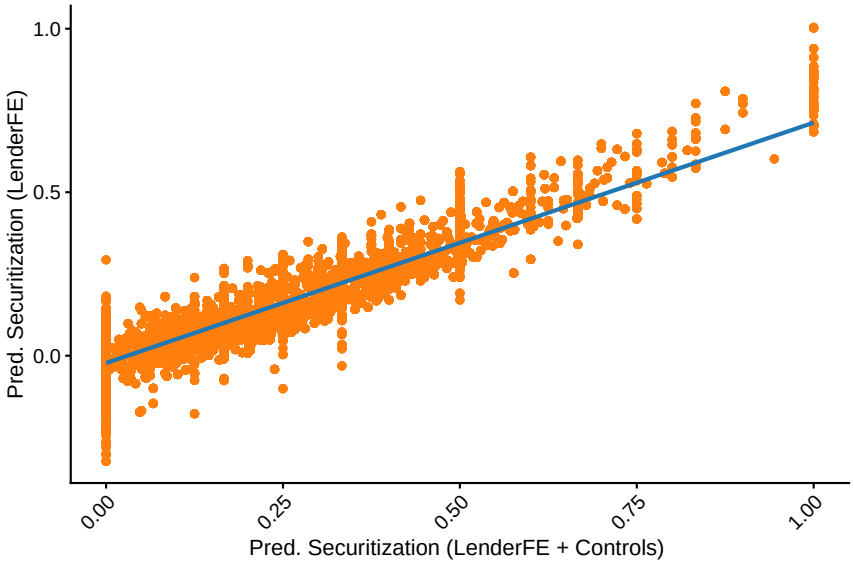
Notes: These figures present the point estimates and the associated standard errors of Y_i from Equation 6 capturing the changes in loan characteristics before and after the policy change in quarter 3 of 2017 during 2014Q4-2019Q4. The estimation controls for the quarter of loan origination fixed effects, NAICS sub-sector fixed effects, loan borrower zip code fixed effects, and loan lender fixed effects. 95% confidence intervals are included for each quarterly point estimate and standard errors are clustered at the zip code level.

Figure 10. Predicted Securitization



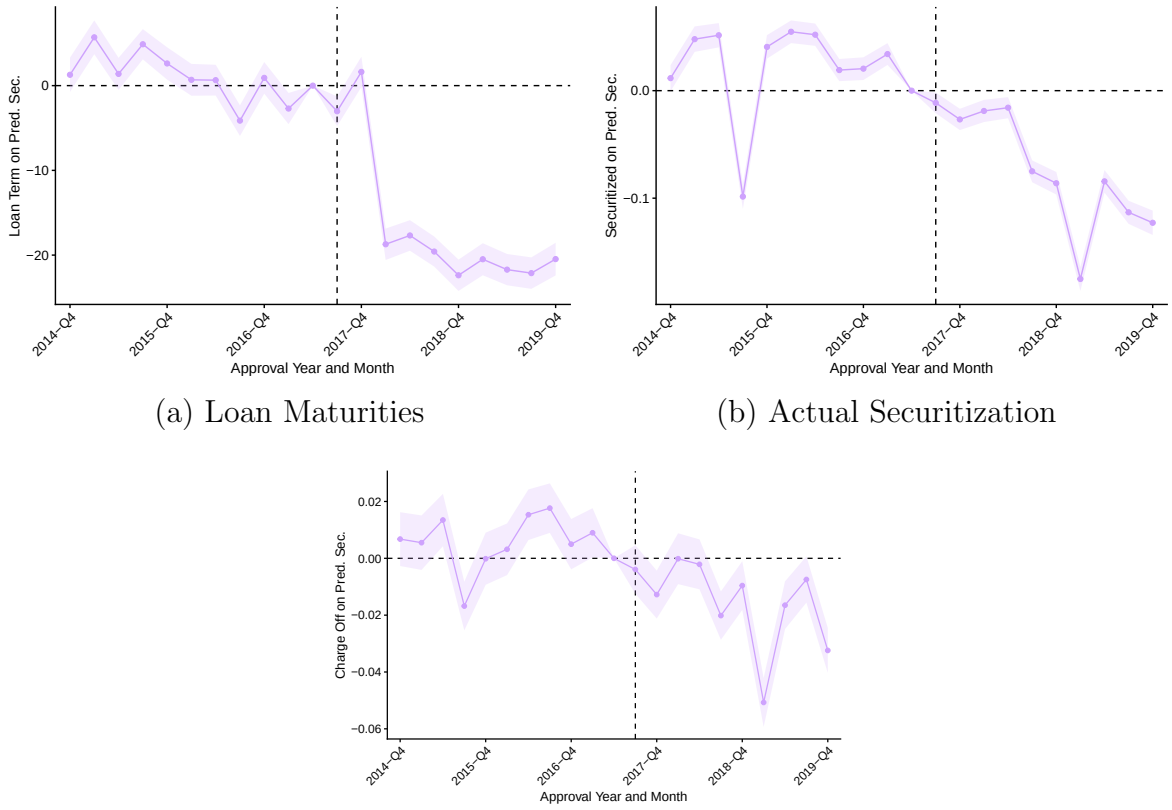
Notes: This figure shows the density of point estimates for $Securitized_i$ from Equation 10 for all loans originated during 2014Q4-2019Q4.

Figure 11. Predicted Securitization Measure Comparison



Notes: This figure shows the point estimates for $Securitized_i$ from Equation 11 and Equation 10 for all samples approved during 2014Q4-2019Q4. The Equation 10 estimation controls for lender fixed effects only. The Equation 11 estimation controls for lender fixed effects, the quarter of loan origination fixed effects, NAICS sub-sector fixed effects, and loan borrower zip code fixed effects.

Figure 12. DiD with Predicted Securitization



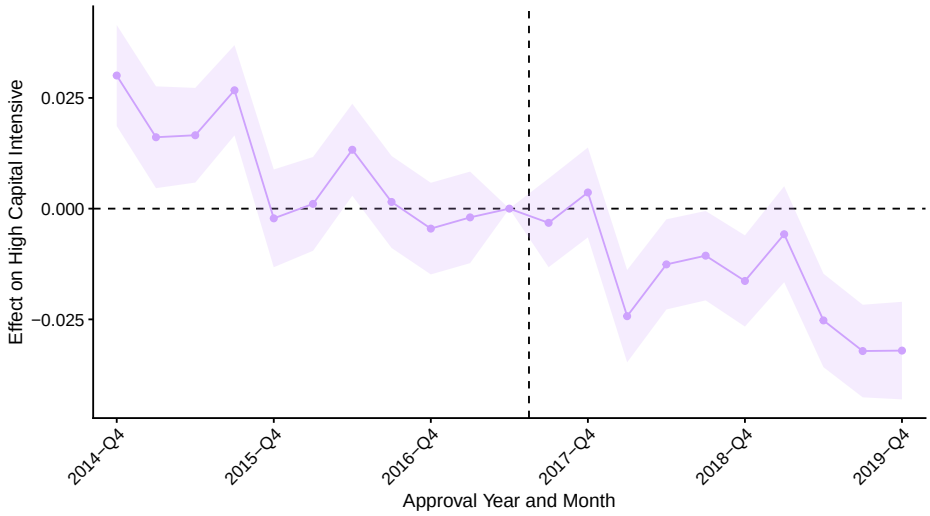
(a) Loan Maturities

(b) Actual Securitization

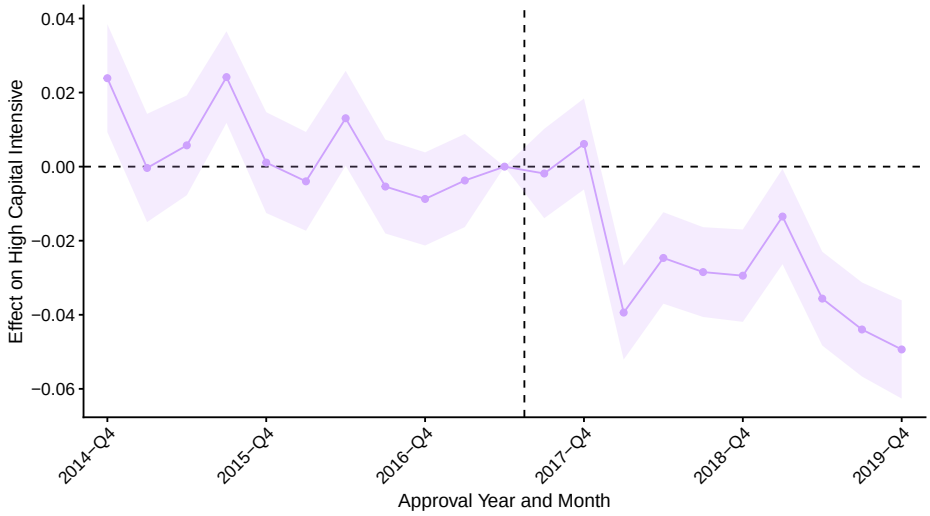
(c) Default Loan Status

Notes: Panel (a) presents the point estimates and the associated standard errors of $Term_i$ from Equation 12 capturing the changes in maturity before and after the policy change in quarter 3 of 2017 during 2014Q4-2019Q4. The estimation controls for log gross approval, initial interest rate, jobs supported, loan origination quarter fixed effects, borrower zip code fixed effects, lender fixed effects, and NAICS sub-sector fixed effects. 95% confidence intervals are included for each quarterly point estimate and standard errors are clustered at the zip code level. Panel (a) shows the average change in the loan maturities on the quarterly time series.
Panel (b) presents the point estimates and the associated standard errors of Y_i from Equation 14 capturing the changes in loan characteristics before and after the policy change in quarter 3 of 2017 during 2014Q4-2019Q4. The estimation controls for the quarter of loan origination fixed effects, borrower zip code fixed effects, and lender fixed effects. 95% confidence intervals are included for each quarterly point estimate and standard errors are clustered at the zip code level.
Panel (c) presents the point estimates and the associated standard errors of Y_i from Equation 15 capturing the changes in loan characteristics before and after the policy change. The estimation controls for the quarter of loan origination fixed effects, NAICS sub-sector fixed effects, loan borrower zip code fixed effects, and loan lender fixed effects. 95% confidence intervals are included for each quarterly point estimate and standard errors are clustered at the zip code level.

Figure 13. High Capital Intensive on Actual and Predicted Securitization



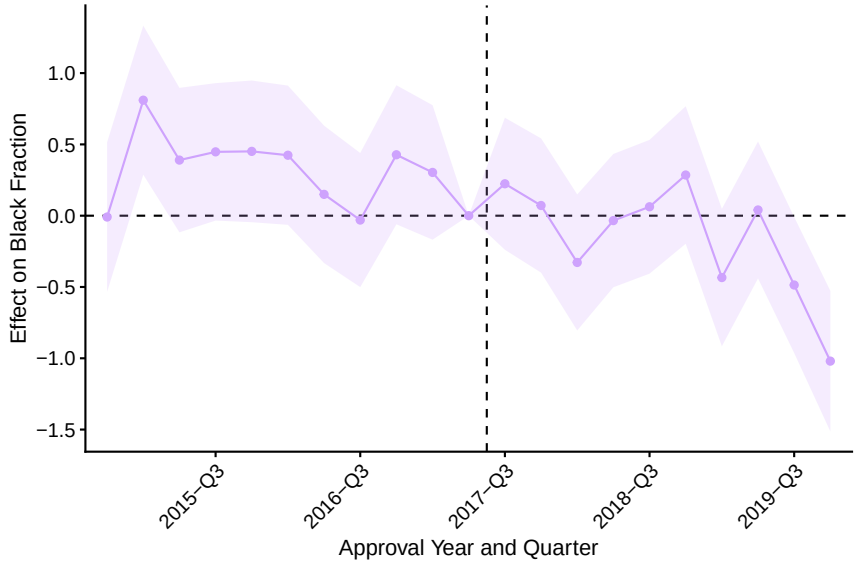
(a) Actual Securitization



(b) Predicted Securitization

Notes: This figure presents the point estimates and the associated standard errors of Y_i from Equation 8 capturing the changes in loan's propensity to be in a high capital intensive sector before and after the policy change in quarter 3 of 2017 during 2014Q4-2019Q4. The estimation controls for the quarter of loan origination fixed effects, loan borrower zip code fixed effects, and loan lender fixed effects. 95% confidence intervals are included for each quarterly point estimate and standard errors are clustered at the zip code level.

Figure 14. Fraction Black at Lender-County-Quarter Level



Notes: This figure presents the point estimates and the associated standard errors of Y_i from Equation 16 capturing the changes in racial makeup before and after the policy change in quarter 3 of 2017 during 2014Q4-2019Q4. The estimation controls for the quarter fixed effects and lender fixed effects. 95% confidence intervals are included for each quarterly point estimate and standard errors are calculated to be heteroskedasticity-robust.

Table 1 Summary Statistics Tables

Panel A. 1086				
Variable	Mean	Median	10%	90%
Certificate Interest Rate	1.83	2.08	0.86	2.62
Price Paid (% of Par)	111.10	111.16	107.55	114.64
SBA Program User Fee (%)	0.87	0.58	0.00	2.32
Age at Sale (days)	99.44	41.00	15.00	255.00
Panel B. 1454				
Variable	Mean	Median	10%	90%
Number of Loans	121.63	48.00	16.00	246.00
Total Loan Balance	25,786,504	14,898,064	3,011,142	62,320,133
Avg Loan Maturity (months)	165.29	118.54	82.31	293.32
Net Spread	2.56	2.47	1.70	4.25
Panel C. 7(a)				
Variable	Mean	Median	10%	90%
Loan Term	125.36	120.00	60.00	300.00
Charge Off	0.06	0.00	0.00	0.00
Securitized	0.26	0.00	0.00	1.00
Interest Rate	6.81	6.50	5.00	9.45
Loan Amount	404,511	136,000	20,000	1,104,000
SBA Guaranteed Loan Amount	296,595	87,805	10,000	831,060
Jobs Supported	10.00	4.00	0.00	25.00
Accommodation and Food Services	0.14	0.00	0.00	1.00
Administrative and Support and Waste Management and Remediation Services	0.05	0.00	0.00	0.00
Agriculture, Forestry, Fishing and Hunting	0.01	0.00	0.00	0.00
Arts, Entertainment, and Recreation	0.03	0.00	0.00	0.00
Professional, Scientific, and Technical Services	0.09	0.00	0.00	0.00

Notes: This table reports summary statistics—mean, median, 10th percentile, and 90th percentile—for SBA loan samples during 2014Q4–2019Q4. Panel A reports statistics for 1086 loans (after merging with 1454 data), Panel B for 1454 pools (after merging with 1086 data), and Panel C for 7(a) loans.

Table 2 DiD WAC vs Standard Pool Level Characteristics

Variable	Maturity	Net Spread
WAC	1.909***	-0.184***
	(0.482)	(0.012)
WAC & Post	-2.363***	-0.056***
	(0.518)	(0.017)
Quarter FE	Yes	Yes
R^2	0.18498	0.30117
N	1,438	1,438

Notes: This table reports static difference-in-differences estimates of the effect of Actual WAC pool status on the standard deviation of loan maturity (in months) and the standard deviation of net spread at the pool level during 2014Q4 - 2019Q4. Pool-level moments are constructed from loan-level data drawn from SBA Forms 1086 and 1454 and aggregated by pool issue quarter. The post-treatment indicator corresponds to the implementation of the 2017 policy change. All specifications include quarter fixed effects. Heteroskedasticity-consistent standard errors are reported in parentheses. ***, **, and * represent 1%, 5%, and 10% significance levels, respectively.

Table 3 DiD Loan Level Characteristics

Variable	Price Paid as % of Par	Age at Sale (days)	Net Interest Rate (%)	Actual WAC	Originator Fee
$\widehat{\text{WAC}} \times$ Post	-1.5377***	184.1060***	-0.6426	-0.5265***	0.8075**
	(0.5508)	(24.6880)	(0.4290)	(0.1312)	(0.3503)
Quarter FE	Yes	Yes	Yes	Yes	Yes
Lender FE	Yes	Yes	Yes	No	Yes
Assembler FE	Yes	Yes	Yes	No	Yes
Zip FE	Yes	Yes	Yes	Yes	Yes
NAICS FE	Yes	Yes	Yes	Yes	Yes
R^2	0.33	0.74	0.12	0.30	0.29
N	59921	59921	59921	59921	59921

Notes: This table reports static difference-in-differences estimates of the effect of Actual WAC pool status on loan pricing and sale characteristics. The FTA Wiki data is used to estimate the results for default, all other regressions are estimated at the loan level using data from SBA Forms 1086 and 1454 over the period 2014Q4–2019Q4. The post-treatment indicator corresponds to the implementation of the 2017 policy change. All specifications include quarter fixed effects. Heteroskedasticity-consistent standard errors are reported in parentheses. ***, **, and * represent 1%, 5%, and 10% significance levels, respectively.

Table 4 Loan Term on Securitization

Variable	(1)	(2)	(3)	(4)
Securitized	67.5669***	17.4390***	13.8558***	17.5006***
	(0.6112)	(0.5001)	(0.4811)	(0.5575)
Securitized & Post	-21.9276***	-15.6620***	-15.0227***	-14.4322***
	(0.6759)	(0.5298)	(0.5297)	(0.5262)
Interest Rate		2.3829***	1.6607***	-1.2329***
		(0.0893)	(0.1005)	(0.1138)
Loan Amount Logged		29.1628***	28.5583***	27.7470***
		(0.1689)	(0.1665)	(0.1619)
Jobs Supported		-0.4345***	-0.4125***	-0.3934***
		(0.0095)	(0.0093)	(0.0090)
NAICS FE		Yes	Yes	Yes
Quarter FE	Yes	Yes	Yes	Yes
Zip FE			Yes	Yes
Lender FE				Yes
R^2	0.11	0.43	0.46	0.52
N	312797	312795	308643	308373

Notes: This table reports loan level difference-in-differences regression results for loan maturities ($Term_i$) from Equation 6. Securitized ($Securitized_i$) denotes whether the loan was securitized. Post-treatment ($Post_t$) denotes whether the loan was originated after MMR. Gross Approval ($GrossApproval_i$) denotes the logged loan amount. Jobs Supported $JobsSupported_i$ denotes the number of jobs supported by the loan. The sample consists of loans originating during 2014Q4-2019Q4 with information on the originating entity. The additional covariates are included as controls. Standard errors are clustered at the zip code level in the regressions where zip code level fixed effects are included. ***, **, * represent 1%, 5%, and 10% significance, respectively.

Table 5 Charge Off on Securitization

Variable	Charge Off	Charge Off
Securitized	0.0403***	0.0439***
	(0.0018)	(0.0018)
Securitized & Post	-0.0110***	-0.0138***
	(0.0021)	(0.0021)
Interest Rate		0.0130***
		(0.0004)
Loan Amount Logged		-0.0042***
		(0.0004)
Jobs Supported		-0.0000
		(0.0000)
Quarter FE	Yes	Yes
Zip FE	Yes	Yes
NAICS FE	Yes	Yes
Lender FE	Yes	Yes
R^2	0.10	0.11
N	308,375	308,373

Notes: This table reports loan-level difference-in-differences regression results for two dependent variables: a charge-off indicator and the loan interest rate. Securitized ($Securitized_i$) denotes whether the loan was securitized. Post-treatment ($Post_t$) denotes whether the loan was originated after the implementation of MMR. The coefficient on Securitized captures the pre-MMR difference between securitized and non-securitized loans, while the coefficient on Securitized × Post captures the differential post-MMR effect for securitized loans. All specifications include quarter, zip code, and lender fixed effects. The sample consists of loans originated during 2014Q4–2019Q4 with information on the originating entity. Standard errors are clustered at the zip code level. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

Table 6 Loan Maturity on Predicted Securitization

Variable	(1)	(2)	(3)	(4)
$\widehat{\text{Securitization}}$	84.8763***	18.0531***	12.2485***	43.8517
	(0.8636)	(0.6804)	(0.6542)	(404384.6620)
$\widehat{\text{Securitization}}$ & Post	-33.1754***	-19.1822***	-18.1211***	-15.5309***
	(0.9319)	(0.7067)	(0.7098)	(0.7140)
Interest Rate		2.6864***	1.8195***	-0.9118***
		(0.0903)	(0.1026)	(0.1135)
Loan Amount Logged		29.7827***	29.1095***	28.3664***
		(0.1623)	(0.1596)	(0.1568)
Jobs Supported		-0.4401***	-0.4177***	-0.3975***
		(0.0095)	(0.0093)	(0.0090)
Quarter FE	Yes	Yes	Yes	Yes
NAICS FE		Yes	Yes	Yes
Zip FE			Yes	Yes
Lender FE				Yes
R^2	0.09	0.43	0.46	0.52
N	314017	314015	309836	309427

Notes: This table reports loan-level difference-in-differences estimates for loan maturity in months (terminmonths) using predicted securitization on SBA 7(a) loans originated during 2014Q4–2019Q4. The coefficient of interest is the interaction between Predicted Securitization ($\widehat{Securitized}_i$) and the post period ($Post_t$), where $Post_t$ indicates loans originated after the implementation of MMR. Standard errors are clustered at the zip code level. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

Table 7 Securitized and Chargeoff on Predicted Securitization

Variable	Securitized	Charge Off
$\widehat{\text{Securitization}}$ & Post	-0.0867***	-0.0198***
	(0.0038)	(0.0028)
Quarter FE	Yes	Yes
Zip FE	Yes	Yes
Lender FE	Yes	Yes
R^2	0.62	0.10
N	308,375	308,375

Notes: This table reports loan-level difference-in-differences regression results for two dependent variables and an indicator for actual securitization. The coefficient shown corresponds to the interaction term between Predicted Securitization ($\widehat{Securitized}_i$) generated in Equation 10 and Post-treatment ($Post_t$), where $Post_t$ denotes loans originated after the implementation of MMR. The sample consists of loans originated during 2014Q4–2019Q4 with available information on the originating entity. Standard errors are clustered at the zip code level. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

Table 8 NAICS Sector on Securitization

Variable	Accommodation and Food Services	Agriculture, Forestry, Fishing and Hunting	Professional, Scientific, and Technical Services	Administrative & Support & Waste Management & Remediation Services	Arts, Entertainment, and Recreation	Health Care and Social Assistance
Securitized	0.0443***	-0.0037***	-0.0140***	-0.0062***	0.0022	-0.0018
	(0.0030)	(0.0007)	(0.0021)	(0.0015)	(0.0015)	(0.0023)
Securitized & Post	-0.0115***	-0.0019**	0.0095***	0.0074***	0.0078***	-0.0055**
	(0.0032)	(0.0007)	(0.0024)	(0.0018)	(0.0017)	(0.0025)
Quarter FE	Yes	Yes	Yes	Yes	Yes	Yes
Zip FE	Yes	Yes	Yes	Yes	Yes	Yes
Lender FE	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.17	0.51	0.11	0.10	0.09	0.11
N	308,375	308,375	308,375	308,375	308,375	308,375

Notes: This table reports loan-level difference-in-differences regression results for NAICS sector loan shares across industries, including Accommodation and Food Services; Agriculture, Forestry, Fishing and Hunting; Professional, Scientific, and Technical Services; Administrative and Support and Waste Management and Remediation Services; Arts, Entertainment, and Recreation; and Health Care and Social Assistance, based on Equation 8. Securitized ($Securitized_i$) denotes whether the loan was securitized. The interaction term Securitized × Post captures the differential change in sectoral loan composition for securitized loans after the implementation of MMR relative to non-securitized loans. Post-treatment ($Post_t$) denotes whether the loan was originated after MMR. The sample consists of loans originating during 2014Q4–2019Q4 with information on the originating entity. All specifications include quarter, zip code, and lender fixed effects. Standard errors are clustered at the zip code level. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

Table 9 NAICS Sector on Predicted Securitization

Variable	Accommodation and Food Services	Agriculture, Forestry, Fishing and Hunting	Professional, Scientific, and Technical Services	Administrative & Support & Waste Management & Remediation Services	Arts, Entertainment, and Recreation	Health Care and Social Assistance
$\widehat{\text{Securitization}}$ & Post	-0.0133***	-0.0030***	0.0076**	0.0120***	0.0110***	-0.0088**
	(0.0042)	(0.0010)	(0.0034)	(0.0025)	(0.0023)	(0.0035)
Quarter FE	Yes	Yes	Yes	Yes	Yes	Yes
Zip FE	Yes	Yes	Yes	Yes	Yes	Yes
Lender FE	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.17	0.51	0.11	0.10	0.09	0.11
N	308,375	308,375	308,375	308,375	308,375	308,375

Notes: This table reports loan-level difference-in-differences regression results for NAICS sector loan shares across industries, including Accommodation and Food Services; Agriculture, Forestry, Fishing and Hunting; Professional, Scientific, and Technical Services; Administrative and Support and Waste Management and Remediation Services; Arts, Entertainment, and Recreation; and Health Care and Social Assistance, based on **??**. The coefficient reported corresponds to the interaction term Predicted Securitization × Post, where Predicted Securitization ($\widehat{Securitized_i}$) is constructed using lender fixed effects generated in Equation 10. This interaction captures the differential post-MMR change in sectoral loan composition attributable to predicted securitization exposure. Post-treatment ($Post_t$) denotes whether the loan was originated after MMR was posted. The sample consists of loans originating during 2014Q4–2019Q4 with information on the originating entity. All specifications include quarter, zip code, and lender fixed effects, along with additional control variables. Standard errors are clustered at the zip code level. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

Table 10 Aggregate Outcomes on Predicted Securitization

Variable	Black	White	High Capital Intensive	>$150K Loans	<$150K Loans
$\widehat{\text{Securitization}} \times$ Post	-0.4578**	0.3901	-0.046***	-0.048***	0.048***
	(0.1608)	(0.2658)	(0.006)	(0.005)	(0.005)
Quarter FE	Yes	Yes	Yes	Yes	Yes
Lender FE	Yes	Yes	Yes	Yes	Yes
R^2	0.23	0.37	0.12922	0.37934	0.37934
N	139,104	139,104	141,858	141,858	141,858

Notes: This table presents lender-county-quarter level difference-in-differences regression results for aggregate outcomes based on Equation 16. The main variables of interest are Predicted Securitization ($\widehat{Securitization}$) and its interaction with Post. The interaction term $\widehat{Securitization} \times Post$ captures the differential post-MMR change associated with predicted securitization exposure across counties. The sample consists of loans originating during 2014Q4–2019Q4 with information on the originating lender. Standard errors are heteroskedasticity-robust. ***, **, * represent 1%, 5%, and 10% significance, respectively.