Compete or Coordinate? Private Credit and the Reorganization of Banking Intermediation

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Preliminary & Comments Welcome

Abstract

I study how the entry of private credit reshapes bank functions in credit intermediation and the allocation of credit across firms. Following deregulation that relaxes leverage and disclosure constraints for private credit lenders, these lenders increase borrowing, allowing them to extend more credit to firms. In response to this expansion, small banks defend their core markets by lowering loan rates, loosening underwriting standards, and expanding credit to small businesses, while large banks retreat from direct lending and instead move upstream to fund business credit intermediaries, taking advantage of regulatory arbitrage. By increasing competition in credit markets and providing firms with more financing options, private credit stimulates local economic activity and improves access to credit, particularly for underserved and financially constrained firms.

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1 Introduction

Since the 2009 financial crisis, stricter regulatory scrutiny made lending more expensive for banks, pushing credit outside the regulated banking system (Irani et al. (2021); Chernenko, Erel, and Prilmeier (2022)). In U.S. corporate credit markets, much of this growth in non-bank lending has taken the form of private credit (Davydiuk, Marchuk, and Rosen (2024a); Hinzen et al. (2026)). Private credit, also referred to as private debt or direct lending, is provided by non-bank financial institutions that raise capital from banks and institutional investors and lend to businesses, primarily small- and middle-market firms. The U.S. private credit market has grown rapidly to approximately $1.4 trillion, making it comparable in size to both the leveraged loan and high-yield bond markets (Bowman (2026)).

But, does private credit directly compete with banks, or reshape how banks lend and compete in credit markets? Private credit competes directly with banks for borrowers in small- and middle-market corporate lending. Yet, private credit also creates regulatory arbitrage opportunities for banks because lending to these nonbanks carries lower risk weights than direct corporate lending (Pandolfo (2025)). These loans are typically senior and well collateralized, and have lower default risk than direct corporate loans (Cai and Haque (2024); Berrospide et al. (2025)). This creates incentives for banks to scale back direct lending to fund private credit instead, and economize on regulatory capital. Motivated by these opposing forces, this paper examines three questions: (i) Are banks and private credit substitutes or complements?, (ii) Does greater competition from private credit lead banks to weaken underwriting standards and take on greater credit risk?, and finally, (iii) What are the real economic consequences of this bank–nonbank competition for local economies?

Theories of incumbent–entrant competition predict that when facing threats of new entrants, incumbents may invest, expand capacity, and compete aggressively to defend their market position and deter entry (Spence (1977); Dixit (1980)). Because small banks have a comparative advantage in relationship lending and soft-information production (Stein (2002); Berger et al. (2005)) and primarily serve small- and middle-market firms, private credit directly competes for their core borrowers. My first hypothesis is therefore that, as private credit expands, small banks defend their core markets by lowering loan rates, expanding small-business lending, and loosening underwriting standards. However, incumbents do not always respond to incumbent threats by competing head-to-head. Industrial organization (IO) models argue that competitive pressure in one market can make other segments more attractive, leading incumbents to strategically reposition rather along the production chain than expand in the contested market (Bulow, Geanakoplos, and Klemperer (1985); Riordan (1998)). In contrast to small banks, large banks have less of a comparative advantage in

soft information processing and screening small, opaque firms. They also face greater regulatory capital requirements but have strong internal capital markets to provide funding to nonbanks at scale. My second hypothesis is therefore that, rather than competing directly with private credit for borrowers, large banks respond to private credit entry by scaling back direct corporate lending and repositioning upstream to fund private credit intermediaries, thereby taking advantage of regulatory arbitrage. Finally, greater competition from shadow banks need not always hurt the real economy. Although private credit operates outside the regulated banking system, it can increase competition and give businesses more financing options (Bowman (2026)). My third hypothesis is therefore that private credit expansion promotes local economic activity by increasing access to capital, particularly for small and underserved firms.

Empirically examining the effects of private credit on bank lending exhibits three identification challenges. The first is that private credit does not enter markets randomly. These lenders may target high-growth markets with strong credit demand or, alternatively, underserved markets with greater growth opportunities. Second, unobserved local economic conditions may simultaneously affect both private credit activity and bank lending decisions but may not be fully captured by the econometric model. Lastly, observed lending outcomes do not allow us to isolate changes in credit supply from underlying borrower demand.

I address these endogeneity concerns in several ways. I exploit the 2018 Small Business Credit Availability Act (SBCAA) as a plausibly exogenous shock to the supply of private credit. The reform introduced two key changes for Business Development Companies (BDCs)[1] First, it reduced the asset coverage requirement from 200% to 150%, allowing BDCs to increase their debt-to-equity ratio from 1:1 to 2:1 and substantially expand their borrowing capacity. Second, the Act relaxed disclosure and reporting requirements for publicly traded BDCs, reducing the regulatory costs of raising capital. The reform therefore increased the ease and capacity of BDCs to borrow more and supply more credit to firms. Importantly, market participants cannot fully anticipate the implementation of this reform, as earlier proposals in 2012, 2013, and 2015 failed to pass.Moreover, adopting the higher leverage limit requires approval from either the BDC's board of directors or shareholders, which can delay leverage adjustments and limit lenders' ability to time adoption in response to contemporaneous credit demand (Balloch and Gonzalez-Uribe (2021)). The SBCAA therefore provides plausibly exogenous variation in the supply of private credit.

[1] A Business Development Company (BDC) is a type of closed-end investment company regulated by the U.S. Securities and Exchange Commission (SEC) that provides capital to small, middle-market, and financially distressed firms. Congress created BDCs in 1980 through amendments to the Investment Company Act of 1940 to facilitate investment in businesses with limited access to traditional financing. See https://www.sec.gov/resources-small-businesses/glossary.

I then construct two measures of ex-ante exposure to private credit. For the county-level analysis, I define *Treated* as an indicator equal to one if the number of private credit investments in a county is above the median across counties in 2017, immediately before the SBCAA. This empirical design focuses on the intensive margin of exposure: both treated and control groups had private credit activity before the reform, but treated counties had greater ex-ante exposure and should therefore be more affected when the SBCAA expands private credit supply. The intensive margin helps separate the effects of private credit expansion from the endogenous entry of private credit lenders. For the bank-level analysis, I measure each bank's exposure to private credit as the share of a bank's deposits located in ZIP codes with private credit activity in 2017, relative to the bank's total deposits nationwide. The underlying assumption is that banks with greater ex-ante exposure operate more heavily in markets where private credit is present and should therefore be more affected by the subsequent expansion of private credit.

I first show that the deregulation expands BDC lending capacity. By allowing BDCs to double their leverage for a given level of equity and easing disclosure requirements for raising external capital, the reform leads to a steady increase in BDC debt-to-equity ratios over time. This additional borrowing translates into greater lending capacity: BDCs finance more portfolio firms, increase both the number and dollar amount of investment positions, and originate more new investments. These results establish the first-stage channel through which the reform expands the supply of private credit, which I use in the subsequent analysis to study how banks and local credit markets respond.

A further advantage of the empirical design is that it mitigates the measurement challenge arising from the broad definition of private credit. Because the deregulation applies only to BDCs, and because I hand-collect BDC investment data from SEC filings that all registered BDCs are required to file, whether publicly traded or privately held, both the policy shock and the measurement of private credit exposure are cleanly tied to the same well-defined market segment, which accounts for nearly half of the U.S. private credit market. Furthermore, I conduct several additional tests to support the validity of my empirical design. I show that treated and control groups exhibit similar characteristics across a range of ex-ante economic and financial characteristics. I also include state-by-year fixed effects, in addition to baseline bank and county fixed effects, to account for time-varying economic conditions within each state. Finally, I control for several county characteristics measured in 2017 and interact them with the Post indicator, allowing counties with different initial conditions to evolve differently after the reform without controlling for variables that may themselves be affected by private credit expansion.

I next examine how small banks adjust their lending strategies in response to the ex-

pansion of private credit. Using RateWatch data on advertised loan rates at the branch level, I find that small banks lower loan rates on both commercial lines of credit and small business loans in markets with greater ex-ante exposure to private credit. Among small banks, spreads decline by 1.3–3.8 percentage points for commercial lines of credit and by approximately 4 percentage points for small business loans, while the pricing response is substantially weaker among large banks. These findings suggest that small banks respond to private credit expansion by competing more aggressively on loan prices, consistent with greater overlap between their traditional borrower base and the firms targeted by private credit. Small banks also adjust the quantity of credit they provide. Using loan-level data, I find that small banks expand lending to small businesses following private credit expansion. Small banks also expand their local presence in more exposed markets. The number of bank branches increases by approximately 9 percent, accompanied by an increase in local deposits. This evidence is consistent with small banks investing in local information production and borrower relationships as competition for small and middle-market firms intensifies. Local presence is particularly important for relationship lending, as small and informationally opaque borrowers tend to rely on geographically proximate lenders (Petersen and Rajan (1994); Cantillo and Wright (2000); Degryse and Ongena (2005)).

Does this expansion in bank lending, in response to competition from private credit, reflect excessive risk-taking and weakened underwriting standards? I find that small banks become approximately 8.5–12.5 percentage points more likely to originate loans through expedited or low-documentation SBA programs associated with greater borrower risk. Despite extending credit to ex-ante riskier borrowers, however, I find no corresponding deterioration in ex-post loan performance: non-performing loans relative to assets do not increase at the institution level. These results suggest that small banks expand lending toward riskier borrowers without facing greater realized credit losses ex-post, consistent with their comparative advantage in processing soft information and monitoring opaque firms. In addition, the partial guarantees provided under the SBA 7(a) program mitigate downside risk for lenders and may facilitate lending to riskier borrowers.

How do large banks respond to the entry of private credit if they do not compete directly in lending markets? I find that large banks reposition themselves upstream in the credit intermediation chain. Following private credit expansion, they reduce lending to small businesses and direct CI lending, while substantially increasing lending to business credit intermediaries, including private credit funds. The increase in lending to nonbank intermediaries is economically significant across several measures. These findings suggest that large banks respond to private credit not by competing for the same corporate borrowers, but by supplying capital to the intermediaries that ultimately lend to these firms.

This reallocation is consistent with regulatory arbitrage incentives. Lending to private credit intermediaries receives more favorable regulatory treatment than direct corporate lending, allowing large banks to maintain exposure to corporate credit while economizing on regulatory capital. Consistent with this mechanism, large banks with greater ex-ante exposure to private credit experience increases in interest income and returns on equity following the reform. These findings suggest that financing private credit intermediaries allows large banks to optimize their balance sheets.

To further examine this mechanism, I examine which banks have stronger incentives to exploit this regulatory arbitrage. The evidence highlights two underlying mechanisms: regulatory incentives and organizational capacity. Banks with higher non-performing loan ratios, lower loss-coverage ratios, and tighter funding conditions increase lending to non-bank intermediaries more strongly following private credit expansion. These findings are consistent with banks facing greater balance-sheet and capital constraints having stronger incentives to take advantage of the favorable regulatory treatment of indirect lending. I also find a stronger response among larger banks, consistent with greater scale and internal capital markets facilitating their ability to provide funding to private credit intermediaries. Moreover, local banking market structure affects banks' incentives to compete with private credit. The expansion of small business lending is significantly weaker in more concentrated banking markets, consistent with greater market power reducing banks' incentives to compete aggressively for marginal borrowers, as borrowers have fewer outside options and face greater switching costs. In contrast, banks expand small business lending more strongly in markets with greater ex-ante business risk. One interpretation is that SBA 7(a) guarantees mitigate lenders' downside risk, allowing banks to compete more aggressively in riskier markets. The lending response is also stronger in counties with greater ex-ante business applications, consistent with stronger underlying credit demand allowing banks to expand lending rather than being displaced by private credit.

Finally, what are the real economic consequences of this bank–nonbank competition for local economies? I find that counties with greater ex-ante exposure to private credit experience stronger business formation and economic activity following the reform. These real effects are particularly pronounced among young and small firms. The number of young firms increases by 3.6 percent, compared with 2.2 percent among older firms, while the number of small firms increases by 3.5 percent, compared with 0.8 percent among medium-sized firms. This concentration among young and small firms is consistent with private credit expanding financing options for firms that are more likely to face financing constraints.

Overall, my results suggest that private credit does not simply replace banks, but reorganizes the roles performed by banks in credit intermediation. While small banks compete

aggressively downstream to defend their core markets, large banks scale back direct lending to firms and move upstream to supply capital to these nonbanks and take advantage of regulatory arbitrage opportunities. These responses reflect differences in banks' comparative advantages and organizational structures, which shape how they respond to competition from nonbank lenders. Moreover, my findings suggest that the rapid growth of shadow banking is not necessarily detrimental to credit markets. By providing an alternative source of capital outside traditional banks, nonbank intermediaries can increase competition, broaden firms' financing options, and improve access to credit, particularly for underserved and financially constrained firms.

2 Literature Contributions

This paper contributes to three strands of the literature. First, my findings contribute to the growing literature on private credit and nonbank financial intermediation. Prior studies examine the rise of private credit, the types of firms it finances, and its effects on firm growth, innovation, and financing outcomes (Chernenko, Erel, and Prilmeier (2022); Davydiuk, Marchuk, and Rosen (2024a); Davydiuk et al. (2024); Jang (2024); H Rocha and Sinno (2026)). Related work studies how private credit interacts with traditional bank financing and shows that banks and private credit lenders can perform different functions in corporate lending (Haque, Mayer, and Stefanescu (2024); Chernenko, Ialenti, and Scharfstein (2025)). A growing literature also highlights the interconnectedness between banks and nonbanks, including the role of bank funding of private credit, regulatory arbitrage, and the implications of bank–nonbank lending for monetary policy transmission and aggregate credit supply (Haque, Jang, and Wang (2025); Lyonnet and Chretien (2025); Li et al. (2026)). My findings add to this literature by showing that the growth of private credit changes not only who provides credit, but also how credit is intermediated and where it ultimately flows. Private credit induces banks to reorganize their roles in credit provision, while the resulting reallocation of bank lending toward nonbank intermediaries can crowd out direct corporate lending. The benefits of private credit expansion are also uneven across firms, with young and small firms benefiting the most.

Second, my paper contributes to the literature on bank–nonbank competition and the organizational structure of banks. A large literature shows that small and large banks have different comparative advantages in lending. Small banks specialize in relationship lending and the production of soft information, while large banks rely more heavily on hard information, scale economies, and internal capital markets (Petersen and Rajan (1994); Berger and Udell (1995, 2002); Stein (2002); Cole, Goldberg, and White (2004); Berger

et al. (2005); Gilje, Loutskina, and Strahan (2016)). Other work shows that competition can affect banks' incentives to screen borrowers, maintain lending relationships, and supply credit (Dell'Ariccia, Friedman, and Marquez (1999); Petersen and Rajan (1995); Boot and Thakor (2000); Marquez (2002); Jiménez, Lopez, and Saurina (2013)). My findings show that these organizational differences also shape how banks respond to competition from nonbank lenders. Small banks respond to private credit by competing more aggressively for borrowers in the markets where they hold informational advantages, while large banks increasingly move upstream and provide capital to nonbank intermediaries. Thus, whether banks compete with or coordinate with private credit depends importantly on their comparative advantages, regulatory incentives, and organizational capacity.

Finally, my findings relate to the industrial organization literature on entry and strategic competition. Classic industrial organization (IO) models show that incumbents may respond to entry by investing or expanding capacity to defend their markets (Spence (1977); Dixit (1980)), while other work shows that firms may accommodate entry or strategically reposition when competition changes the relative profitability of different markets or stages of production (Fudenberg and Tirole (1984); Bulow, Geanakoplos, and Klemperer (1985); Riordan (1998)). My setting shows that these responses can coexist within the same market. Faced with the same expansion of private credit, small banks compete more aggressively downstream, while large banks reposition upstream and supply capital to the new intermediaries. More broadly, the findings show that entry need not simply displace incumbents or intensify head-to-head competition. Instead, entry can reorganize the roles of incumbent firms and reshape the structure of intermediation itself.

3 Data and Sample

3.1 BDC Registry and Portfolio Investment Data

I construct a dataset of private credit investments from the filings of Business Development Companies through the SEC EDGAR system. Under the Investment Company Act of 1940, all publicly traded and privately held BDCs are required to file annual and quarterly reports (Forms 10-K and 10-Q) with the SEC. These filings include a *Schedule of Investments* (SOI), which lists each portfolio firm, the instrument held, its principal, cost, and fair value, and, for debt instruments, the contractual interest rate and maturity.

I begin with the universe of U.S. BDCs identified from the SEC Business Development Company (BDC) Report, which serves as the registry of all entities that have elected (or

notified the SEC of their intent to elect) BDC status.[2] Over 2012–2026 the registry lists 366 entities, of which 255 file at least one Form 10-K or 10-Q on EDGAR.[3] Because these disclosures are mandatory for all active BDCs, regardless of whether they are publicly traded or privately held, my sample is less likely to be subject to selective coverage concerns.

To identify the geographic locations of portfolio firms, I collect addresses from six sources. First, I use the BDC's own Form N-2, the registration statement filed when a BDC offers securities, whose Item 8.3 reports each portfolio company and its address.[4] Second, for firms not found in the BDC's own N-2, I use addresses reported for the same firm in another BDC's Form N-2 under the same timing rule, since portfolio firms may borrow from multiple BDCs. Third, I use the issuer address from the portfolio firm's own Form D filing, selecting the filing closest in time to the schedule. Fourth, for SEC registrants, I use the business address reported in the firm's EDGAR registrant record. Fifth, I match firm names to the Global Legal Entity Identifier Foundation (GLEIF) register, preferring U.S. entities and the earliest registration. Sixth, for firms still without an address, I conduct a structured web search that links acquisition vehicles (for example, "XYZ Buyer, Inc." or "ABC Merger Sub") to the underlying operating company, prioritizes addresses from the period in which the firm is held, and records the street address, source, and confidence level. Only results containing a five-digit ZIP code or identifying a foreign country are retained.[5]

Because BDCs report interest rates using different conventions, I standardize the reported yields based on the contractual terms and accompanying footnotes. When a BDC prints the total rate, I use it; otherwise I sum the cash and payment-in-kind (PIK) components;

[2]SEC Business Development Company (BDC) Report: https://www.sec.gov/data-research/sec-markets-data/opendatasetsshtmlbdc

[3]I define an active BDC in a given year as one that filed a Form 10-K or 10-Q during that year, and I retrieve all 6,506 annual and quarterly reports of these BDCs for fiscal periods 2011Q3 to 2026Q2. From each filing I parse the SOI tables as of the filing's report date and record one observation per investment position, defined as one instrument in one portfolio firm, together with the investment type, the industry, the amount, and the interest rate. For each BDC and calendar year, I retain the schedule with the December report date, or the latest report date in the year when the BDC's fiscal year does not end in December.

[4]I collect all N-2 family filings for the BDCs in the sample (2,183 filings by 120 BDCs) and parse 109,584 portfolio-company address records from 1,410 filings. I match portfolio firms in the SOI to the most recent N-2 filed before the schedule's report date. If no prior filing exists, or the most recent filing is more than 36 months old, I carry addresses backward from the earliest N-2 filed within nine months after the report date, assuming firms are unlikely to change addresses over such a short period. Firm names are matched after removing punctuation and corporate suffixes such as Inc., LLC, Corp., and Holdings, and alternatively using the first three words of the name. N-2 filings more than nine months after the report date are not used.

[5]Across all 334,021 positions from 2012–2026, SEC filings (the four EDGAR-based sources) provide 64.4% of addresses, while the LEI register and web search provide another 18.3%; 17.4% of positions remain unmatched. Coverage is highest in the years used to construct exposure: in 2017, 89.3% of positions have an identified address, with the BDC's own N-2 providing 55.2% and another BDC's N-2 another 19.5%. The share obtained from a BDC's own N-2 declines after 2020 because many BDCs launched since then are non-traded BDCs that file few N-2s; other BDCs' N-2s, the LEI register, and web searches fill much of this gap.

otherwise I compute the rate from the reference rate, the spread, and the floor, adding any PIK component; and otherwise I use the fixed coupon.[6] The level of the reference rate is taken from the filing's own footnotes; when the filing does not state it, I use the median level reported by other BDCs with the same report date, and otherwise the rate published by the Federal Reserve Bank of St. Louis (FRED). Exit fees, prepayment fees, and alternative rates at the borrower's option are ignored. For investments whose interest rates cannot be determined from the available disclosures, I leave the interest rate as missing.

Finally, I exclude investments made indirectly through a BDC's portfolio company subsidiaries, as these represent an additional layer below the underlying portfolio firms.[7] I also exclude taxi medallion loans, investments in REITs and other real estate loans, non-U.S. portfolio firms, firms located in Puerto Rico, Guam, and the U.S. Virgin Islands, and positions for which an address or ZIP code cannot be identified. The full panel covers 334,021 investment positions reported by 241 BDCs over 2012–2026, of which 242,555 positions in 44,085 unique portfolio firms held by 238 BDCs remain after the sample filtering.[8]

3.2 Federal Reserve Financial Accounts Data

To measure the size and growth of the U.S. private credit market, and to understand how private credit lenders fund themselves and where they invest their capital, I obtain quarterly data from the Federal Reserve's Financial Accounts of the United States (Z.1). Beginning with the September 11, 2026 release, the Financial Accounts separately report the balance sheets of major private credit intermediaries, including business development companies (BDCs), private debt funds, and interval and tender-offer funds. I use these data in three ways. First, I sum private credit loans across holding sectors to measure total private credit lending. I compare its growth and amount outstanding with two traditional sources of business credit: bank loans to nonfinancial businesses and syndicated loans to

[6]For example, a BDC may report an interest rate as "Prime + 6.45%, 9.95% floor, 3.85% exit fee" as of December 31, 2017. I calculate the coupon as max(Prime + Spread, Floor). Since the U.S. Prime Rate was 4.50% on December 14, 2017, the coupon rate equals $\max(4.50\% + 6.45\%,\ 9.95\%) = 10.95\%$. I exclude the exit fee because it is a one-time payment rather than part of the annual coupon. As another example, an investment quoted as "10.07% cash (LIBOR + 8.70%, Floor 10.00%), 4.75% PIK" is calculated as 14.82% (=10.07% + 4.75%), where the LIBOR rate and floor are obtained directly from the BDC's footnotes. A floor of 4% or less is treated as a floor on the reference rate and a higher floor as a floor on the total rate.

[7]The largest case is Newtek Business Services, whose schedule lists individual SBA 7(a) loans made by its subsidiary Newtek Small Business Finance; Newtek's equity investments in its controlled companies are retained.

[8]In 2017, the year used to construct each bank's ex ante exposure to private credit, the schedules of 95 active BDCs report 12,658 positions; the filters remove 1,550 indirect positions, 1,225 positions without an address, 447 non-U.S. firms, 78 real estate investments, 33 taxi medallion loans, and 26 positions in Puerto Rico or Guam, leaving a final 2017 sample of 9,299 investments in 4,750 unique portfolio firms located in 1,802 ZIP codes, made by 94 active BDCs.

nonfinancial corporations. Second, I use the sector balance sheets to examine how private credit intermediaries raise funding and where they invest it. On the liability side, I separate bank borrowing, debt securities, and equity and fund shares; on the asset side, I separate private credit loans, other loans, and securities. Third, I use the holder-by-sector breakdown of private credit loans to measure how much of the market is held by each type of lender and how these shares change over time.

3.3 Bank Loan Pricing

To examine the effects of private credit expansion on bank retail loan pricing, I obtain deposit and loan rate data from **RateWatch**. The dataset provides branch-weekly information on advertised interest rates for a wide range of deposit and loan products offered to both households and businesses, such as checking and savings accounts, time deposits (e.g., certificates of deposit), mortgage and auto loans, credit cards, commercial lines of credit, and small business loans. It also includes institutional information on financial providers—such as asset size and branch locations—and covers several types of institutions, including commercial banks, credit unions, brokers and dealers, and savings and loan associations.

Because the dataset reports advertised (offered) interest rates rather than realized loan rates, it captures lenders' pricing decisions that reflect local market conditions rather than borrower-specific risk characteristics. To maintain consistency with the Call Reports and the FDIC Summary of Deposits, I restrict the sample to products offered by commercial banks and exclude other financial institutions. I then aggregate the weekly quoted rates to the branch-quarter level. To account for aggregate macroeconomic movements, I normalize raw loan rates by the annual federal funds rate obtained from the Federal Reserve Bank of St. Louis[9]. Moreover, because product pricing is typically set by designated rate-setting branches, with other branches in the same local market adopting identical quoted rates, this implies that pricing decisions are determined at the local market level. The resulting filtering and aggregation procedure yields 83,824 unique branches from 3,067 institutions and approximately 3.6 million branch-quarter observations between 2009 and 2024.

For the main analysis, I focus on two business lending products. The first is *commercial lines of credit*, a collateralized revolving credit facility commonly used by firms to manage short-term cash flows and finance working capital. The second is *small business loans*, defined as the advertised annual interest rate for a secured business loan of approximately $50,000. Because private credit primarily operates in the corporate lending segment, I use consumer loan products (auto loans, mortgages, credit cards, and unsecured personal loans) as placebo

[9]https://fred.stlouisfed.org/series/FEDFUNDS

outcomes to verify that the effects do not extend to the retail consumer lending segment.

3.4 Bank Financial Statements

I obtain quarterly data on bank balance sheets and income statements from the Consolidated Reports of Condition and Income (**"Call Reports"**) provided by the Federal Financial Institutions Examination Council (FFIEC) from 2009Q1 to 2025Q3, compiled by Correia, Luck, and Verner (2025). The data contain institution-level information on asset holdings, lending composition, and income for all U.S. commercial banks. I classify banks with total assets of at least $1 billion as large banks. This threshold reflects a commonly used distinction between community banks and larger regional institutions in the banking literature and captures meaningful differences in organizational complexity, funding access, and lending technologies. Otherwise, higher regulatory thresholds such as $10 billion or $100 billion would lead to unbalanced samples between small and large banks.

3.5 Lending to Small Businesses

I obtain loan-level data on small business lending from the **U.S. Small Business Administration(SBA) 7(a) Loan Program** covering 2009 through 2025. The SBA 7(a) is a government-guaranteed lending program designed to support small businesses with limited operating histories or weak cash flows that may not qualify for conventional bank financing. The program facilitates financing for a variety of purposes, including working capital, equipment purchases, or fixed-asset investments. Under the program, the SBA subsidies a portion of each loan – typically ranging from 50 to 85% – in the event of borrower default. Lenders pay small fees to the SBA in return for this guarantee and are subject to program-specific pricing caps. As a result, the data provide a comprehensive measure of bank credit supply to small business, especially credit-constrained firms.

The data provide detailed loan-level information on all SBA 7(a) origination, including loan approval date, loan amount, SBA-subsidized amount, borrower and lender location, interest rate, program type, loan status, and loan performance outcomes of the loans such as defaults or paid-in-full resolution. To account for inflation and measure lending activity in real terms, I con-vert loan amounts to 2017 dollars using Consumer Price Index (CPI) data from the Bureau of Labor Statistics.

I construct five measures of small business lending activity and risk-taking. At the county level, I define the number of SBA loans originated, lending amount per capita (measured as aggregate SBA loan volume divided by county population), and lending amount per firm, measured as aggregate loan volume scaled by the total number of firms. These measures

capture both the extensive and intensive margins of small business credit supply across local markets. At the loan level, I construct two measures capturing ex ante borrower risk and ex post loan performance. Probability of Risky Loan is an indicator equal to one if a loan is originated under expedited or low-documentation SBA programs associated with weaker underwriting standards and higher borrower risk. Second, Probability of Loan Default equals one if a loan is charged off, conditional on the loan is completed. Together, these measures allow me to examine whether changes in bank lending activity are associated with shifts in underwriting standards and realized loan performance.

3.6 Bank Branches and Deposits

I obtain data on bank local footprints and deposit volume from the **Federal Deposit Insurance Corporation (FDIC) Summary of Deposits** from 2009 to 2025. The data cover all FDIC-insured bank branches in the U.S. and report branch-level information as of June 30 each year, including branch location, parent bank identifier, and the total volume of deposits held at each bank. Because deposits are the primary funding source for commercial banks and institutions with larger deposits are more likely to supply more loans (Becker (2007); Butler and Cornaggia (2011)), I construct two proxies for bank lending capacity: number of bank branches, and total volume of deposits across all branches within each county-year. These measures capture both the extensive margin (branch networks) and intensive margin (deposit funding) of bank credit supply within local markets.

3.7 Real Economic Outcomes

Finally, I collect county-level measures of local economic activity from the U.S. Census Bureau's Business Formation Statistics (BFS) and Business Dynamics Statistics (BDS). The outcomes include business applications, the number of firms and establishments, establishment entry and exit, employment, job creation and destruction, and firm deaths. The BDS further provides these measures by firm age and size, allowing me to examine whether the effects of private credit expansion are concentrated among young and small firms. To measure business income and the risk of business failure, I also obtain county-level business bankruptcy filings from U.S. Courts Report F-5A and the number of business tax returns and business income from the IRS Statistics of Income (SOI). I measure the risk of business failure as the number of business bankruptcy filings relative to the number of business tax returns.

3.8 Summary Statistics

Table 1 presents summary statistics for 243 Business Development Companies (BDCs) BDCs and 1,676 BDC-year observations over 2012–2026. The majority of BDC investments are debt. On average, 77% of investment positions are in the form of debt, with an average interest rate of 8.5%. BDCs also use a fair amount of leverage, with an average debt-to-equity ratio of 0.83. The sample also exhibits substantial variation across BDCs in terms of size, borrowing, and new investment activity. Finally, the sample covers both public and private BDCs, with publicly traded BDCs making up 44% of BDC-year observations.

[Insert Table 1 Here]

4 Empirical Strategy

In this section, I discuss potential endogeneity challenges in examining the effects of private credit expansion on local banking markets. I then introduce a regulatory reform in the private credit sector that provides a natural experiment generating plausibly exogenous variation in private credit supply. Finally, I outline the identification strategy and regression specifications.

4.1 Endogeneity

Empirically examining banks' strategic responses to private credit expansion presents three primary identification challenges. First, private credit entry may be endogenous. They may choose to enter markets experiencing strong economic growth to capture expanding lending opportunities or alternatively target under-served markets with unmet financing demand. This suggests that lender entry decisions are correlated with local economic conditions, making treatment no longer random. Second, it is difficult to separate credit supply from credit demand. For example, an increase in loan origination could arise from improved borrower fundamentals rather than changes in lender preferences or lending capacity. Third, unobserved local economic conditions may simultaneously influence borrower behavior and lender strategies. Factors such as local productivity shocks, industry composition, or investment opportunities may affect both private credit expansion and bank outcomes but are unobservable to researchers, potentially biasing ordinary least squares estimates.

4.2 Natural Experiment: The Small Business Credit Availability Act 2018

To address these identification challenges, I exploit the introduction of the Small Business Credit Availability Act (SBCAA) of 2018 as an exogenous source of variation in the expansion of private credit supply. The Act was enacted on March 23, 2018, by Congress as part of the Consolidated Appropriations Act, and amended provisions of the Investment Company Act of 1940 governing Business Development Companies (BDCs). BDCs are closed-end investment funds that lend to—and sometimes take equity stakes in—small and mid-sized private firms that have limited access to traditional bank financing. Beyond substituting for bank credit, private credit can promote firm growth and innovation through managerial assistance and monitoring (Davydiuk, Marchuk, and Rosen (2024a); Davydiuk et al. (2024); Jang (2024); H Rocha and Sinno (2026)). Compared to banks, which face tighter regulation and capital requirements, BDCs operate under fewer constraints and can expand lending when banks pull back (Davydiuk, Marchuk, and Rosen (2024a)). BDCs finance their lending through a combination of equity raised from public and institutional investors and issuing debt. Prior to the SBCAA reform, BDCs were subject to a statutory asset coverage requirement of 200%, effectively limiting leverage to a 1:1 debt-to-equity ratio. Under this constraint, a BDC with $100 in equity, for instance, could borrow at most $100 in debt to finance investments.

The SBCAA introduced two key regulatory changes. First, it reduced the asset coverage requirement from 200% to 150%, allowing BDCs to increase leverage to approximately a 2:1 debt-to-equity ratio. This reform substantially expanded BDCs' borrowing capacity and enabled them to raise additional capital to extend credit to middle-market firms. Second, the Act relaxed certain disclosure and communication requirements for publicly traded BDCs, reducing regulatory burdens associated with capital raising. Indeed, following the reform, BDCs increased leverage and expanded lending activity. Industry evidence shows that BDCs' debt-to-equity ratios rose substantially after 2018, reaching historically high levels in the subsequent years, while new investments also increased in the post-reform period [10] The response is monotonic, consistent with implementation frictions such as the need for shareholder and board approval. Importantly, despite higher leverage, BDCs do not appear to take on excessive risk and continue to perform well (Balloch and Gonzalez-Uribe (2021)).

The reform provides plausibly exogenous variation in private credit supply for two reasons. First, lenders and market participants did not anticipate the enactment of the law, as there had been several failed attempts of similar reform in 2012, 2013, and 2015. Second,

[10] See, e.g., Houlihan Lokey, BDC Monitor (2025); Haque, Mayer, and Stefanescu (2024).

implementation required approval by boards of directors or shareholders, delaying leverage adjustments and limiting lenders' ability to time adoption in response to contemporaneous borrower demand (Haque, Jang, and Wang (2025); Balloch and Gonzalez-Uribe (2021)). As a result, the re-form represents a supply-driven shock private credit lenders' capacity to expand lending, isolating supply-side variation that is unrelated to endogenous entry decisions, borrower demand, or changes in bank regulation. Although the SBCAA deregulation relaxes leverage constraints only for BDCs, I include private debt (PD) funds in the treatment sample because BDCs and PD funds operate in overlapping markets, follow investment strategies, and jointly substitute when bank retreat (Davydiuk, Marchuk, and Rosen (2024a)). As a results, competitive spillovers and capital real-location within private credit markets may induce endogenous responses among PD funds, pre-venting PD funds from serving as a valid control group. Unlike BDCs, PD funds were not regulated by the SEC and therefore not subject to leverage caps prior to the reform.

4.3 Regression Specifications

I examine the effects of expansion in private credit on local credit markets and bank balance sheets using the following empirical specifications. For bank-level outcomes, I estimate:

$$\begin{aligned} Y_{b,t} = \beta_0 + \beta_1(\text{Private Credit}_b \times \text{Post}_t) + \beta_2(\text{Large}_b \times \text{Post}_t) \\ + \beta_3(\text{Private Credit}_b \times \text{Post}_t \times \text{Large}_b) + \gamma' X_{b,t} + \alpha_b + \delta_t + \varepsilon_{b,t} \end{aligned} \tag{1}$$

and

$$Y_{b,t} = \beta_0 + \sum_{h \neq -1} \beta_h \left(\text{Private Credit}_b \times \mathbf{1}[t - t_0 = h]\right) + \gamma' X_{b,t} + \alpha_b + \delta_t + \varepsilon_{b,t} \tag{2}$$

where b indexes banks and t indexes quarters. $\textit{Private Credit Exposure}_b$ captures a bank's geographic exposure to private credit expansion based on its ex-ante deposit footprint, calculated as the share of deposits located in treated counties relative to nationwide deposits. $Post_t$ is an indicator equal to one for periods beginning in 2018Q1, following the enactment of SBCAA. $X_{b,t}$ is a vector of bank controls, including log(Assets), liabilities-to-assets, equity-to-assets, net income-to-assets, and retained earnings-to-assets. All monetary variables are expressed in 2017 dollars. I include bank fixed effects (α_b) to absorb time-invariant differences across institutions, such as business models, lending practices, and risk preferences. I also control for year-quarter fixed effects (δ_t) to absorb aggregate macroeconomic conditions and common shocks affecting all banks. Lastly, I cluster standard errors at the bank-quarter level to account for serial correlation within banks over time.

Similarly, for county-level outcomes, I estimate:

$$\begin{aligned} Y_{c,t} = \beta_0 &+ \beta_1(\text{Private Credit}_c \times \text{Post}_t) + \beta_2(\text{Large}_b \times \text{Post}_t) \\ &+ \beta_3(\text{Private Credit}_c \times \text{Post}_t \times \text{Large}_b) + \gamma' X_{c,t} + \alpha_c + \alpha_b + \delta_{s,t} + \varepsilon_{c,t}. \end{aligned} \tag{3}$$

and

$$Y_{c,t} = \beta_0 + \sum_{k \neq -1} \beta_k \left(\text{Private Credit}_c \times \mathbf{1}[t - t_0 = k]\right) + \gamma' X_{c,t} + \alpha_c + \delta_{s,t} + \mu_b + \varepsilon_{c,t} \tag{4}$$

where c indexes counties and t indexes years. *Private Credit Exposure*$_c$ measures a county's ex ante private credit intensity, defined as the share of private debt deals relative to all private-market deals during 2007–2017. *Post*$_t$ is an indicator equal to one for periods beginning in 2018Q1, following the enactment of SBCAA. $X_{c,t}$ is a vector of county controls, including the logarithm of population, income per capita, number of firms, unemployment rate, number of bank branches, and county deposits. I include county fixed effects (α_c) to absorb time-invariant local market characteristics, such as demographic and long-run economic differences, and state-by-year fixed effects ($\delta_{s,t}$) to control for nationwide macroeconomic shocks that affect all markets. Lastly, I cluster standard errors at the county-by-year level.

In the static specification, β_1 (Private Credit$\times$Post) captures the baseline effect of private credit expansion for small banks in more exposed markets. The coefficient β_2 (Large Bank $\times$ Post) captures differential time trends for large banks that are common across all exposure levels, such as responses to aggregate regulatory or macroeconomic changes after 2018. The key coefficient of interest, β_3 (Private Credit $\times$ Post $\times$ Large Bank), identifies the differential effect of private credit expansion for large relative to small banks. This specification allows me to estimate heterogeneous treatment effects within a unified framework, rather than relying on split-sample comparisons, while flexibly controlling for baseline differences and differential trends across bank types.

Lastly, for the real economic outcomes, I estimate the following county-level difference-in-differences specification:

$$Y_{c,t} = \beta \left(\text{Treated}_c \times \text{Post}_t\right) + \gamma' \left(X_{c,2017} \times \text{Post}_t\right) + \alpha_c + \delta_{s,t} + \varepsilon_{c,t}, \tag{5}$$

and

$$Y_{c,t} = \sum_{\tau \neq 2017} \beta_\tau \left(\text{Treated}_c \times \mathbb{1}\{t = \tau\}\right) + \gamma' \left(X_{c,2017} \times \text{Post}_t\right) + \alpha_c + \delta_{s,t} + \varepsilon_{c,t}, \tag{6}$$

where c, s, and t denote county, state, and year, respectively. $Y_{c,t}$ denotes measures of local economic activity, including business applications, the number of firms and establishments, establishment entry, employment, and job creation. Treated_c is an indicator equal to one if the number of BDC investments in county c is above the median across counties with BDC activity in 2017, immediately before the SBCAA. Post_t equals one for 2018 and thereafter. The coefficient of interest, β, therefore captures the differential change in economic activity following the SBCAA in counties with greater ex-ante exposure to private credit.

The specification includes county fixed effects, α_c, which absorb time-invariant differences across counties, and state-by-year fixed effects, $\delta_{s,t}$, which absorb time-varying economic and policy shocks common to counties within the same state. $X_{c,2017}$ is a vector of county characteristics measured before the reform in 2017, including the unemployment rate, poverty rate, business income per return, and business bankruptcy rate. I interact these pre-reform characteristics with Post_t to allow counties with different initial economic conditions to evolve differently after 2018 without controlling for potentially endogenous contemporaneous outcomes. Lastly, I cluster standard errors at the county-by-year level.

5 Empirical Results

5.1 BDC-Level Results

I first examine whether the deregulation meaningfully expands the lending capacity of BDCs. The intuition is straightforward: if the reform increases private credit supply, it should first relax a financing constraint at the BDC level and allow BDCs to raise more debt and expand their investment activity. Similar to banks, BDCs face regulatory constraints on the amount of leverage they can use. Prior to the SBCAA, BDCs were subject to a 200% asset coverage requirement, which effectively limited debt to approximately one dollar for each dollar of equity. The 2018 reform reduced the required asset coverage ratio to 150% for adopting BDCs, allowing them to operate with substantially more leverage. The reform therefore increases the amount of capital that BDCs can deploy for a given level of equity.

[Insert Figure 2 Here]

Figure 2 shows that BDCs respond to this relaxation as expected. Following adoption, their debt-to-equity ratios increase steadily over time, indicating that BDCs borrow more once the leverage constraint is relaxed. This additional borrowing translates into greater lending capacity: BDCs finance more portfolio firms, increase both the number and dollar amount of investment positions, and originate more new investments. The effects build after

adoption rather than appearing before the reform, supporting the interpretation that the expansion is driven by the regulatory change rather than by differential pre-existing trends. These results establish the first-stage channel through which the reform expands the supply of private credit, which I use in the subsequent analysis to study how banks and local credit markets respond.

5.2 Banks and Private Credit: Competing via Price

I begin by testing the hypothesis that the entry of private credit affects bank pricing behavior through differential competitive responses across banks with different functions. If private credit primarily competes in relationship-based and opaque corporate lending, small banks–who have comparative advantages in these segments–should respond by lowering loan rates to defend market share. In contrast, large banks, which have less comparative advantage in relationship lending and screening opaque borrowers but benefit from scale and internal capital markets, may face weaker incentives to compete directly in these segments.

Table 3 presents difference-in-differences estimates of the effects of private credit expansion on bank loan pricing. The dependent variable is the loan spread, defined as the difference between the advertised loan rate and the federal funds rate, for two loan products: commercial lines of credit (columns 1–2) and small business loans (columns 3–4). The specification exploits cross-county variation in ex-ante exposure to private credit and compares changes in business loan pricing before and after the enactment of the Small Business Credit Availability Act in 2018.

[Insert Table 3 Here]

The results provide evidence consistent with the hypothesis. In column (1), the coefficient on Private Credit $\times$ Post is negative and statistically significant, indicating that small banks reduce spreads by approximately 3.8 percentage points in more exposed counties following the expansion of private credit. The magnitude attenuates but remains statistically significant when lender fixed effects are included in column (2). A similar pattern emerges for small business loans in columns (3) and (4), where the estimates are consistently negative and precisely estimated. I also observe similar patterns for small business loans in columns (3) and (4).

The triple interaction term shows a differential response for large banks. For commercial lines of credit (columns 1 and 2), the combined effect for large banks is close to zero or slightly positive, implying that large banks do not lower spreads and may even increase them in more exposed counties. In contrast, for small business loans (columns 3 and 4), large banks still reduce spreads, but by significantly less than small banks. Overall, these

results suggest that private credit expansion intensifies competitive pressure in segments where small banks are most active. While small banks reduce spreads to defend market share and attract borrowers, large banks do not directly compete through price competition.

5.3 Banks and Private Credit: Competing via Underwriting

Next, I examine whether banks respond to private credit expansion by loosening underwriting and extending credit to more marginal borrowers, in addition to competing through price. This reflects a classic tension in the banking literature: increases in credit supply may arise either from relaxed screening and excessive risk-taking or from strategic reallocation toward borrower segments that banks are better positioned to serve (Matutes and Vives (2000); Marquez (2002)). In particular, if lending expansion reflects risk-taking or weakened screening, banks should originate a higher share of risky loans. In contrast, if bank credit expansion reflects comparative advantage in relationship lending, bank underwriting disciplines and loan performance should not deteriorate.

[Insert Table 4 Here]

Table 4 presents the results on the effects of private credit expansion on bank underwriting. The dependent variable is an indicator for whether a loan is classified as risky, based on its origination through SBA programs associated with lower documentation requirements or specialized credit facilities. The results indicate that private credit expansion is associated with an increase in the likelihood that small banks originate risky loans. In column (1), the coefficient on Private Credit $\times$ Post is positive and statistically significant, implying that small banks are more likely to extend credit through higher-risk lending programs in more exposed counties following the expansion of private credit. The magnitude is economically meaningful: the estimate of 0.088 corresponds to an increase of approximately 8.8 percentage points relative to a baseline mean of about 48 percent. I observe robust patterns across different specifications in columns (2) and (3). For large banks, the triple interaction term is negative and statistically significant across all specifications, indicating that large banks are less likely to increase their exposure to risky loans in response to private credit expansion.

But does this loosening of underwriting to compete with new nonbank entrants and defend market share come at the cost of worse loan outcomes? Column (1) of Table 8 addresses this question by examining the ex-post performance of bank lending, measured by non-performing loans scaled by total assets at the institution level. The results show no evidence of deterioration in loan performance for small banks in more exposed markets following the expansion of private credit.

Taken together, these results suggest that the expansion of private credit leads to differential competitive responses shaped by banks' comparative advantages and institutional frictions. In particular, small banks loosen underwriting and expand lending to riskier borrowers both to defend their core markets and because they possess a comparative advantage in processing soft information, screening, and monitoring opaque borrowers. Importantly, this shift toward higher-risk lending does not translate into worse ex-post outcomes, as the SBA 7(a) small business lending segment provides government guarantees covering approximately 50–85% of losses, which offers downside protection and thus further strengthens small banks' incentives to extend credit in this space.

In contrast, large banks do not appear to compete in this segment by loosening underwriting standards, consistent with their weaker comparative advantage in screening and monitoring opaque borrowers. Instead, their stronger internal capital markets allow them to reallocate capital toward alternative activities. Overall, the evidence points to functional segmentation in lending markets: small banks absorb a greater share of higher-risk borrowers in segments where they are better positioned to compete, while large banks retreat from these segments.

5.4 Banks and Private Credit: Competing via Quantity

I next examine whether banks complement price and underwriting adjustments by expanding lending quantities to compete with private credit. Based on the same mechanism discussed in Section 5.2, my second hypothesis predicts that in markets with greater ex-ante exposure to private credit, small banks expand credit supply to small businesses, while large banks retreat from this segment.

[Insert Table 5 Here]

Table 5 provides evidence on how banks adjust lending quantities in response to private credit expansion. The dependent variable is the number of loans issued to small businesses under the under the Small Business Administration 7(a) Loan Program, and the unit of observation is at the bank–county–year level. Column (1) reports results using the level of lending, while columns (2) and (3) present alternative normalizations that scale lending activity by local economic conditions, including population and the number of firms in the county. This allows me to compare lending intensity by traditional bank lenders across markets of different sizes.

Across all specifications, the coefficient on Private Credit $\times$ Post is positive and statistically significant, indicating that small banks expand lending in counties with greater

exposure to private credit following the reform. The estimates are economically meaningful. In column (1), the coefficient of 0.686 implies that small banks increase the number of SBA loans by approximately 20% relative to the sample mean of 3.37 loans per bank–county–year. The results are quantitatively similar when scaling lending by population and the number of firms in columns (2) and (3), suggesting that the expansion reflects a broad-based increase in lending intensity rather than being driven by differences in market size.

In contrast, large banks exhibit the opposite response. The coefficient on Large Bank × Post is negative and highly significant, indicating that large banks reduce small business lending on average following the reform. Taken together, these results provide strong evidence of differential quantity adjustments across banks. Small banks expand lending to defend market share and serve borrowers in segments where they retain comparative advantages, while large banks withdraw from these markets.

5.5 Banks and Private Credit: Competing via Geographical Presence

I next examine whether banks respond to private credit expansion by adjusting their geographic presence. While the previous sections show that banks compete through pricing, underwriting, and lending quantities, an important question is whether they also invest in local market presence to sustain lending relationships and information advantages.

[Insert Table 6 Here]

Table 6 presents difference-in-differences estimates of the effects of private credit expansion on banks' geographic footprints, measured using branch networks and deposits from the FDIC Summary of Deposits data. The unit of observation is at the bank–county–year level. Columns (1) and (2) examine the number of bank branches using log and inverse hyperbolic sine (IHS) transformations, respectively, while columns (3)–(5) analyze deposit activity using deposits per capita and alternative transformations of total deposits.

Across specifications, the coefficient on Private Credit × Post is positive and statistically significant for branch-based measures, which indicates that small banks expand their local presence in counties with greater exposure to private credit following the reform. The magnitude is economically meaningful: in column (1), the estimate of 0.091 implies an increase of approximately 9% in the number of branches. I observe similar patterns using the IHS transformation in column (2), suggesting that the results are not driven by extreme values or skewness. Columns (3)–(5) further show that deposits per capita and total deposits also increase in more exposed counties, indicating that branch expansion is accompanied by a

broader increase in local banking activity. In contrast, coefficients on the triple interaction term are small and statistically insignificant across specifications. This suggests that large banks do not systematically expand their geographic presence in response to increased competition from private credit.

These results suggest that competition from private credit induces small banks to invest more in local information production and maintain borrower relationships, consistent with theories of strategic competition in which firms expand market presence to defend market share (Spence (1977); Dixit (1980)). This strategy is particularly valuable, as relationship borrowers–such as small businesses–prefer prefer lenders with close geographic proximity (Petersen and Rajan (1994); Cantillo and Wright (2000); Degryse and Ongena (2005)).

5.6 Banks and Private Credit: Competing via Upstream Financing

The previous sections show that small banks respond to private credit expansion by competing aggressively to defend market share—through pricing, underwriting, lending quantities, and geographic presence.

How do large banks respond if they do not compete along the same margins as small banks? In this section, I examine this question and test the hypothesis that, given their greater scale, organizational capacity, and stronger internal capital markets, large banks do not compete directly with private credit lenders for borrowers. Instead, they respond by scaling back from direct lending and supplying capital to private credit intermediaries as upstream providers.

[Insert Table 7 Here]

Table 7 provides evidence consistent with this mechanism. The dependent variables measure bank lending to nonbank financial institutions (NBFIs), which serve as a proxy for lending to private credit funds. The unit of observation is at the bank–quarter level, and the specification exploits cross-bank variation in exposure to private credit based on ex-ante geographic footprints. Due to data limitations, I proxy for bank lending to private credit funds using loans to nonbank financial institutions, as bank loans to business credit intermediaries constitute the largest share, both in levels and growth rate (SP Global Market Intelligence (2025); Acharya, Cetorelli, and Tuckman (2024)).

Across all four specifications, the coefficient for small banks is small and generally insignificant. This suggests that small banks do not meaningfully adjust their lending to these nonbanks following the expansion of private credit. This is consistent with the view that

smaller institutions lack the scale, access, or relationships necessary to intermediate capital to private credit markets. In contrast, the triple interaction term is positive and statistically significant across all specifications, suggesting that large banks in more exposed markets increase lending to private credit lenders as a way to compete with these new entrants. The magnitudes are economically meaningful. In column (1), loans to nonbanks as a share of assets increases by approximately 0.6 percentage points for large banks in exposed areas, relative to a sample mean of 0.4 percent. Similar patterns hold when scaling by equity and total loans in columns (2) and (3), as well as when examining the log level of lending in column (4), indicating a substantial increase in the volume of lending to nonbank intermediaries.

These results highlight two distinct adjustment margins across banks. Small banks compete directly for borrowers by expanding traditional lending activities, while large banks adopt a coordination strategy by supplying funding to private credit intermediaries rather than lending directly to firms. This division of roles reflects a form of functional segmentation in credit intermediation, where small banks operate downstream as relationship lenders, and large banks move upstream as capital providers.

5.7 Do Large Banks Benefit from Upstream Financing?

Why do large banks prefer to intermediate capital to private credit funds rather than lend directly to firms? First, lending to private credit intermediaries can generate higher returns on equity than direct corporate lending, in part due to lower balance-sheet costs and more favorable capital treatment. Loans to private credit funds are often structured as senior or secured claims, implying lower risk-weighted capital requirements relative to traditional corporate loans.[11] Second, monitoring costs are lower when lending to a smaller number of intermediaries rather than managing a large number of individual firm loans.

[Insert Table 8 Here]

Table 8 provides evidence consistent with these mechanisms, where I examine the effects of private credit expansion on bank returns on capital. The dependent variables include interest income relative to equity and the log level of interest income, measured at the institution-quarter level, based on the Call Reports data. These outcomes serve as proxies for the efficiency with which banks use capital.

The results show that large banks achieve higher returns as they expand lending to private credit intermediaries. The triple interaction term, Private Credit × Post × Large, is positive and statistically significant across specifications. In column (2), interest income

[11] See "Banks and Private Credit: Competitors or Partners?", Federal Reserve Bank of Kansas City (2025).

relative to equity increases for large banks in more exposed markets, while column (3) shows a corresponding increase in the level of interest income. These findings indicate that large banks benefit from upstream financing strategies. By supplying capital to private credit intermediaries rather than lending directly to firms, large banks generate higher returns on capital, consistent with lower balance-sheet costs, more favorable capital treatment, and reduced monitoring intensity compared to direct lending to firms.

In contrast, the coefficient on Private Credit × Post is small and generally insignificant, suggesting that small banks do not experience comparable gains in returns from private credit expansion. This is consistent with earlier results showing that small banks primarily compete through traditional lending segments, such as SBA 7(a) loans, which tend to be lower-margin due to interest rate caps and involve riskier borrowers. Moreover, small banks lack the scale and balance sheet capacity to engage in regulatory arbitrage through favorable risk-weight treatment, limiting their ability to capture similar gains from upstream financing.

5.8 Does bank funding of private credit crowd out corporate lending?

Does the reallocation of bank lending toward nonbank intermediaries come at the expense of direct lending to firms? I examine this question using bank-level direct Commercial and Industrial (C&I) Loans from the Call Reports data. Dynamic effects presented in Figure **??** show that banks with greater ex-ante exposure to private credit significantly reduce direct C&I lending relative to less-exposed banks following the reform. The decline emerges after the reform and becomes progressively larger over time, both when C&I lending is scaled by total assets and by total loans. These results suggest that the increase in bank lending to nonbank intermediaries documented in Section 5.6 is accompanied by a reallocation away from direct corporate lending.

While some nonbank intermediaries channel bank funding into corporate loans, increased bank funding of nonbank intermediaries need not translate one-for-one into greater credit supply to firms. NBFIs differ substantially in how they deploy bank funding. While private credit funds and other lending-oriented intermediaries channel bank financing into corporate loans, other NBFIs use bank funding primarily to finance securities positions. For instance, Li et al. (2026) show that much of the growth in bank lending to NBFIs is directed toward intermediaries that invest in securities rather than lend to firms. They further show that banks expanding their NBFI exposures reduce direct corporate lending, and that the resulting increase in NBFI credit does not fully offset the decline in bank credit to firms. Thus, reallocating bank balance-sheet capacity from direct corporate loans toward NBFI lending

can reduce the amount of credit ultimately reaching the real economy.

5.9 Real Economic Outcomes

What are the real economic consequences of increased competition between banks and private credit? My results thus far show that private credit does not simply replace banks, but reshapes bank functions in credit intermediation. While small banks compete aggressively downstream to defend their core markets, large banks scale back direct lending to firms and move upstream to supply capital to these nonbanks and take advantage of regulatory arbitrage opportunities. The growth of private credit, however, need not be detrimental to the real economy. By providing an alternative source of capital outside the traditional banking system, private credit can increase competition, broaden firms' financing options, and improve access to credit, particularly for small and underserved firms (Bowman (2026)). Thus in this section, I examine whether the expansion of private credit translates into greater business formation and local economic activity, and which firms benefit most from this expansion.

Table 9 presents county-level results using data from the U.S. Census Bureau's Business Formation Statistics (BFS) and Business Dynamics Statistics (BDS). I compare counties with greater versus lower ex-ante exposure to private credit before and after the 2018 reform. The specifications include county fixed effects and state-by-year fixed effects, as well as several county characteristics measured in 2017 and interacted with the Post indicator to allow counties with different initial economic conditions to evolve differently following the reform.

[Insert Table 9 Here]

Panel A shows that private credit expansion is associated with greater business formation and entry. Business applications increase by approximately 4.2% in more exposed counties following the reform. The number of firms and business establishments increases by approximately 2.6% and 2.1%, respectively. The results are similar when these outcomes are scaled by county population: treated counties experience approximately 1.8 additional business applications, 0.45 additional firms, and 0.47 additional establishments per 1,000 residents. Establishment entry also increases, suggesting that the increase in the number of firms and establishments reflects, at least in part, the creation of new businesses rather than only the expansion of existing firms.

Panel B shows that these effects extend to local labor markets. Job creation increases by approximately 1.6%, or 1.8 additional jobs per 1,000 residents, while employment increases by approximately 1.2%, or 8.9 additional employees per 1,000 residents. Taken together, these

results indicate that private credit expansion is accompanied by greater business formation, firm entry, job creation, and employment in local economies. Thus, the entry of private credit appears to generate real effects beyond a simple reallocation of lending across financial intermediaries.

I next examine which firms account for this increase in economic activity. If greater competition and additional financing options improve access to credit, the effects should be stronger among firms that are more dependent on intermediated finance and more likely to face financing constraints. Table 10 examines this prediction by separating young firms, defined as firms aged 0–5 years, from older firms aged 6 years or more.

[Insert Table 10 Here]

The results show that the effects are stronger among young firms. Following private credit expansion, the number of young firms increases by approximately 3.6%, compared with 2.2% among older firms. Business establishments increase by 3.5% among young firms, compared with 2.6% among older firms, while employment increases by 2.8% and 2.3%, respectively. A particularly pronounced difference appears in establishments relative to the number of firms: young firms add approximately 3.3 establishments per 1,000 firms, whereas the corresponding estimate for older firms is small and statistically insignificant. These results are consistent with the increase in credit availability disproportionately benefiting younger firms, which tend to have shorter credit histories, fewer established banking relationships, and greater financing constraints.

Results in Table 11 highlight an even sharper difference across firm size. The number of firms with 1–19 employees increases by approximately 3.5%, compared with only 0.8% among firms with 20–499 employees. Business establishments exhibit a similar pattern, increasing by 3.5% among small firms and 1.1% among medium-sized firms. In contrast, the number of large firms with at least 500 employees declines, and the number of establishments operated by these firms falls by approximately 2.8%.

[Insert Table 11 Here]

This size gradient is closely related to the reorganization of credit intermediation documented in the previous sections. Small firms benefit through increased competition between traditional banks and shadow banks through two channels. First, private credit primarily expands credit supply to small- and middle-market firms, providing an additional source of financing outside the traditional banking system. Second, the entry of private credit induces small banks, which traditionally specialize in lending to small and informationally opaque firms, to compete more aggressively by lowering loan rates, loosening underwriting

standards, and expanding small business lending. Small firms therefore benefit not only from the additional financing provided by private credit itself, but also from the competitive response of incumbent banks.

The decline among large firms, however, points to a different effect of this reallocation. The earlier results show that large banks respond to private credit expansion by scaling back direct corporate lending and reallocating their balance sheets toward loans to nonbank financial intermediaries. To the extent that this reallocation crowds out direct credit supply to nonfinancial firms, firms that depend more heavily on direct lending from large banks may face a contraction in bank credit even as aggregate financing conditions improve for smaller firms. The decline in large firms and establishments is consistent with this channel. Thus, private credit expansion appears to redistribute credit supply across borrower segments: small firms benefit from both private credit entry and stronger competition from small banks, whereas large firms may be adversely affected by the withdrawal of large banks from direct corporate lending.

These findings show that the real effects of private credit expansion are heterogeneous across firms rather than uniformly expansionary. Private credit increases business formation, employment, and job creation on average, with the gains concentrated among young and small firms that are more likely to face financing constraints. At the same time, the contraction among large firms is consistent with the upstream reallocation of large-bank lending documented earlier in the paper. Thus, my results suggest that private credit reshapes not only which financial intermediaries supply credit, but also which firms ultimately receive it.

5.10 Heterogeneity by Bank Characteristics

Which banks have greater incentives to exploit this regulatory arbitrage? I examine two complementary channels: (i) balance-sheet incentives and (ii) organizational capacity.

The first channel captures **regulatory incentives**. The hypothesis is that banks with weaker balance sheets may have stronger incentives to substitute direct lending with indirect lending via nonbank intermediaries, benefit from more favorable capital treatment, and reduce monitoring costs associated with direct lending. I proxy for this channel using three measures: the non-performing loan (NPL) ratio, which captures asset quality; the NPL coverage ratio, which reflects loss-absorption capacity; and the loans-to-deposits ratio, which captures liquidity and funding constraints. The second channel captures **organizational capacity**. Banks with greater scale and stronger internal capital markets are better positioned to intermediate private credit efficiently. I proxy for this mechanism using bank size and operating income relative to assets.

Table 12 reports the results. The coefficient on Private Credit × Post is positive and statistically significant across specifications, consistent with the baseline findings that banks increase lending to nonbank intermediaries following private credit expansion. The interaction terms show how this response varies with bank characteristics.

[Insert Table 12 Here]

Columns (1) to (3) provide evidence supporting the balance-sheet incentives channel. The coefficient on Private Credit × Post × NPL/Assets is positive and statistically significant, indicating that banks with weaker asset quality expand lending to nonbank intermediaries more aggressively. In contrast, the interaction with the NPL coverage ratio is negative and significant, implying that banks with lower loss-absorption capacity exhibit a stronger shift toward lending to private credit. Similarly, the positive and significant coefficient on Private Credit × Post × Loans-to-Deposits suggests that banks facing tighter funding constraints reallocate lending toward nonbank intermediaries to a greater extent. Taken together, these results indicate that banks with weaker balance sheets and tighter liquidity conditions have stronger incentives to engage in upstream financing, consistent with regulatory arbitrage and funding considerations.

Columns (4) and (5) provide evidence on the organizational capacity channel. The interaction between Private Credit × Post and bank size is positive and highly significant, indicating that larger banks are more likely to expand lending to nonbank intermediaries. This is consistent with the idea that upstream intermediation requires scale, infrastructure, and internal capital market capacity. In contrast, the interaction with operating income relative to assets is negative, suggesting that banks with stronger core profitability are less reliant on this strategy.

Results in columns (1) to (3) support the balance-sheet incentives channel. The response of NBFI lending increases monotonically across banks with higher NPL ratios, lower NPL coverage ratios, and higher loans-to-deposits ratios. These patterns indicate that banks facing weaker asset quality and tighter liquidity constraints reallocate lending more aggressively toward nonbank intermediaries, consistent with internal capital allocation serving as a mechanism to alleviate regulatory and funding pressures. Similarly, results in column (4) support the organizational capacity mechanism. The effect is concentrated among banks in the top quartile of the size distribution, suggesting that this coordination strategy is feasible primarily for large institutions with sufficient scale, infrastructure, and internal capital market capacity. Together, these findings explain the heterogeneous responses documented in earlier sections, where large banks adapt through intermediation with nonbanks while smaller

banks lack the organizational capacity to do so. Figure 8 presents graphical representations of these coefficient estimates.

[Insert Figure 8 Here]

These results highlight that both balance-sheet incentives and organizational capacity shape banks' responses to private credit expansion. Banks with weaker balance sheets and tighter funding constraints are more likely to shift lending toward nonbank intermediaries. Moreover, the ability to capture this regulatory arbitrage is disproportionately concentrated among larger institutions with the capacity to intermediate private credit markets. These findings help explain the earlier results: small banks compete downstream through traditional lending, whereas large banks compete by supplying capital upstream to private credit intermediaries.

5.11 Heterogeneity by Banking Market Structure

I next examine how local banking market structure shapes banks' incentives to compete with private credit. While the baseline results show that banks expand small business lending to defend market share, this response may depend on the degree of local competition and the underlying demand and risk environment.

[Insert Table 13 Here]

Table 13 reports difference-in-differences estimates of lending to small businesses under the SBA 7(a) program at the county–year level. The interaction terms capture how the response to private credit expansion varies with ex-ante county characteristics, including business risk, credit demand, and local banking concentration.

Columns (2) and (3) show that banks expand lending more aggressively in counties with higher business risk and stronger credit demand. The coefficient on Private Credit $\times$ Post $\times$ Business Failures is positive and statistically significant, indicating that the increase in small business lending is larger in counties with more business bankruptcies. This pattern is consistent with the role of SBA guarantees, which mitigate downside risk and allow banks to extend credit to riskier borrowers when competing with private credit. Similarly, the positive and significant interaction with Business Applications suggests that banks expand lending more in areas with stronger ex-ante demand for corporate credit. In these markets, banks can compete more effectively by serving additional borrowers rather than being crowded out.

In contrast, columns (4) and (5) show that local banking concentration dampens competitive responses. The interaction terms with both deposit and branch HHIs are negative

and highly significant, indicating that the expansion in small business lending is attenuated in more concentrated markets. This suggests that banks with greater market power face weaker competitive pressure and have fewer incentives to compete for marginal borrowers. In such environments, limited outside options and higher switching costs reduce the cost of losing borrowers to private credit, weakening the need for aggressive lending responses.

These heterogeneity results highlight how differences in local market conditions shape banks' responses to private credit expansion. Banks compete more aggressively in markets characterized by higher risk and stronger credit demand, where guarantees and borrower inflows support lending expansion. In contrast, competition is weaker in concentrated banking markets, where market power dampens incentives to defend market share. These findings further reinforce the role of competition as a key mechanism driving the heterogeneous responses documented in earlier sections.

5.12 Parallel Pre-Trends

The validity of my difference-in-differences design relies on the assumption that treated and control counties, as well as more- and less-exposed banks, would have followed similar trends in the absence of the expansion in private credit. To assess this parallel-trends assumption, I estimate dynamic difference-in-differences specifications that interact ex-ante private credit exposure with indicators for each period relative to the 2018 reform. Figures 3, 4, 5, and 7 present the resulting estimates across the main outcomes. Across these figures, the pre-reform coefficients are generally close to zero and statistically insignificant, providing no evidence of differential pre-trends prior to the SBCAA. This evidence supports the parallel-trends assumption underlying my empirical design.

Figure 4 presents the dynamic effects on small business lending under the SBA 7(a) program. Prior to the reform, the coefficients are close to zero, with no evidence that lending evolved differentially across more- and less-exposed markets. Following the reform, the responses of small and large banks diverge: small banks expand small business lending in more exposed markets, while large banks reduce lending. This pattern is consistent with the baseline results showing that small banks compete directly for borrowers by expanding credit supply, whereas large banks retreat from this lending segment.

Figures 3 presents the dynamic effects on direct corporate lending and lending to nonbank financial intermediaries, respectively. The pre-reform coefficients again show no systematic differential trends. Following the reform, large banks reduce direct C&I lending while increasing lending to nonbank intermediaries. The increase in NBFI lending becomes progressively stronger after the reform, consistent with the gradual adjustment of bank balance sheets

toward upstream financing. Taken together, these dynamics reinforce the interpretation that large banks respond to private credit expansion by reallocating credit away from direct corporate lending and toward nonbank intermediaries.

Figure 7 examines banks' geographic footprints. Prior to the reform, there is no evidence of differential trends in branch presence across markets with different exposure to private credit. Following the reform, small banks gradually expand their branch presence in more exposed markets, consistent with greater investment in local information production and borrower relationships. In contrast, large banks exhibit little systematic adjustment in their geographic footprint.

Finally, Figure 5 examines the dynamic effects on local economic activity. The estimates show no systematic differences in trends between treated and control counties prior to the reform. Following the SBCAA, the effects become positive for measures of business formation and economic activity, with the increase emerging after the expansion in private credit supply. These dynamics provide additional support for the interpretation that the real economic effects documented in Section 5.9 are not driven by pre-existing differences in economic trends between treated and control counties.

5.13 Placebo Tests using Retail Consumer Outcomes

One potential concern is that the observed results reflect broader trends in credit markets or changes in lender preferences over time, rather than the causal effects of private credit expansion. To address this concern, I conduct placebo tests using retail consumer banking products as outcomes. Because private credit primarily operates in corporate lending markets, there should be no systematic effects in consumer lending segments where private credit does not compete.

Appendices 1 and 2 present placebo tests at both the extensive and intensive margins. Appendix 1 examines bank credit supply to consumers via credit card loans at the institution level based on Call Reports data. The dynamic estimates show no evidence of differential pre-trends between treated and control banks prior to the reform, and no meaningful divergence in the post-reform period for either small or large banks.

Similarly, Appendix 2 examines retail loan pricing, including auto loans, mortgage loans, credit cards, and unsecured personal loans. Across all specifications, the triple interaction term is small and statistically insignificant, indicating no differential response of large banks relative to small banks in consumer lending rates.

These results again show that private credit expansion does not affect consumer lending markets, either in terms of credit supply or pricing. This finding is consistent with the in-

stitutional setting in which private credit operates primarily in corporate lending segments. More importantly, the absence of effects in these placebo outcomes helps rule out the possibility that the main findings are driven by broader trends in retail banking or general shifts in credit supply, reinforcing the interpretation that the estimated effects reflect differential responses to private credit expansion.

6 Conclusion

This paper provides novel evidence on how the rapid growth of private credit reshapes bank functions in credit intermediation and the ultimate allocation of credit across firms. Using the 2018 Small Business Credit Availability Act as an exogenous increase in private credit supply, I show that private credit does not simply replace banks, but reorganizes their roles in the credit intermediation chain. Small banks compete more aggressively to defend their core lending markets, while large banks retreat from direct corporate lending and increasingly move upstream to supply capital to nonbank intermediaries, taking advantage of the regulatory arbitrage.

The expansion of private credit changes where credit ultimately flows. Because not all bank funding to nonbanks ultimately flows back to firms, this reallocation can crowd out direct corporate credit even as private credit expands. These changes in credit allocation also have important consequences for the real economy. By providing firms with an alternative source of financing and inducing small banks to compete more aggressively, private credit improves access to capital, particularly for young and small firms that are more likely to face financing constraints. In contrast, economic activity among large firms declines, consistent with the reduction in direct corporate lending by large banks.

Overall, my findings highlight that the boundaries between bank and nonbank intermediation are increasingly blurred, extending beyond the simple substitution of bank lending by nonbanks. The growth of private credit changes how credit is intermediated, how banks participate in corporate lending, and which firms ultimately receive financing. Thus, understanding the growth of shadow banking requires considering not only the activities of nonbank lenders themselves, but also how their expansion changes the incentives and functions of regulated banks, and where credit ultimately flows.

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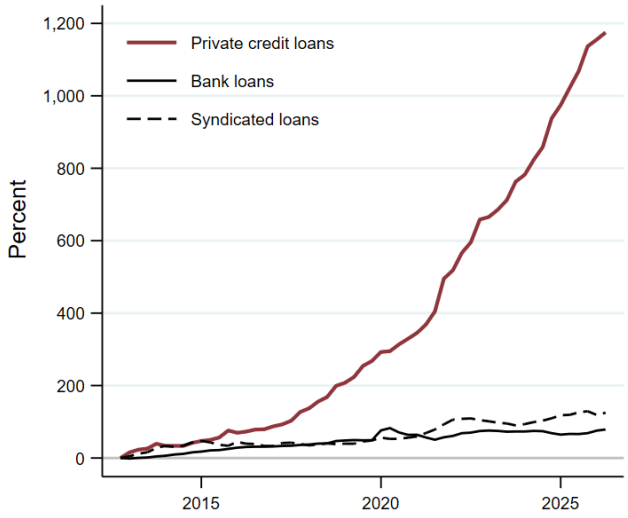
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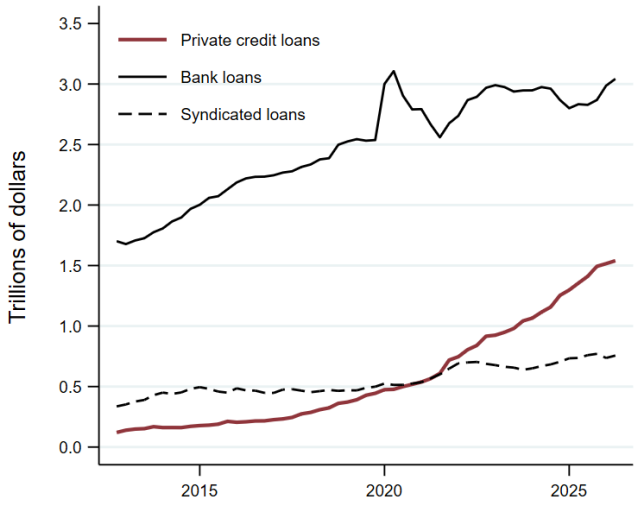
FIGURE 1. The Growth and Geography of U.S. Private Credit Lending Markets

This figure presents the growth and geographic distribution of U.S. private credit markets from 2012 to 2026. Panel A shows the percent change in the value of private credit loans, bank loans to nonfinancial businesses, and syndicated loans to nonfinancial corporations since 2012Q4, constructed using data from the U.S. Federal Reserve Enhanced Financial Accounts (Z.1). *Private credit loans* are loans held by private credit lenders, including business development companies, interval and tender-offer funds, private debt funds, middle-market CLOs, and foreign holders. Panel B shows the amount outstanding, in trillions of dollars. All series are measured at the end of each quarter. Panel C shows the fair value of BDC investments in portfolio firms by county as of 2017Q4, in millions of dollars, constructed from the Schedules of Investments from Forms 10-K/10-Q and N-2 filings, where darker shading indicates a larger amount of BDC capital invested.

Panel A. Growth in Debt Outstanding



Panel B. Size of Private Credit Markets



Panel C. Geography Distribution of Private Credit

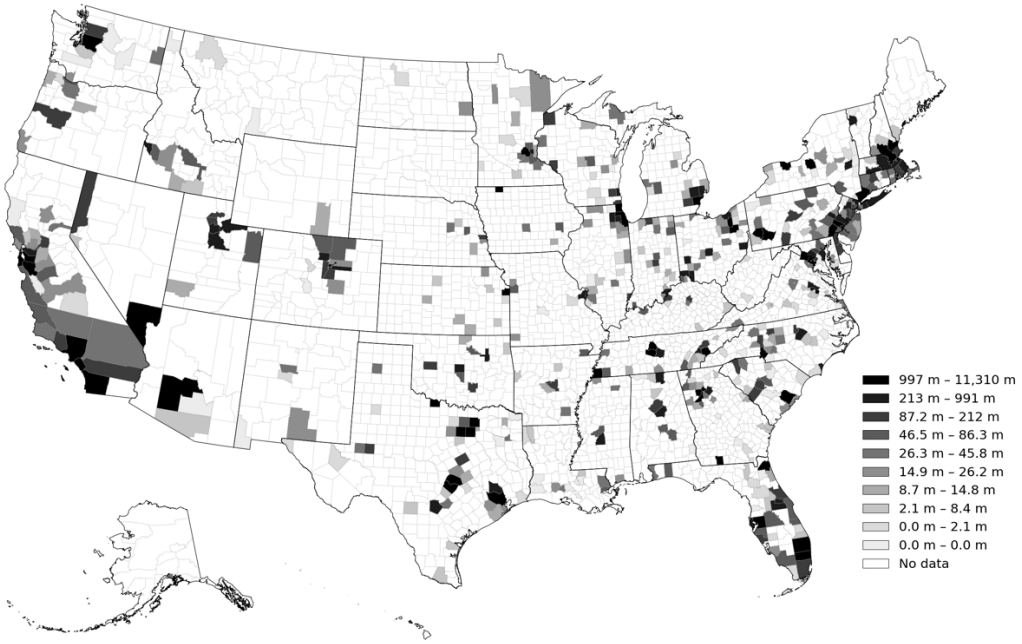
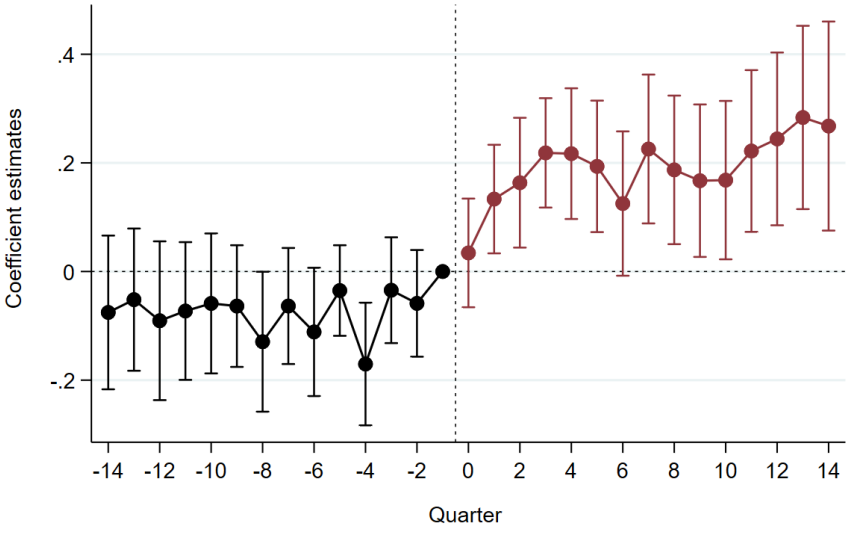


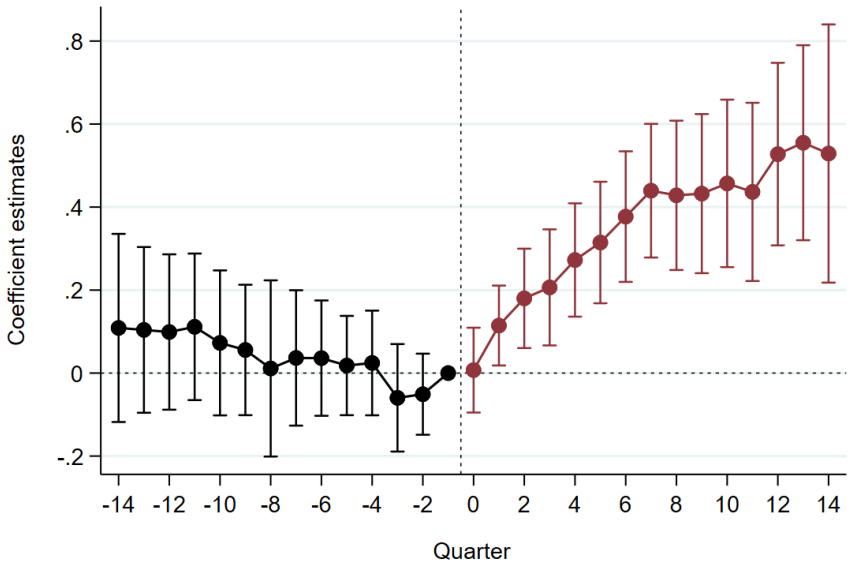
FIGURE 2. Effects of Deregulation on BDC Borrowing and Investment

This figure presents dynamic difference-in-differences estimates of the effects of the 2018 Small Business Credit Availability Act, which relaxed BDC borrowing constraints and disclosure requirements, on BDC borrowing and investment. The sample is a BDC-quarter panel hand-collected from SEC-registered BDC 10-K and 10-Q filings over 2011Q3–2026Q2. Treated BDCs are those that adopt the reduced asset coverage requirement, while never-adopters form the control group. The regression specification is: $Y_{i,t} = \sum_{k=-14,\, k\neq -1}^{14} \beta_k \, \mathbf{1}[t - E_i = k] + \alpha_i + \delta_t + \varepsilon_{i,t}$, where α_i and δ_t are BDC and quarter fixed effects. The omitted baseline quarter is 2017Q4. Panel A reports the debt-to-equity ratio, defined as total liabilities over net assets. Panel B reports the log number of unique portfolio firms. Panel C reports the log number of investment positions. Panel D reports the log of total investments at fair value, in millions of dollars. Panel E reports the log number of new portfolio companies added since the previous quarter. The figure reports coefficient estimates and 90% confidence intervals based on standard errors clustered at the BDC level.

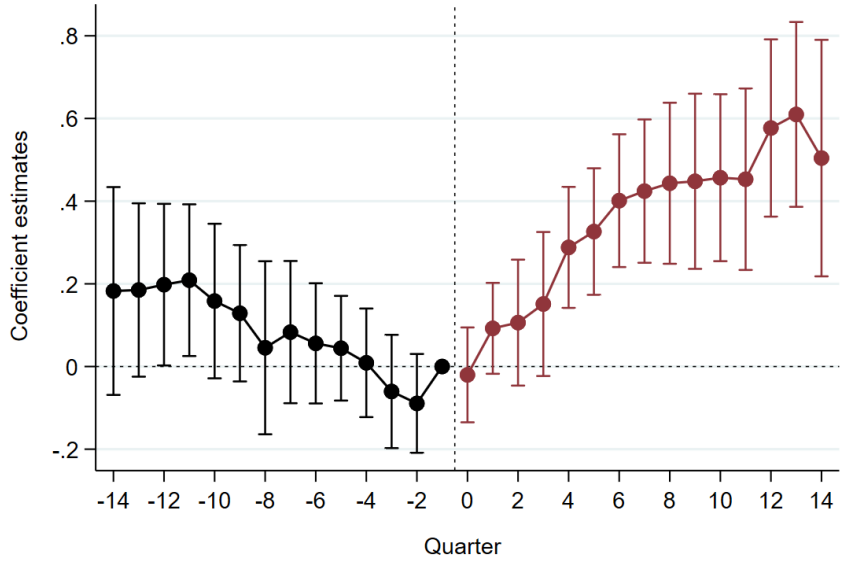
Panel A. Debt-to-Equity Ratio



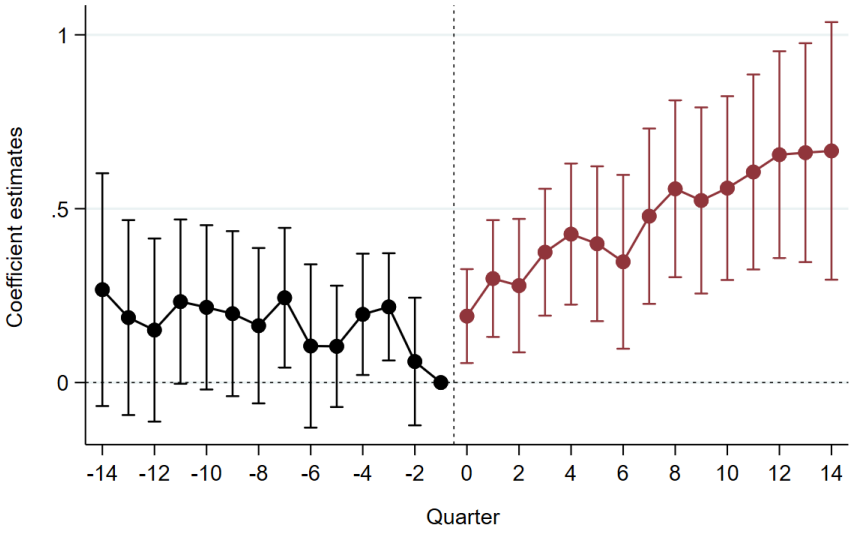
Panel B. Log Number of Portfolio Firms



Panel C. Log Total Investment Positions



Panel D. Log Total Investment Dollar Amount



Panel E. Log New Investment Positions

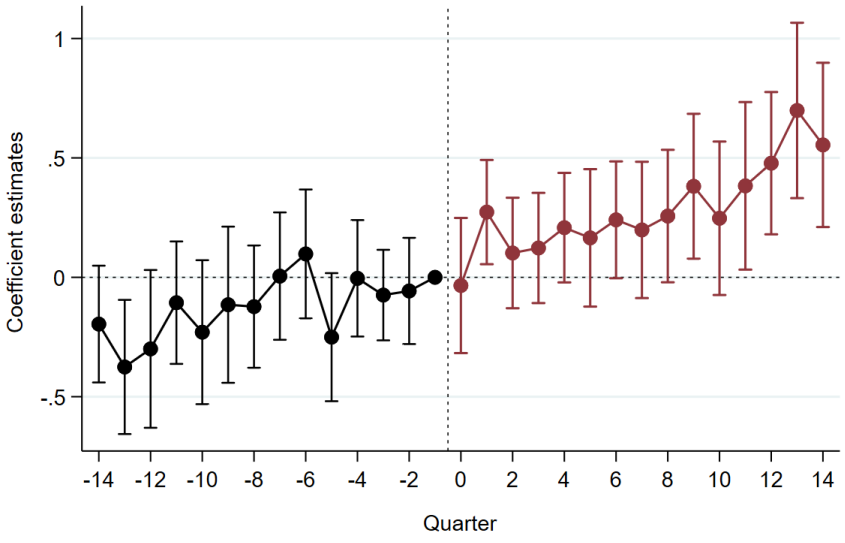
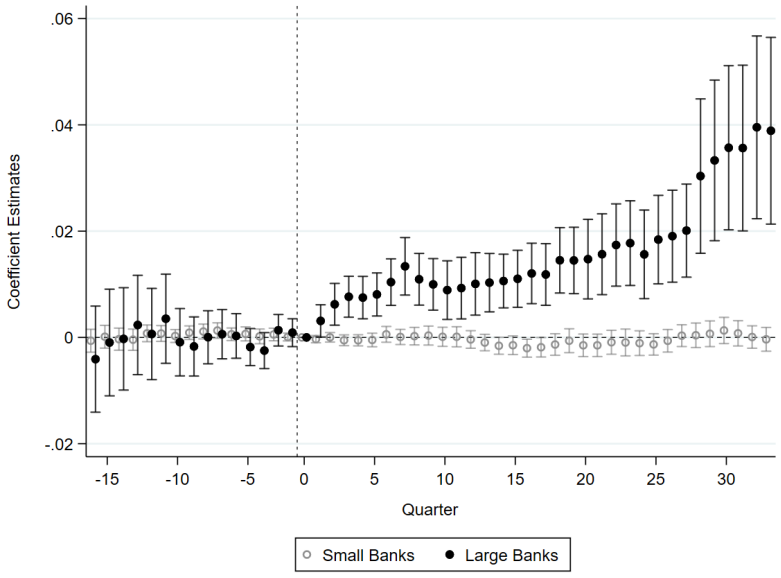


FIGURE 3. Dynamic Effects of Bank Lending to Nonbank Intermediaries

This figure presents difference-in-differences estimates of bank lending to private credit following the expansion of private credit. The regression specification is: $Y_{b,t} = \beta_0 + \sum_{h \neq -1} \beta_h \left(\text{Private Credit}_b \times \mathbf{1}[t - t_0 = h]\right) + \gamma' X_{b,t} + \alpha_b + \delta_{s,t} + \varepsilon_{b,t}$ where b denotes bank and t denotes quarter. Private Credit$_b$ is the share of bank b's deposits in zip codes with private credit activity in 2017. The sample period is 2014-Q1 to 2026-Q1. The reference year is 2017-Q4, the quarter prior to the implementation of the SBCAA. $X_{b,t}$ is a vector of bank controls, including log assets, liabilities-to-assets, equity-to-assets, net income-to-assets, and retained earnings-to-assets. Loan amounts and bank controls are adjusted for inflation using 2017 dollars. Large banks are institutions with assets of at least $1 billion, and small banks otherwise. The figures display point estimates with 90% confidence intervals based on standard errors clustered at the bank level.

Panel A. Loans to Nonbanks/Total Assets



Panel B. Loans to Nonbanks/Total Loans

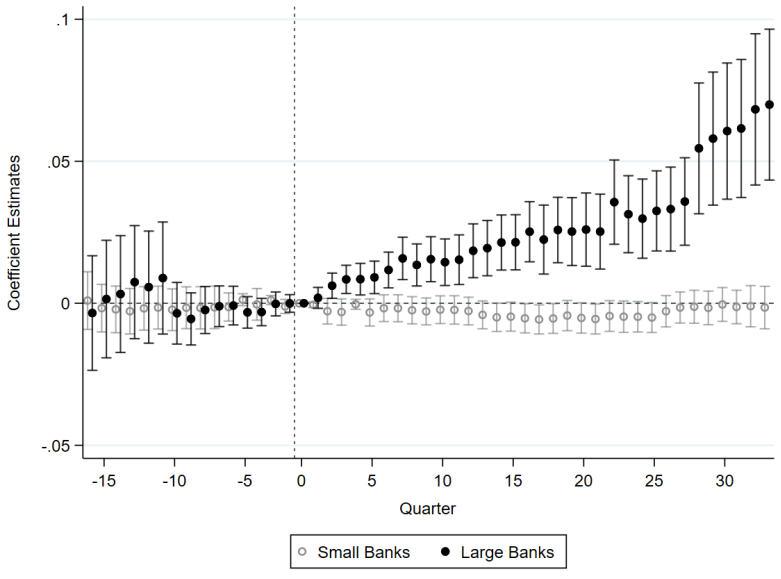


FIGURE 4. Dynamic Effects of Bank Lending to Small Businesses

This figure presents difference-in-differences estimates of bank lending to small businesses following the expansion of private credit. The dependent variable is the number of loans issued to small businesses under the SBA 7(a) program. The regression specification is: $Y_{b,c,s,t} = \beta_0 + \sum_{h \neq -1} \beta_h \left(\text{Private Credit}_c \times \mathbf{1}[t - t_0 = h]\right) + \gamma' X_{c,t} + \alpha_b + \mu_c + \delta_{s,t} + \varepsilon_{b,c,s,t}$ where b, c, s, t denote bank, county, state, and year, respectively. Private Credit$_c$ is the share of private debt deals in total private-market deals, capturing a bank's ex-ante exposure to private credit activity at the county level. The reference year is 2017, the year prior to the implementation of the SBCAA. $X_{c,t}$ is a vector of county controls, including log population, log income per capita, log number of firms, unemployment rate, log county deposits, and number of bank branches. Large banks are institutions with assets of at least $1 billion, and small banks otherwise. The figures display point estimates with 90% confidence intervals.

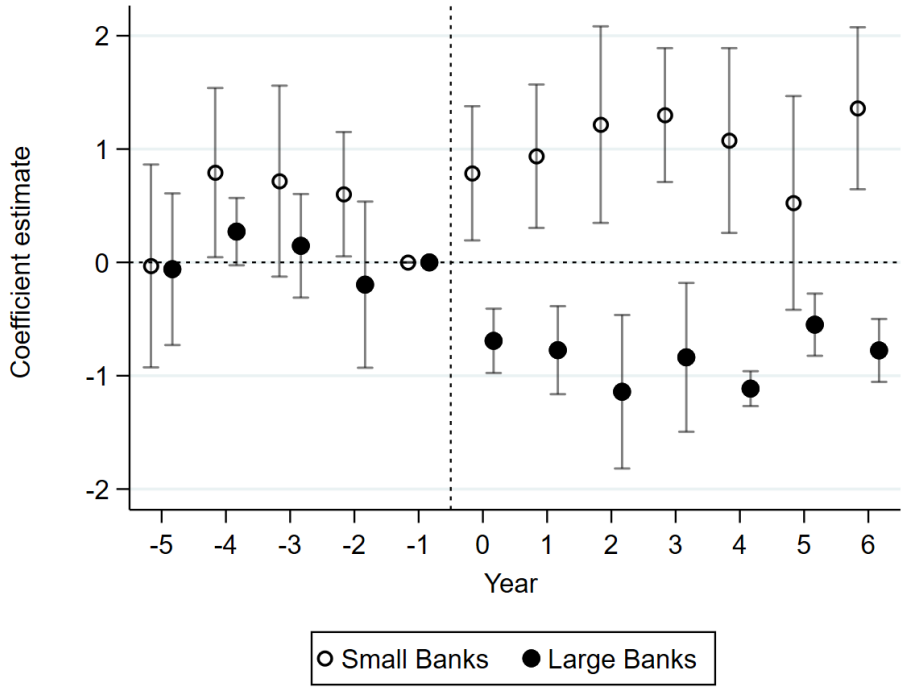
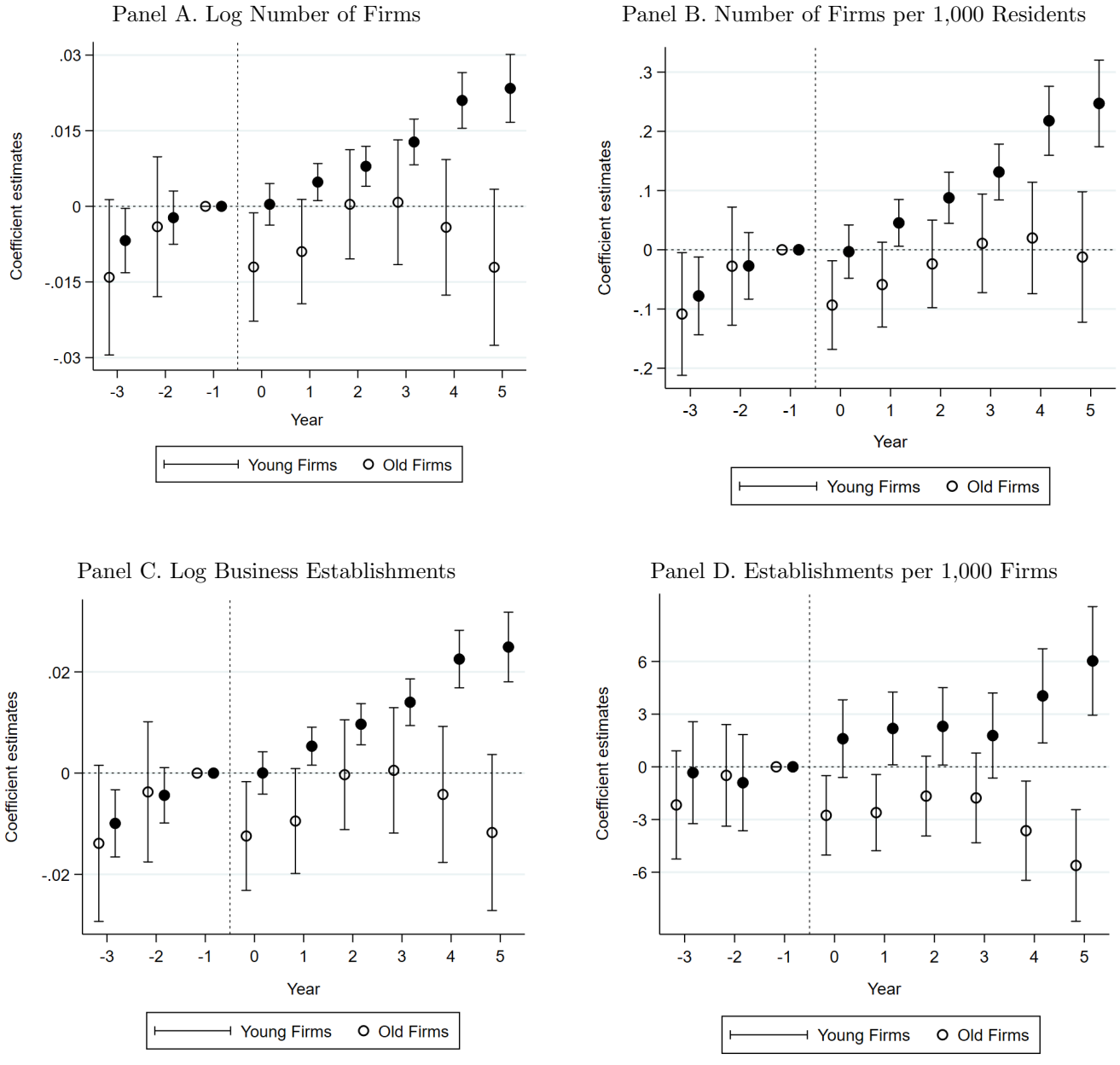


FIGURE 5. Does Private Credit Stimulate Local Economic Activity?

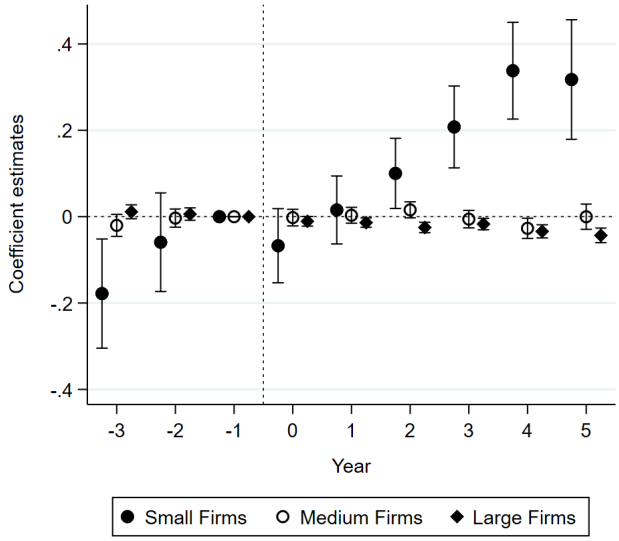
This figure presents difference-in-differences estimates of the effects of private credit expansion on local economic activity, by Firm Age (in Panel A) and by Firm Size (in Panel B) for the coefficients in Tables 10 and 11. The regression specification is: $Y^g_{c,t} = \sum_{\tau \neq -1} \beta^g_\tau \left(\text{Treated}_c \times \mathbf{1}\{t - 2018 = \tau\}\right) + \gamma' \left(X_{c,2017} \times \text{Post}_t\right) + \alpha_c + \delta_{s,t} + \varepsilon^g_{c,t}$, where c, s, t denote county, state, and year, respectively. *Treated* is an indicator equal to one if the number of BDC investments in the county is above the median across counties in 2017. *Post* is an indicator for 2018 and thereafter, following the implementation of the SBCAA 2018. $X_{c,2017}$ denotes county-level controls measured in 2017, including the unemployment rate, poverty rate, business income per return, and business bankruptcy rate, each interacted with *Post*. The figures display point estimates with 90% confidence intervals.

Panel A. By Firm Age

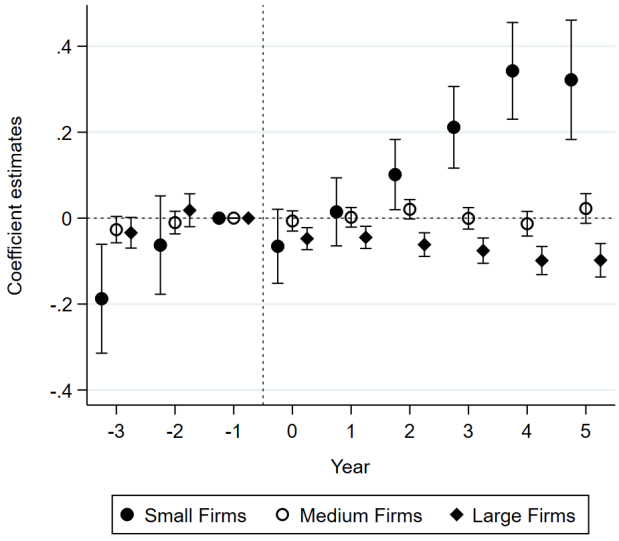


Panel B. By Firm Size

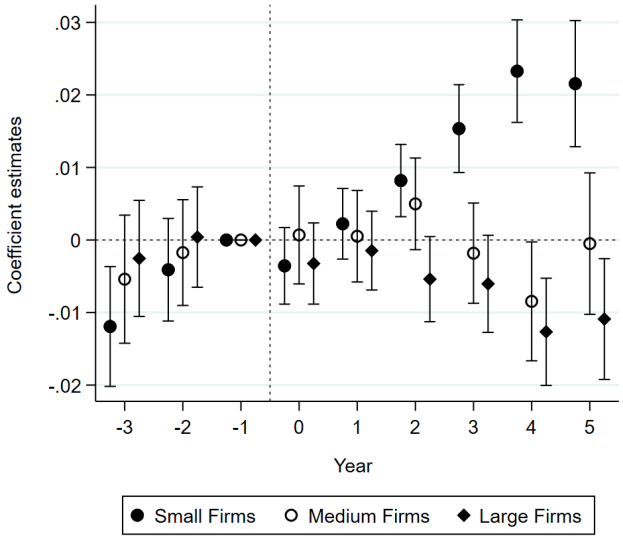
Panel A. Number of Firms per 1,000 Residents



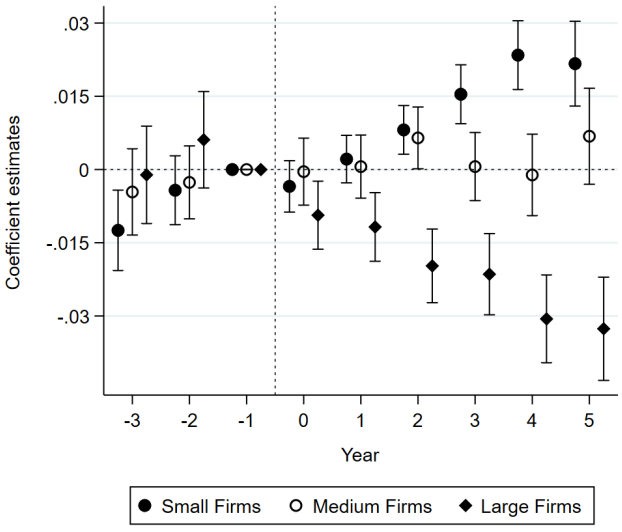
Panel B. Establishments per 1,000 Residents



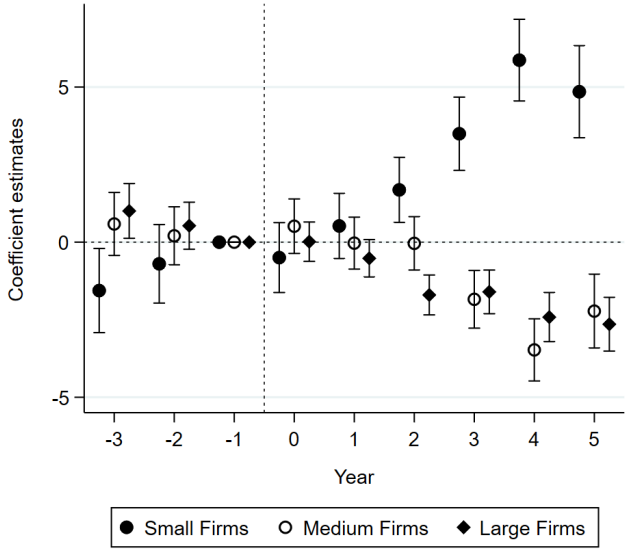
Panel C. Log Number of Firms



Panel D. Log Business Establishments



Panel E. Share of Firms



Panel F. Share of Establishments

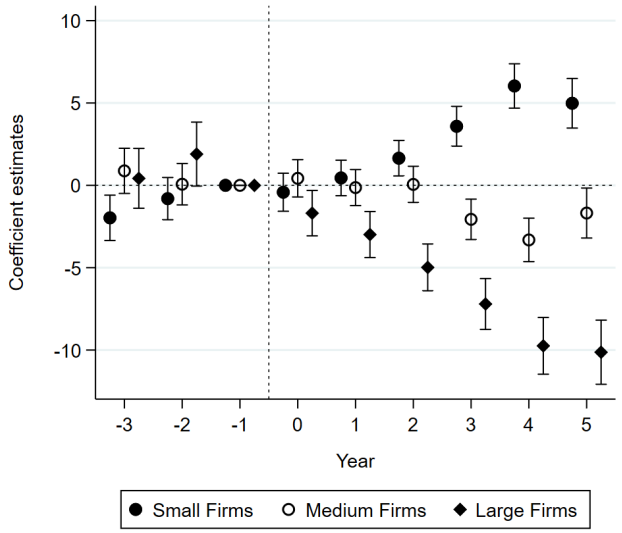


FIGURE 7. Dynamic Effects of Bank Geographic Footprints

This figure presents difference-in-differences estimates of bank branching networks following the expansion of private credit. The dependent variable is log number of bank branches by small banks. The regression specification is: $Y_{b,c,t} = \beta_0 + \sum_{h \neq -1} \beta_h \left(\text{Private Credit}_c \times \mathbf{1}[t - t_0 = h]\right) + \gamma' X_{c,t} + \alpha_b + \mu_c + \delta_{s,t} + \varepsilon_{b,c,t}$ where b, c, s, t denote bank, county, state, and year, respectively. Private Credit$_c$ is the share of private debt deals in total private-market deals, capturing a bank's ex-ante exposure to private credit activity at the county level. The reference year is 2017, the year prior to the implementation of the SBCAA. $X_{c,t}$ is a vector of county controls, including log population, log income per capita, log number of firms, and the unemployment rate. Large banks are institutions with assets of at least \$1 billion, and small banks otherwise. The figures display point estimates with 90% confidence intervals.

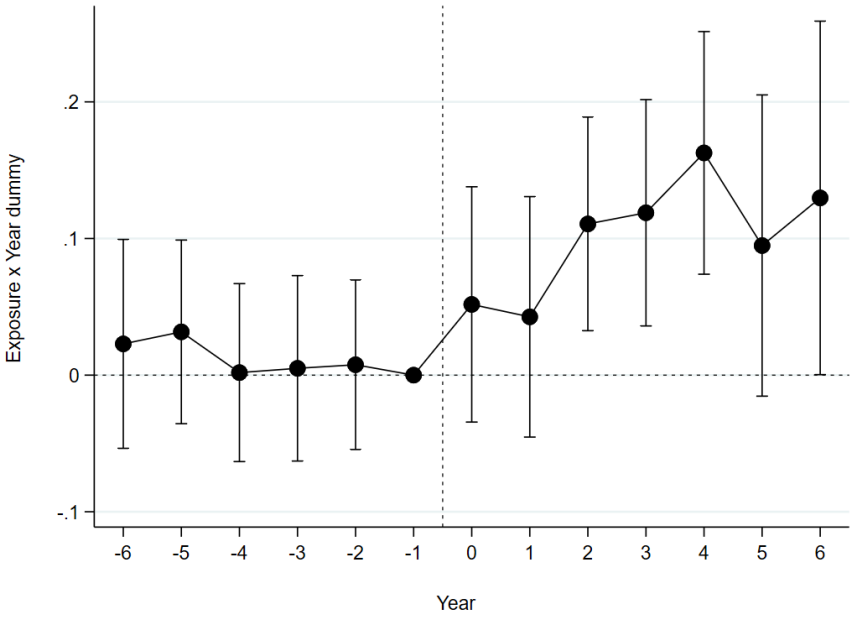


FIGURE 8. Which Banks Have Greater Incentives to Exploit Regulatory Arbitrage?

This figure shows which banks have greater incentives to exploit regulatory arbitrage via lending to private credit. The unit of observation is the bank-quarter, based on Call Reports data. The dependent variable is bank loans to nonbank intermediaries scaled by total assets. I interact *Private Credit Exposure* and *Post* with indicators for quartile distribution of bank characteristics; Quartile 1 represents the lowest values, while Quartile 4 represents the highest. *Non-Performing Loans* (NPL) are loans that cease generating scheduled interest or principal payments due to borrower distress. *NPL Coverage Ratio* is calculated as loan loss reserves divided by NPL, measuring loss-absorption capacity where lower coverage indicates greater vulnerability. *Loans-to-deposits* ratio capture liquidity and funding constraints, where higher values indicate tighter funding conditions. Loan amounts and bank characeristics are adjusted for inflation using 2017 dollars. Coefficient estimates represent differential effects and are shown with 95% confidence intervals based on standard errors clustered at the bank level. The corresponding coefficient estimates are reported in Appendix 7.

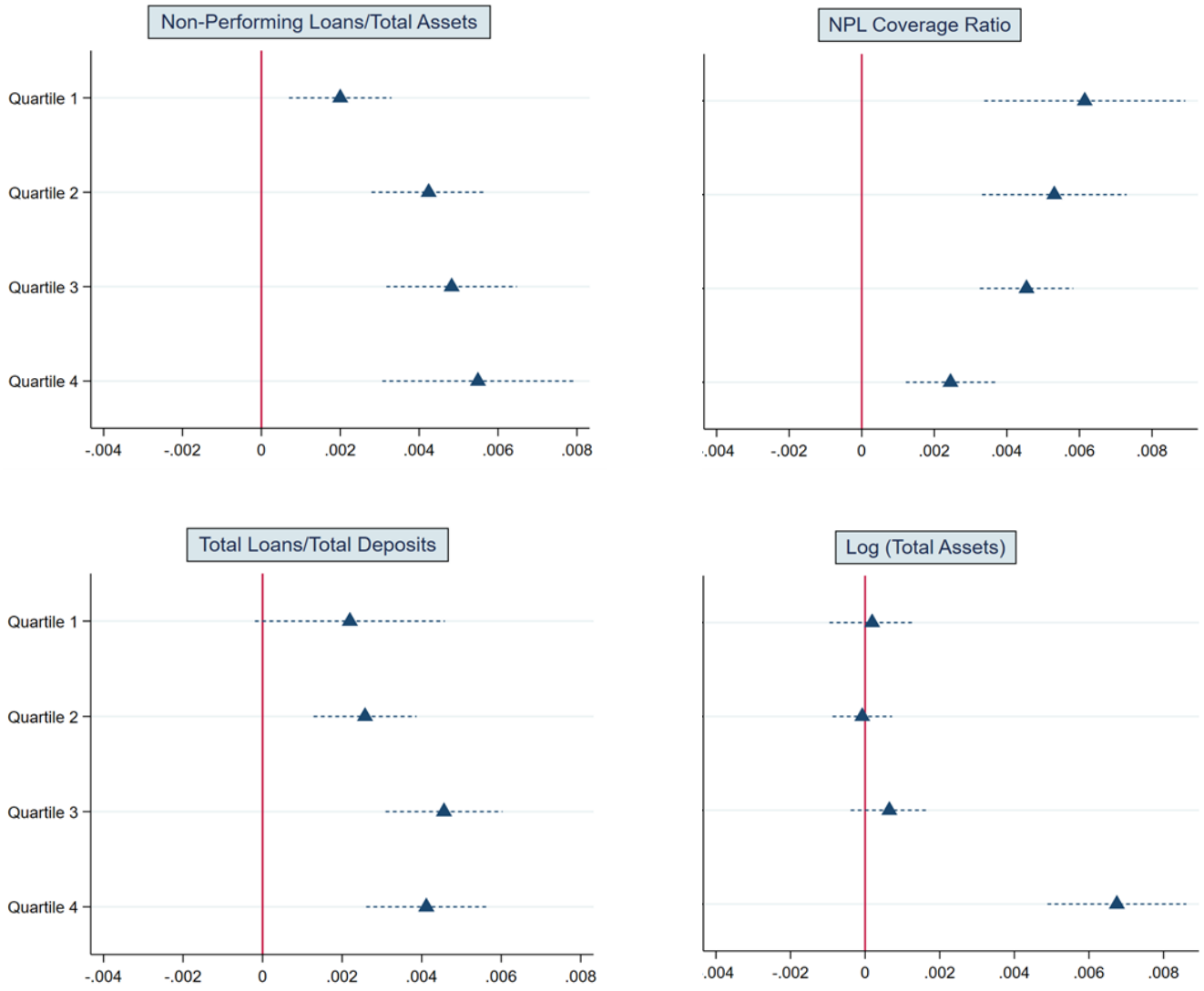


TABLE 1. Summary Statistics: Business Development Companies

This table reports summary statistics for BDC characteristics constructed from SEC Form 10-K and Form 10-Q filings and Schedules of Investments over 2012–2026. The sample contains 243 BDCs and 1,676 BDC-year observations. *New Investment Amount* is the dollar amount of investments newly added during the year. *Fraction of Investments that are Debt* is the share of investment positions classified as debt. *Fraction of Investments that are Affiliated or Controlled* is the share of positions in affiliated or controlled portfolio companies. *Debt-to-Equity Ratio* is total liabilities divided by net assets. *PIK Interest Income* is payment-in-kind interest income.

Variable	N	Mean	P5	P50	P95	SD
New Investment Amount ($ millions)	682	4232.72	1.19	288.40	4485.21	28132.38
Interest Rate (%)	1,493	8.52	3.70	8.69	12.72	2.85
Fraction of Investments that are Debt	1,627	0.77	0.22	0.84	1.00	0.24
Fraction of Investments that are Affiliated or Controlled	746	0.25	0.00	0.10	1.00	0.31
Total Assets ($ millions)	1,430	1885.35	23.54	599.70	6739.00	5321.35
Total Liabilities ($ millions)	1,393	911.66	1.18	275.72	2975.66	2630.94
Debt-to-Equity Ratio	1,353	0.83	0.02	0.84	1.70	0.52
Total Investment Income ($ millions)	1,142	110.77	0.05	34.03	488.05	261.95
Total Interest Income ($ millions)	866	130.95	0.13	40.03	602.10	302.93
PIK Interest Income ($ millions)	418	16.04	0.00	1.97	82.65	56.64
Fee Income ($ millions)	567	10.01	0.00	1.05	52.00	33.85
Publicly Traded (=1)	1,664	0.44	0.00	0.00	1.00	0.50

TABLE 2. Balance Assessment for Treated and Control Groups

This table presents covariate balance tests for the treated and control groups shown in Figure 1, Panel C. The tests are based on ex-ante county characteristics measured prior to treatment in 2017.

	Control		Treated		
Variable	Mean	SD	Mean	SD	Std. Diff
Number of firms per capita	0.019	0.006	0.019	0.004	0.089
Number of establishments per capita	0.022	0.006	0.023	0.005	0.281
Unemployment rate	4.350	1.268	4.083	0.941	-0.239
Business bankruptcies per 1,000 business returns	0.709	0.435	0.777	0.369	0.168
Number of establishments per firm	1.141	0.058	1.195	0.063	0.890
New jobs created per firm	2.366	0.796	2.895	0.754	0.682
Job destruction rate	11.467	2.973	11.751	1.556	0.119
Poverty rate	10.190	4.493	9.233	3.911	-0.227
Establishment entry rate	8.543	1.888	9.765	1.910	0.643
Establishment exit rate	8.129	1.177	9.075	1.258	0.777
Business Applications per firm	0.411	0.167	0.548	0.198	0.754
Firm deaths per firm	0.058	0.010	0.066	0.010	0.773
Bank branches per 1,000 residents	0.336	0.167	0.284	0.125	-0.351
Job reallocation rate	21.295	3.726	23.016	3.010	0.508

TABLE 3. Effects of Private Credit Expansion on Bank Loan Pricing

This table reports difference-in-differences estimates of bank loan pricing following the expansion of private credit. The dependent variables are loan spreads for *Commercial Lines of Credit* (columns 1 and 2) and *Small Business Loans* (columns 3 and 4), adjusted for aggregate macro conditions by normalizing by the federal funds rate. The regression specification is: $Y_{i,b,c,s,t} = \beta_0 + \beta_1(\text{Private Credit}_c \times \text{Post}_t) + \beta_2(\text{Large}_b \times \text{Post}_t) + \beta_3(\text{Private Credit}_c \times \text{Post}_t \times \text{Large}_b) + \gamma' X_{c,t} + \theta_{b,c} + \alpha_c + \delta_{s,t} + \varepsilon_{i,b,c,s,t}$ where i, b, c, s, t index branch, bank, county, state, and quarter, respectively. *Commercial Lines of Credit* is secured commercial lines of credit offered to top-tier business borrowers. *Small Business Loans* is the advertised interest rate a bank branch offers for a $50,000 secured small business loan. *Large Bank* equals one for banks with assets of at least $1 billion, and small bank otherwise. *Private Credit* is the share of private debt deals relative to all private-market deals, capturing ex-ante exposure to private credit activity. $Post_t$ equals one beginning in 2018Q1 following the enactment of SBCAA. $X_{c,t}$ is a vector of county controls, including log population, log income per capita, log number of firms, unemployment rate, number of bank branches, and log deposits. Standard errors clustered at the county-year level are reported in parentheses. *** , ** , and * denote significance at the 1%, 5%, and 10% levels.

	Dependent Variable = Loan Spread (= Raw Rate - Federal Funds Rate)			
	Commercial Line of Credit		**Small Business Loans**	
	(1)	(2)	(3)	(4)
Private Credit × Post	-3.790**	-1.266*	-4.050***	-4.065***
	(1.605)	(0.739)	(0.431)	(0.451)
Large Bank × Post	-0.028	-0.028	-0.577***	-0.623***
	(0.230)	(0.193)	(0.194)	(0.190)
Private Credit × Post × Large	4.399***	1.168	2.951***	2.994***
	(1.621)	(0.736)	(0.489)	(0.482)
Number of Observations	164,777	164,871	63,755	63,784
Mean of Dependent Variable	5.119	5.118	5.040	5.039
SD of Dependent Variable	1.266	1.266	1.231	1.232
Lender FE	No	Yes	No	Yes
Lender × County FE	Yes	No	Yes	No
County FE	Yes	Yes	Yes	Yes
State × Year-Quarter FE	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes
Adjusted R^2	0.811	0.758	0.848	0.825

TABLE 4. Effects of Private Credit Expansion on Bank Underwriting

This table reports difference-in-differences estimates of bank underwriting disciplines following the expansion of private credit. The dependent variable is the likelihood that a granted loan is risky, with higher values indicate looser screening and greater lending to riskier borrowers, constructed based on the SBA 7(a) Loan Program data. The regression specification is: $Y_{l,b,c,s,t} = \beta_0 + \beta_1(\text{Private Credit}_c \times \text{Post}_t) + \beta_2(\text{Large}_b \times \text{Post}_t) + \beta_3(\text{Private Credit}_c \times \text{Post}_t \times \text{Large}_b) + \gamma' X_{c,t} + \theta' Z_{l,t} + \alpha_{b,c} + \eta_c + \delta_{s,t} + \varepsilon_{l,b,c,s,t}$ where l, b, c, s, t index loan, bank, county, state, year, respectively. *Probability of Risky Loan* is an indicator equal to one for loans originated through SBA programs associated with lower documentation requirements or specialized credit facilities, which typically involve higher borrower risk and weaker lender screening. Large banks are institutions with assets of at least $1 billion, and small banks otherwise. *Private Credit* is the share of private debt deals relative to all private-market deals, capturing ex-ante exposure to private credit activity. $X_{c,t}$ is the vector of county controls, including log population, log income per capita, log number of firms, unemployment rate, number of bank branches, and volume of deposits. Z_i is the vector of loan controls, including an indicator for collateral requirement and a categorical variable for loan type (one for revolving lines of credit and zero for term loans). Standard errors are clustered at the county-year level and reported in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels.

	Dependent Variable = Probability of Risky Loan		
	(1)	(2)	(3)
Private Credit × Post	0.088***	0.125***	0.085***
	(0.025)	(0.048)	(0.023)
Large Bank × Post	0.017***	0.021***	0.017***
	(0.003)	(0.004)	(0.003)
Private Credit × Post × Large	-0.107***	-0.135***	-0.099***
	(0.024)	(0.046)	(0.024)
Number of Observations	718,380	701,233	718,382
Mean of Dependent Variable	0.484	0.493	0.484
SD of Dependent Variable	0.500	0.500	0.500
Lender FE	Yes	No	Yes
Lender × County FE	No	Yes	No
County FE	Yes	Yes	No
State-by-Year FE	Yes	Yes	Yes
County Controls	Yes	Yes	Yes
Loan Controls	Yes	Yes	Yes
Adjusted R^2	0.641	0.651	0.640

TABLE 5. Effects of Private Credit Expansion on Bank Lending to Small Businesses

This table reports difference-in-differences estimates of bank lending to small businesses following the expansion of private credit. The dependent variable is the number of loans issued to small businesses under the SBA 7(a) program. The regression specification is: $Y_{b,c,s,t} = \beta_0 + \beta_1(\text{Private Credit}_c \times \text{Post}_t) + \beta_2(\text{Large}_b \times \text{Post}_t) + \beta_3(\text{Private Credit}_c \times \text{Post}_t \times \text{Large}_b) + \gamma' X_{c,t} + \alpha_{b,c} + \mu_c + \delta_{s,t} + \varepsilon_{b,c,s,t}$ where b, c, s, t index bank, county, state, and year, respectively. *Private Credit* is the share of private debt deals relative to all private-market deals, capturing ex-ante exposure to private credit activity. Large banks are institutions with assets of at least $1 billion, and small banks otherwise. $X_{c,t}$ is a vector of county controls, including log population, log income per capita, log number of firms, unemployment rate, log county deposits, and number of bank branches. Loan amounts are normalized to 2017 dollars. Standard errors clustered at the county-year level are reported in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels.

	Loans to Small Businesses		
	(1)	(2)	(3)
Private Credit × Post	0.686**	0.686**	0.584*
	(0.311)	(0.311)	(0.300)
Large Bank × Post	-0.376***	-0.376***	-0.360***
	(0.040)	(0.040)	(0.039)
Private Credit × Post × Large Bank	-0.944***	-0.944***	-0.714**
	(0.323)	(0.323)	(0.312)
Number of Observations	180,865	180,865	180,865
Mean of Dependent Variable	3.365	3.365	3.365
SD of Dependent Variable	5.864	5.864	5.864
Lender × County FE	Yes	Yes	Yes
County FE	Yes	No	Yes
Year FE	Yes	Yes	No
State × Year FE	No	No	Yes
Controls	Yes	Yes	Yes
Adjusted R^2	0.667	0.667	0.664

TABLE 6. Effects of Private Credit Expansion on Local Market Structure

This table reports difference-in-differences estimates of bank branching networks following the expansion of private credit. The dependent variables are listed at the top of each column, constructed from the FDIC Summary of Deposits data. The regression specification is: $Y_{b,c,s,t} = \beta_0 + \beta_1(\text{Private Credit}_c \times \text{Post}_t) + \beta_2(\text{Large}_b \times \text{Post}_t) + \beta_3(\text{Private Credit}_c \times \text{Post}_t \times \text{Large}_b) + \gamma' X_{c,t} + \alpha_c + \alpha_b + \delta_{s,t} + \varepsilon_{b,c,s,t}$ where b, c, s, and t index bank, county, state, and year, respectively. Large banks are institutions with assets of at least $1 billion, and small banks otherwise. *Private Credit* is the share of private debt deals relative to all private-market deals, capturing ex-ante exposure to private credit activity. IHS denotes the inverse hyperbolic sine transformation ($IHS(x) = \ln(x + \sqrt{x^2 + 1})$), which accommodates zero values and reducing skewness. $Post_t$ equals one beginning in 2018 following the enactment of SBCAA. County controls include log population, log income per capita, log number of firms, and unemployment rate. Standard errors are clustered at the county-year level and reported in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels.

	(1) Log Bank Branches	(2) IHS Bank Branches	(3) Bank Deposits per capita	(4) Log Bank Deposits	(5) IHS Bank Deposits
Private Credit × Post	0.091***	0.086***	1.424***	0.065*	0.065*
	(0.027)	(0.025)	(0.297)	(0.033)	(0.033)
Large × Post	0.159***	0.160***	4.379***	0.395***	0.395***
	(0.008)	(0.008)	(0.215)	(0.012)	(0.012)
Private Credit × Post × Large	-0.086	-0.073	2.550	-0.094	-0.094
	(0.053)	(0.052)	(2.035)	(0.064)	(0.064)
Number of Observations	48,037	48,037	48,037	48,037	48,037
Mean of Dependent Variable	1.551	2.295	4.785	12.648	13.341
SD of Dependent Variable	1.230	1.178	19.158	1.577	1.577
Lender FE	Yes	Yes	Yes	Yes	Yes
County FE	Yes	Yes	Yes	Yes	Yes
State x Year FE	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes
Adjusted R^2	0.958	0.960	0.923	0.950	0.950

TABLE 7. Effects of Private Credit Expansion on Bank Lending to Private Credit

This table reports difference-in-differences estimates of bank lending to private credit following the expansion of private credit. The dependent variables are loans to nonbank intermediaries, which proxy for and include loans to private credit funds. The regression specification is: $Y_{b,t} = \beta_0 + \beta_1(\text{Private Credit}_b \times \text{Post}_t) + \beta_2(\text{Large}_b \times \text{Post}_t) + \beta_3(\text{Private Credit}_b \times \text{Post}_t \times \text{Large}_b) + \gamma' X_{b,t} + \alpha_b + \delta_t + \varepsilon_{b,t}$ where b indexes bank and t indexes quarter. Private Credit_b is the share of bank b's deposits in zip codes with private credit activity in 2017. Large banks are institutions with assets of at least $1 billion, and small banks otherwise. $X_{b,t}$ is the vector of bank controls, including log assets, liabilities-to-assets, equity-to-assets (omitted in column (2) due to collinearity), net income-to-assets, and retained earnings-to-assets. Loan amount and bank controls are adjusted for inflation using 2017 dollars. Standard errors are clustered at the bank level and reported in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels.

	(1) Loans to NBFIs/ Assets	(2) Loans to NBFIs/ Equity	(3) Loans to NBFIs/ Total Loans	(4) Log (Loans to NBFIs)
Private Credit × Post	0.001***	-0.002	0.001***	0.020
	(0.000)	(0.006)	(0.000)	(0.020)
Large × Post	-0.001***	-0.009**	-0.001***	0.220***
	(0.000)	(0.004)	(0.000)	(0.018)
Private Credit × Post × Large	0.006***	0.078***	0.011***	0.386***
	(0.000)	(0.006)	(0.001)	(0.034)
Number of Observations	390,668	390,667	388,157	281,075
Mean of Dependent Variable	0.004	0.040	0.007	5.220
SD of Dependent Variable	0.019	0.977	0.037	2.843
Bank FE	Yes	Yes	Yes	Yes
Year-Quarter FE	Yes	Yes	Yes	Yes
Bank Controls	Yes	Yes	Yes	Yes
Adjusted R^2	0.666	0.025	0.756	0.819

TABLE 8. Effects of Private Credit Expansion on Bank Returns on Capital

This table reports difference-in-differences estimates bank returns on capital from increased lending to private credit. Dependent variables are listed at the top of each column. The regression specification is: $Y_{b,t} = \beta_0 + \beta_1(\text{Private Credit}_b \times \text{Post}_t) + \beta_2(\text{Large}_b \times \text{Post}_t) + \beta_3(\text{Private Credit}_b \times \text{Post}_t \times \text{Large}_b) + \gamma' X_{b,t} + \alpha_b + \delta_t + \varepsilon_{b,t}$ where b indexes bank and t indexes quarter. Private Credit_b is the share of bank b's deposits in zip codes with private credit activity in 2017. *Non-Performing Loans* are loans that cease generating scheduled interest or principal payments due to borrower distress. *Interest Income* is the amount of income a bank earns from interest-bearing assets, as reported in the FFIEC Call Reports data. Large banks are institutions with assets of at least $1 billion, and small banks otherwise. $X_{b,t}$ is the vector of bank controls, including log assets, net income-to-assets, and retained earnings-to-assets. Bank outcomes and controls are adjusted for inflation using 2017 dollars. Standard errors are clustered at the bank level and reported in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels.

	(1) Non-Performing Loans/Assets	(2) Interest Income/ Equity	(3) Log (Interest Income)
Private Credit × Post	-0.006***	-0.024	0.061***
	(0.000)	(0.022)	(0.002)
Large × Post	-0.002***	-0.018	-0.024***
	(0.000)	(0.014)	(0.002)
Private Credit × Post × Large	0.004***	0.047*	0.009**
	(0.000)	(0.027)	(0.004)
Number of Observations	390,668	390,667	390,601
Mean of Dependent Variable	0.010	0.257	8.574
SD of Dependent Variable	0.017	4.553	1.555
Bank FE	Yes	Yes	Yes
Year-Quarter FE	Yes	Yes	Yes
Bank Controls	Yes	Yes	Yes
Adjusted R^2	0.597	0.136	0.990

TABLE 9. Does Private Credit Stimulate Local Economic Activity?

This table reports the difference-in-differences estimates on the effects of private credit expansion on local economic activity. Dependent variables are listed at the top of each column. The regression specification is: $Y_{c,t} = \beta(\text{Treated}_c \times \text{Post}_t) + \gamma'(X_{c,2017} \times \text{Post}_t) + \alpha_c + \delta_{s,t} + \varepsilon_{c,t}$, where c, s, t index county, state, and year, respectively. *Treated* is an indicator equal to one if the number of BDC investments in the county is above the median across counties in 2017. *Post* is an indicator for 2018 and thereafter, following the implementation of the Small Business Credit Availability Act of 2018. *Business Applications* is the number of applicants for an EIN made predominantly for business purposes. *Business Establishments* is the number of fixed physical locations where economic activity occurs. *Establishment Entry* is the number of establishments born during the last 12 months. *New Jobs Created* is the number of jobs created by expanding and opening establishments. *Employment* is the number of employees across all firms in the county-year. $X_{c,2017}$ denotes county-level controls measured in 2017, including the unemployment rate, poverty rate, business income per return, and business bankruptcy rate, each interacted with *Post*. Standard errors are clustered at the county-by-year level and reported in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels.

Panel A. Business Formation and Firm Dynamics

	Business Applications		Number of Firms		Business Establishments		Establishment Entry	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Log	Per 1,000 Residents	Log	Per 1,000 Residents	Log	Per 1,000 Residents	Log	Per 1,000 Residents
Treated × Post	0.042***	1.792***	0.026***	0.450***	0.021***	0.467***	0.009*	0.040***
	(0.005)	(0.081)	(0.002)	(0.039)	(0.002)	(0.043)	(0.005)	(0.011)
Observations	8,476	8,476	7,410	7,410	7,410	7,410	7,408	7,408
Mean of Y	5,530	10.152	8,217	19.039	9,833	22.022	1,030	2.069
SD of Y	11,424	5.713	13,868	5.146	16,693	5.649	1,959	0.733
County FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
State-by-Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R^2	0.995	0.920	0.999	0.981	0.999	0.981	0.995	0.917

Panel B. Employment and Job Creation

	New Jobs Created		Employment	
	(1)	(2)	(3)	(4)
	Log	Per 1,000 Residents	Log	Per 1,000 Residents
Treated × Post	0.016**	1.827***	0.012***	8.909***
	(0.008)	(0.413)	(0.003)	(1.061)
Observations	7,410	7,410	7,410	7,410
Mean of Y	23,451	46.222	178,784	373.900
SD of Y	43,113	18.975	309,209	127.281
County FE	Yes	Yes	Yes	Yes
State-by-Year FE	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes
Adjusted R^2	0.989	0.809	0.999	0.974

TABLE 10. Does Private Credit Stimulate Local Economic Activity? Heterogeneity by Firm Age

This table reports difference-in-differences estimates of the effects of private credit expansion on local economic activity, separately by firm age. Panel A reports the results for young firms, defined as firms aged 0–5 years, and Panel B reports the results for older firms, defined as firms aged 6 years or more. Dependent variables are listed at the top of each column. The regression specification is: $Y_{c,t} = \beta(\text{Treated}_c \times \text{Post}_t) + \gamma'(X_{c,2017} \times \text{Post}_t) + \alpha_c + \delta_{s,t} + \varepsilon_{c,t}$, where c, s, t index county, state, and year, respectively. *Treated* is an indicator equal to one if the number of BDC investments in the county is above the median across counties in 2017. *Post* is an indicator for 2018 and thereafter, following the implementation of the Small Business Credit Availability Act of 2018. *Business Establishments* is the number of fixed physical locations where economic activity occurs. $X_{c,2017}$ denotes county-level controls measured in 2017, including the unemployment rate, poverty rate, business income per return, and business bankruptcy rate, each interacted with *Post*. Standard errors are clustered at the county-by-year level and reported in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels.

Panel A. Young Firms (Age 0–5)

	(1) Number of Firms per 1,000 Residents	(2) Log Number of Firms	(3) Log Business Establishments	(4) Log Employment	(5) Business Establishments per 1,000 Firms
Treated × Post	0.221***	0.036***	0.035***	0.028***	3.291***
	(0.023)	(0.004)	(0.004)	(0.007)	(0.707)
Observations	7,410	7,410	7,410	7,410	7,410
Mean of Y	5.406	2,681	2,715	19,779	286.719
SD of Y	1.931	5,179	5,250	37,899	61.362
County FE	Yes	Yes	Yes	Yes	Yes
State-by-Year FE	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes
Adjusted R^2	0.947	0.997	0.997	0.991	0.950

Panel B. Older firms (Age 6+)

	(1) Number of Firms per 1,000 Residents	(2) Log Number of Firms	(3) Log Business Establishments	(4) Log Employment	(5) Business Establishments per 1,000 Firms
Treated × Post	0.192***	0.022***	0.026***	0.023***	0.575
	(0.021)	(0.002)	(0.002)	(0.004)	(0.671)
Observations	7,410	7,410	7,410	7,410	7,410
Mean of Y	10.818	4,625.175	5,198.371	83,217.800	620.395
SD of Y	3.159	7,744.514	8,829.523	147,430.104	44.514
County FE	Yes	Yes	Yes	Yes	Yes
State-by-Year FE	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes
Adjusted R^2	0.986	0.999	0.999	0.997	0.914

TABLE 11. Does Private Credit Stimulate Local Economic Activity? Heterogeneity by Firm Size

This table reports difference-in-differences estimates of the effects of private credit expansion on local economic activity, separately by firm size. Panel A reports the results for small firms, defined as firms with 1–19 employees, Panel B reports the results for medium-sized firms, defined as firms with 20–499 employees, and Panel C reports the results for large firms, defined as firms with 500 or more employees. Dependent variables are listed at the top of each column. The regression specification is: $Y_{c,t} = \beta(\text{Treated}_c \times \text{Post}_t) + \gamma'(X_{c,2017} \times \text{Post}_t) + \alpha_c + \delta_{s,t} + \varepsilon_{c,t}$, where c, s, t index county, state, and year, respectively. *Treated* is an indicator equal to one if the number of BDC investments in the county is above the median across counties in 2017. *Post* is an indicator for 2018 and thereafter, following the implementation of the Small Business Credit Availability Act of 2018. *Business Establishments* is the number of fixed physical locations where economic activity occurs. $X_{c,2017}$ denotes county-level controls measured in 2017, including the unemployment rate, poverty rate, business income per return, and business bankruptcy rate, each interacted with *Post*. Standard errors are clustered at the county-by-year level and reported in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels.

Panel A. Small-sized firms (1–19 employees)

	Number of Firms			Business Establishments		
	(1)	(2)	(3)	(4)	(5)	(6)
	Log	Per 1,000 Residents	Per 1,000 Firms	Log	Per 1,000 Residents	Per 1,000 Firms
Treated × Post	0.035***	0.485***	6.301***	0.035***	0.492***	6.458***
	(0.002)	(0.035)	(0.372)	(0.002)	(0.035)	(0.377)
Observations	7,410	7,410	7,410	7,410	7,410	7,410
Mean of Y	6,546	14.533	761	6,587	14.619	765.077
SD of Y	11,776	4.339	50.667	11,852	4.366	50.981
County FE	Yes	Yes	Yes	Yes	Yes	Yes
State-by-Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R^2	0.999	0.980	0.980	0.999	0.980	0.979

Panel B. Medium-sized firms (20–499 employees)

	Number of Firms			Business Establishments		
	(1)	(2)	(3)	(4)	(5)	(6)
	Log	Per 1,000 Residents	Per 1,000 Firms	Log	Per 1,000 Residents	Per 1,000 Firms
Treated × Post	0.008***	0.015**	-2.569***	0.011***	0.036***	-2.641***
	(0.003)	(0.007)	(0.268)	(0.003)	(0.009)	(0.352)
Observations	7,410	7,410	7,410	7,410	7,410	7,410
Mean of Y	1,127.806	2.711	143.144	1,458.897	3.440	182.016
SD of Y	1,744.113	0.814	24.696	2,312.148	1.051	35.479
County FE	Yes	Yes	Yes	Yes	Yes	Yes
State-by-Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R^2	0.998	0.969	0.950	0.998	0.972	0.958

Panel C. Large-sized firms ($\geq$ 500 employees)

	Number of Firms			Business Establishments		
	(1)	(2)	(3)	(4)	(5)	(6)
	Log	Per 1,000 Residents	Per 1,000 Firms	Log	Per 1,000 Residents	Per 1,000 Firms
Treated × Post	-0.006**	-0.050***	-3.752***	-0.028***	-0.061***	-9.573***
	(0.002)	(0.004)	(0.243)	(0.003)	(0.010)	(0.526)
Observations	7,410	7,410	7,410	7,410	7,410	7,410
Mean of Y	547.558	1.804	96.791	1,787.356	3.962	213.317
SD of Y	496.727	0.744	35.025	2,739.044	1.278	62.037
County FE	Yes	Yes	Yes	Yes	Yes	Yes
State-by-Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R^2	0.998	0.987	0.982	0.999	0.979	0.975

TABLE 12. Which Banks Have Greater Incentives to Exploit the Regulatory Arbitrage?

This table reports results on which banks have greater incentives to exploit regulatory arbitrage via lending to private credit. The unit of observation is the bank–quarter, based on Call Reports data. The regression specification is:

$$\text{Outcome}_{b,t} = \beta_0 + \beta_1(\text{Private Credit}_b \times \text{Post}_t) + \beta_2(\text{Private Credit}_b \times \text{Post}_t \times \text{Bank Characteristics}_{b,t}) + \gamma' X_{b,t} + \mu_b + \delta_t + \varepsilon_{b,t}$$

where b and t index bank and quarter, respectively. The dependent variable is bank loans to nonbank intermediaries scaled by total assets. Private Credit$_b$ is the share of bank b's deposits in zip codes with private credit activity in 2017. *Non-performing loans* (NPL) are loans that cease generating scheduled interest or principal payments due to borrower distress. *NPL coverage ratio* is calculated as loan loss reserves divided by NPL and captures a bank's capacity to absorb losses, where lower coverage indicates greater vulnerability. *Loans-to-deposits ratio* captures liquidity and funding constraints, where higher values indicate tighter funding conditions. *Bank Size* is the log of total assets, capturing a bank's organizational capacity and internal capital markets. Standard errors are clustered at the bank level and reported in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels.

	Dependent Variable = Loans to Nonbank Intermediaries/Total Assets				
	(1)	(2)	(3)	(4)	(5)
Private Credit × Post	0.003***	0.005***	0.002***	-0.045***	0.004***
	(0.000)	(0.000)	(0.001)	(0.002)	(0.000)
Private Credit × Post × NPL/Assets	0.068***				
	(0.022)				
Private Credit × Post × Loss Coverage Ratio		-0.072***			
		(0.012)			
Private Credit × Post × Loan-to-Deposits Ratio			0.002***		
			(0.001)		
Private Credit × Post × Bank Size				0.004***	
				(0.000)	
Private Credit × Post × Operating Income/Assets					-0.001***
					(0.000)
Number of Observations	390,669	388,158	390,574	390,669	390,667
Bank FE	Yes	Yes	Yes	Yes	Yes
Year-Quarter FE	Yes	Yes	Yes	Yes	Yes
Number of Institutions	8,181	8,181	8,181	8,181	8,181
Adjusted R^2	0.663	0.691	0.663	0.669	0.663

TABLE 13. Heterogeneity by Banking Market Structure

This table shows how local banking structure affects banks' incentives to compete with private credit. The dependent variable is number of bank loans to small businesses under SBA 7(a) program. The regression specification is:

$$\text{Outcome}_{c,t} = \beta_0 + \beta_1(\text{Private Credit}_c \times \text{Post}_t) + \beta_2(\text{Private Credit}_c \times \text{Post}_t \times \text{County Characteristics}_c) + \gamma' X_{c,t} + \mu_c + \delta_{s,t} + \varepsilon_{c,t}$$

where c and t index county and year, respectively. County characteristics are measured ex-ante in 2017, the year prior to the SBCAA. *Private Credit* is the share of private debt deals relative to all private-market deals, capturing ex-ante exposure to private credit activity. *Business Failures* is the number of business bankruptcy filings obtained from U.S. Courts, Reports F-5A, capturing the risk of operating businesses in the local area. *Business applications* is the number of new business applicants in the county obtained from the U.S. Census Business Formation Statistics, proxying corporate credit demand. *Bank deposits HHI* and *Bank branches HHI* are county-level Herfindahl–Hirschman indices of bank market concentration, based on deposit and branch shares, respectively, computed as the sum of squared bank shares within a county. County controls include log population and unemployment rate. Standard errors are clustered at the county-year level and reported in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels.

	Loans to Small Businesses under SBA 7(a) Loan Program				
	(1)	(2)	(3)	(4)	(5)
Private Credit × Post	4.546**	-9.628***	-12.692***	26.535***	28.790***
	(1.858)	(2.827)	(2.875)	(5.076)	(4.245)
Private Credit × Post × Business failures		1.855***			
		(0.299)			
Private Credit × Post × Business applications			0.016***		
			(0.002)		
Private Credit × Post × Bank deposits HHI				-113.826***	
				(25.420)	
Private Credit × Post × Bank branches HHI					-170.177***
					(27.103)
Number of Observations	14,159	14,142	14,159	14,159	14,159
County FE	Yes	Yes	Yes	Yes	Yes
State × Year FE	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes
Adjusted R^2	0.939	0.940	0.940	0.939	0.939

Internet Appendix to Nguyen (2026)

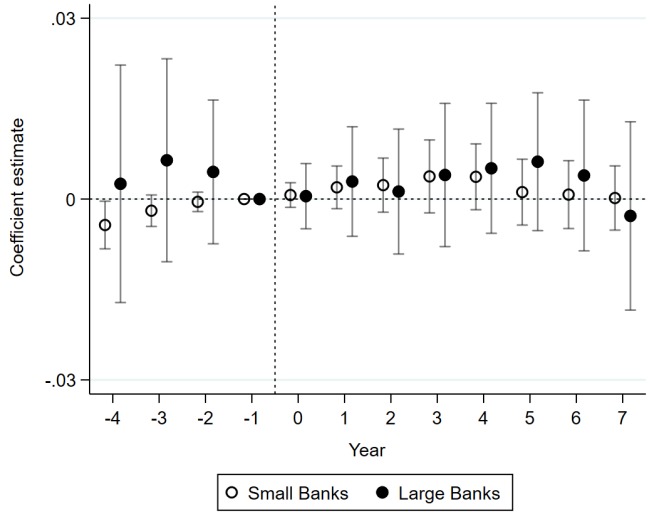
This Internet Appendix includes the following supplementary analyses:

1. Appendix 1 show no effect using consumer loan amounts as placebo outcomes
2. Appendix 2 shows no effect using consumer loan rates (mortgage, credit cards, auto loans, personal loans) as placebo outcomes
3. Appendix 3 presents time-series trends in bank lending by loan category as percentage changes relative to 2007
4. Appendix 5 presents the annual number of "active" Business Development Companies reported by the SEC from 2012 to 2026.
5. Appendix 4 presents dynamic effects on bank lending to private credit, as in Figure 3, but using an alternative bank size threshold ($10 billion)
6. Appendix 6 reports the event-study coefficient estimates corresponding to Figure 7
7. Appendix 7 presents the coefficient estimates for heterogeneity effects by bank characteristics from Figure 8
8. Appendix 8 presents the distribution of loan types and borrower industries in private credit and bank lending

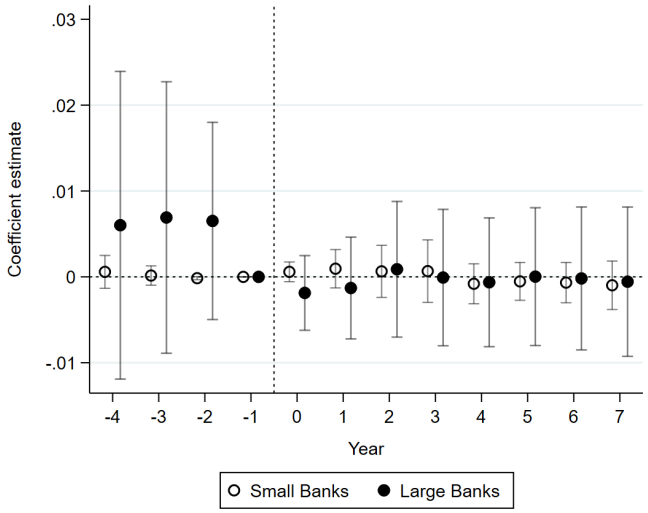
APPENDIX 1. Placebo Test Using Consumer Loan Outcomes — Extensive Margin

This appendix reports difference-in-differences estimates using the same specification as in Figures 3 and **??**, using bank credit cards loan amounts as placebo outcomes. The goal is to show that small banks do not expand credit in consumer segment to compete for borrowers, as private credit primarily lends to firms. *Consumer Loans* is bank credit extended to individuals for household and individuals, excluding commercial or real estate loans. *Credit Card Loans* is outstanding balances on credit cards issued by the bank, including both revolving and term credit card receivables. Private Credit$_b$ is the share of bank b's deposits in zip codes with private credit activity in 2017. $X_{b,t}$ is a vector of bank controls, including log assets, liabilities-to-assets, equity-to-assets, net income-to-assets, and retained earnings-to-assets. Loan amounts and bank controls are adjusted for inflation using 2017 dollars. Large banks are institutions with assets of at least $1 billion, and small banks otherwise. The figures display point estimates with 95% confidence intervals.

Panel A. Consumer Loans/Total Assets



Panel B. Credit Card Loans/Total Assets



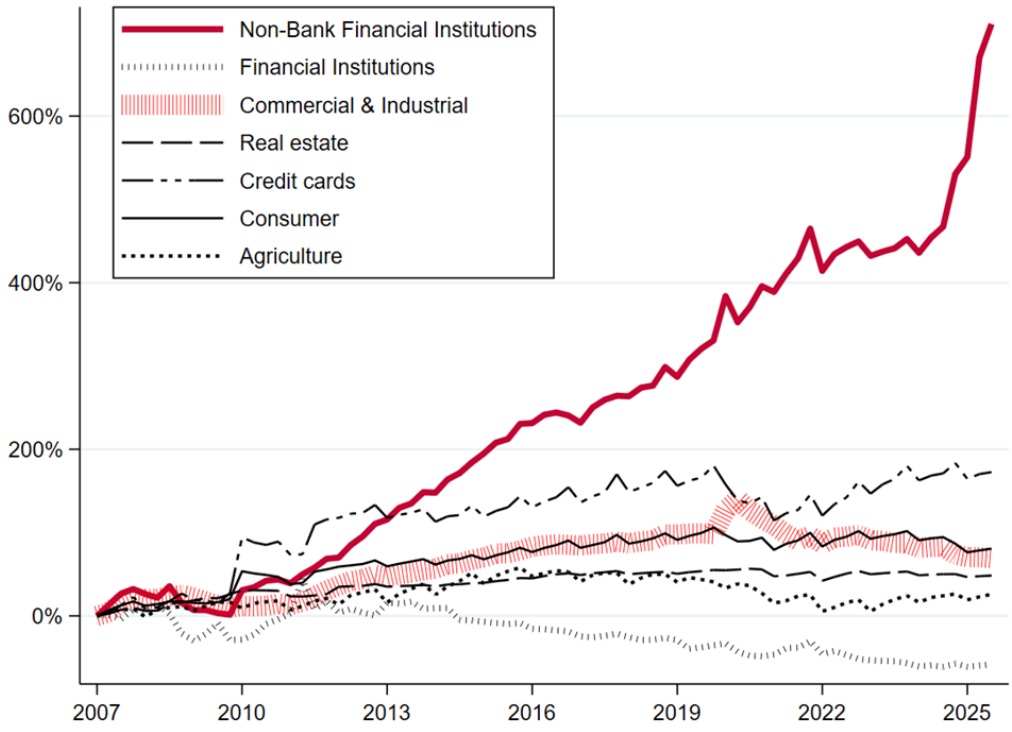
APPENDIX 2. Placebo Test Using Consumer Loan Outcomes – Intensive Margin

This appendix reports difference-in-differences estimates using the same specification as in Table 3, with retail consumer loan rates as placebo outcomes. The goal is to show that small banks do not lower rates in consumer lending segments to compete for borrowers, as private credit primarily lends to firms. *Auto Loan* is the rate on new auto loans with a 60-month maturity offered by banks. *Mortgage Loan* is the rate on 30-year fixed-rate mortgage loans for a $175,000 loan amount. *Credit Cards* is the rate on credit cards issued on the MasterCard and Visa network, respectively. *Personal Loan* is the rate on unsecured personal loans offered to Tier 1 borrowers. *Large Bank* equals one for banks with assets of at least $1 billion, and small bank otherwise. *Private Credit* is the share of private debt deals relative to all private-market deals, capturing ex-ante exposure to private credit activity. County controls include log population, log income per capita, log number of firms, unemployment rate, number of bank branches, and log deposits. Standard errors clustered at the county-year level are reported in parentheses. *** , ** , and * denote significance at the 1%, 5%, and 10% levels.

	Dependent Variable = Loan Spread (Raw Rate − Federal Funds Rate)				
	Auto Loan	Mortgage Loan	Credit Cards (MasterCard)	Credit Cards (Visa Card)	Personal Loan
	(1)	(2)	(3)	(4)	(5)
Private Credit × Post	0.235**	0.237	-1.163	0.805	-0.246
	(0.115)	(0.186)	(0.807)	(1.102)	(0.290)
Large × Post	0.621***	-0.363***	0.195	-0.530***	-0.527***
	(0.022)	(0.026)	(0.131)	(0.144)	(0.067)
Private Credit × Post × Large	-0.143	-0.304	1.278	-0.637	0.462
	(0.118)	(0.185)	(0.812)	(1.129)	(0.325)
Observations	2,186,293	2,236,173	750,735	1,253,177	1,546,443
Mean of Dependent Variable	3.643	3.317	13.505	12.219	10.808
SD of Dependent Variable	1.474	1.258	2.390	1.912	3.148
Lender FE	Yes	Yes	Yes	Yes	Yes
County FE	Yes	Yes	Yes	Yes	Yes
State × Year FE	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes
Adjusted R^2	0.769	0.846	0.751	0.677	0.688

APPENDIX 3. Trends in Bank Lending Portfolios

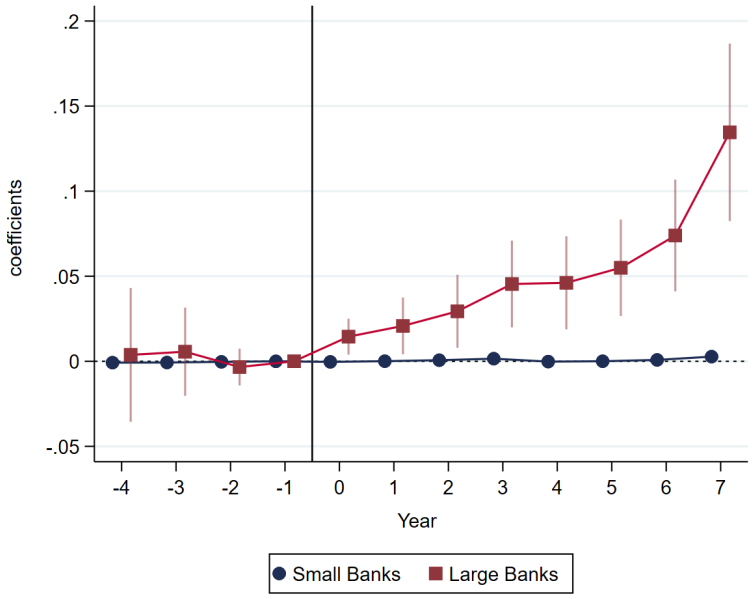
This figure presents time-series trends in bank lending by loan category, expressed as percentage changes relative to 2007-Q1. The sample covers quarterly observations from 2007Q1 through 2025Q3, constructed from Call Reports data. *Non-Bank Financial Institutions* includes loans to business and mortgage intermediaries, consumer finance companies, private equity funds, and other nonbank lenders. *Financial Institutions* are interbank lending within the regulated banking system, including commercial banks, saving institutions, credit unions, and other insured depository institutions. *Commercial & Industrial* loans are conventional short- to medium-term business credit used for working capital, equipment purchases, investment, and general operations. *Real estate loans* are secured residential or commercial property collateral. *Credit card loans* are revolving unsecured consumer credit. *Consumer loans* include other household lending such as auto loans, personal loans, student loans, and installment credit. *Agriculture loans* are credit to the farming sector and rural economies. All loan values are adjusted for inflation using 2017 dollars.



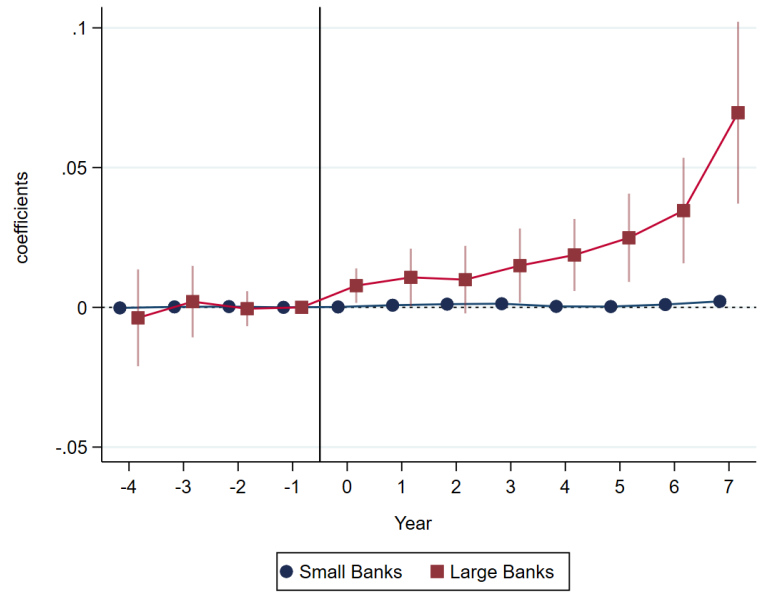
APPENDIX 4. Effects Using an Alternative Large Bank Threshold ($10B)

The main analysis defines large banks using a $1 billion asset threshold. This appendix reports difference-in-differences estimates using the same specification as in Figure **??**, but uses a $10 billion asset threshold for large banks. The unit of observations is the bank-year, constructed from the Call Reports data. The dependent variable, loans to nonbank intermediaries, serves as a proxy for bank lending to private credit and other business intermediaries. Loan amounts are adjusted for inflation using 2017 dollars. The figures display point estimates with 95% confidence intervals.

Panel A. Loans to Nonbank Intermediaries/Total Loans

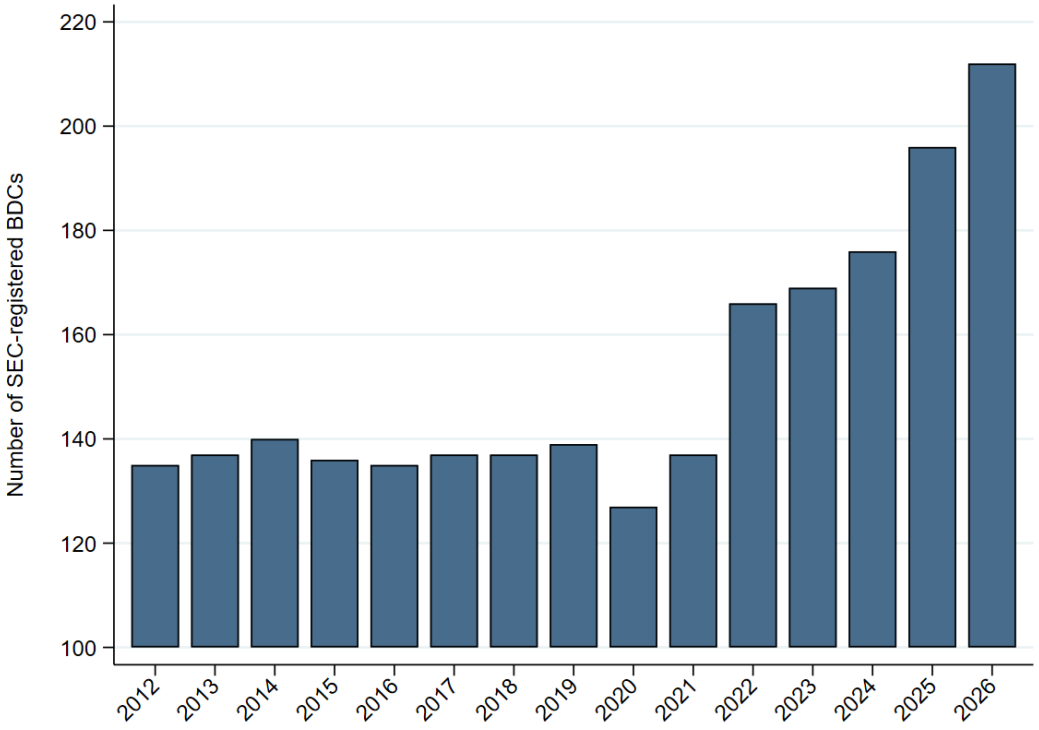


Panel B. Loans to Nonbank Intermediaries/Total Assets



APPENDIX 5. Number of Business Development Companies

This figure presents the annual number of "active" Business Development Companies (BDCs) reported by the U.S. Securities and Exchange Commission (SEC) from 2012 to 2026. The counts are based on annual snapshots of entities with an active 814-reporting number, including firms that have filed Form N-6F or elected BDC status by filing Form N-54A and have not withdrawn their election by filing Form N-54C.



APPENDIX 6. Dynamic Effects of Private Credit Expansion on Bank Geographic Footprints

This table reports the event-study coefficients plotted in Figure 7, capturing the dynamic effects of private credit expansion on bank geographic footprints. The regression specification is:

$$Y_{c,t} = \beta_0 + \sum_{k \neq 2017} \beta_k \left(\text{Private Credit}_c \times \mathbf{1}[t = k] \right) + \gamma' X_{c,t} + \alpha_c + \alpha_b + \delta_{s,t} + \varepsilon_{c,t}$$

where c indexes county and t indexes year. *Private Credit* is the share of private debt deals relative to all private-market deals, capturing ex-ante exposure to private debt activity. County controls include log population, log income per capita, log number of firms, and unemployment rate. Standard errors are clustered at the county-year level and reported in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels.

	Small Banks (< $1B)		Large Banks (> $1B)	
	(1) Log (Branches)	(2) IHS (Branches)	(3) Log (Branches)	(4) IHS (Branches)
Private Credit × 2014	−0.0051	−0.0073	−0.0536	−0.0592
	(0.0391)	(0.0362)	(0.1184)	(0.1176)
Private Credit × 2015	0.0004	−0.0020	−0.0107	−0.0146
	(0.0415)	(0.0392)	(0.1029)	(0.1027)
Private Credit × 2016	0.0072	0.0055	0.0301	0.0263
	(0.0371)	(0.0347)	(0.1010)	(0.1004)
Private Credit × 2017	.	.	.	.
	.	.	.	.
Private Credit × 2018	0.0508	0.0504	0.0374	0.0408
	(0.0518)	(0.0487)	(0.0900)	(0.0894)
Private Credit × 2019	0.0415	0.0417	0.0428	0.0468
	(0.0537)	(0.0499)	(0.0981)	(0.0974)
Private Credit × 2020	0.1145**	0.1065**	0.1302	0.1346
	(0.0469)	(0.0441)	(0.0963)	(0.0964)
Private Credit × 2021	0.1225**	0.1152**	0.0986	0.1021
	(0.0497)	(0.0471)	(0.0909)	(0.0909)
Private Credit × 2022	0.1701***	0.1536***	0.0991	0.1016
	(0.0531)	(0.0496)	(0.0928)	(0.0927)
Private Credit × 2023	0.1018	0.0871	0.1688*	0.1711*
	(0.0669)	(0.0610)	(0.0997)	(0.0991)
Private Credit × 2024	0.1369*	0.1216*	0.1661	0.1688*
	(0.0785)	(0.0717)	(0.1021)	(0.1014)
Number of Observations	25,955	25,955	8,235	8,235
Number of Lenders	3,231	3,231	1,137	1,137
Number of Counties	727	727	447	447
Bank FE	Yes	Yes	Yes	Yes
State-by-Year FE	Yes	Yes	Yes	Yes
County FE	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes
Adjusted R^2	0.944	0.945	0.984	0.984

APPENDIX 7. Which Banks Lend to Private Credit Funds?

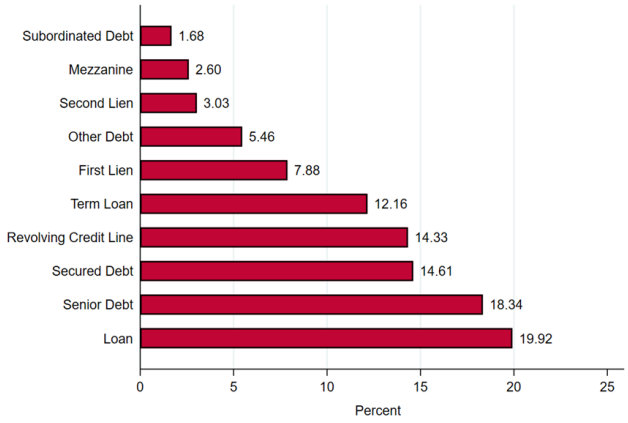
This table reports the coefficient estimates plotted in Figure 8, which examine the heterogeneous effects of private credit expansion on banks' exposure to nonbanks. The dependent variable is lending to NBFIs scaled by total assets and expressed in 2017 dollars. The analysis is at the bank-quarter level. I interact *Private Credit* and *Post* with indicators for quartile distributions of bank characteristics; Quartile 1 represents the lowest values, while Quartile 4 represents the highest. *Private Credit* captures a bank's geographic exposure to private credit expansion based on its ex-ante deposit footprint, calculated as the share of deposits located in treated counties relative to nationwide deposits. *Post* equals one beginning in 2018Q1 following the enactment of SBCAA. Standard errors are clustered at the bank-year level and reported in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels.

	Dependent Variable = Lending to NBFIs / Total Assets			
	(1) NPL Total Assets	(2) NPL Coverage Ratio	(3) Total Loans Total Deposits	(4) Log (Total Assets)
Private Credit × Post × Q1 (lowest)	0.0020***	0.0061***	0.0022*	0.0002
	(0.0007)	(0.0014)	(0.0012)	(0.0006)
Private Credit × Post × Q2	0.0042***	0.0053***	0.0026***	-0.0001
	(0.0007)	(0.0010)	(0.0007)	(0.0004)
Private Credit × Post × Q3	0.0048***	0.0045***	0.0046***	0.0006
	(0.0008)	(0.0007)	(0.0008)	(0.0005)
Private Credit × Post × Q4 (highest)	0.0055***	0.0024***	0.0041***	0.0067***
	(0.0012)	(0.0006)	(0.0008)	(0.0010)
Number of Observations	390,669	390,669	390,669	390,669
Bank FE	Yes	Yes	Yes	Yes
Year-Quarter FE	Yes	Yes	Yes	Yes
Number of Institutions	8,181	8,181	8,181	8,181
Adjusted R^2	0.663	0.664	0.663	0.665

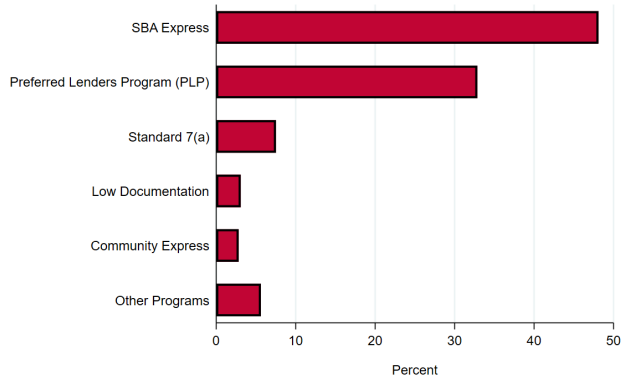
APPENDIX 8. Bank versus Private Credit: Industry and Loan Type

This figure shows the distribution of loan types (Panels **A** and **B**) and borrower industries (Panels **C** and **D**) in private credit lending and the SBA 7(a) loan program. The figures are constructed using 9,968 private credit loan transactions between 2004 and 2020 and 1.57 million SBA 7(a) loans between 2000 and 2025. In Panel B, *SBA Express* is a fast-track program that allows lenders to approve loans quickly through delegated authority with minimal SBA review. The *Preferred Lenders Program (PLP)* grants experienced lenders full authority to approve SBA-guaranteed loans without prior SBA review. *Standard 7(a)* refers to the traditional program in which loan applications are reviewed and approved directly by the SBA. *Low Documentation* is a simplified version of the 7(a) program that requires less paperwork and was designed to speed up approval for smaller loans. *Community Express* is a specialized program aimed at expanding credit access for underserved or disadvantaged small businesses through smaller loans and technical assistance. Finally, *Other Programs* include various specialized SBA 7(a) lending programs—such as export programs, CAPLines, and targeted initiatives—that address specific financing needs or borrower groups.

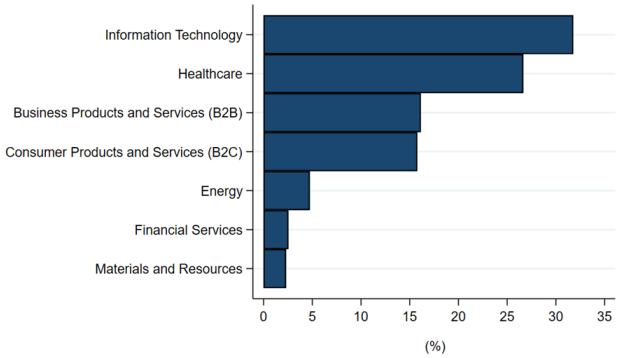
Panel A. Loan Types in Private Credit



Panel B. Loan Types in Bank Lending



Panel C. Borrower Industries in Private Credit



Panel D. Borrower Industries in Bank Lending

