Economic. perspectives

Small business lending after the financial crisis: A new competitive landscape for community banks

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Introduction and summary

A growing body of research examines how the financial crisis and new regulations have resulted in a consistent decline in small business lending (SBL) by community banks. Beginning in the 1990s, large banks began to increase their market share at the expense of community banks. Ten years or more before the financial crisis, community banks offering standard commercial term loans began to lose their place as the first choice for small businesses seeking credit.

The financial crisis accelerated these trends, setting the stage for a new post-crisis landscape in credit markets for small firms. In this article, we use Federal Reserve data to demonstrate that before the financial crisis, small businesses were increasingly using real estate as collateral for loans. During the crisis, credit available from community banks contracted. Subsequently, as the economy and housing markets began to recover, large banks leveraged technology to compete for smaller commercial borrowers as they searched for lending opportunities in a low-interest-rate and low-return banking environment.

We also examine the rise of alternative and nonbank lenders over the past several years. Most recently, nonbank and alternative lenders have begun to compete with banks by introducing sophisticated technologies and new underwriting methods. These lenders typically issue small business loans electronically, with minimal processing time, across a range of sizes, terms, and borrower risk profiles. In a new development, nonbank lenders—including payment processors such as PayPal and Square—have begun to harness databases of borrower sales history collected during the processing of payments to offer cash-flow loans and other credit products.

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In the post-crisis environment, evidence suggests that community banks are facing growing competition from both large banks and nonbank lenders. The latter are new entrants and are subject to fewer supervisory requirements. But evidence suggests that community banks may also be able to exploit some unique opportunities as the SBL sector continues to evolve. For starters, there is evidence that demand for credit is growing. We also examine the emerging examples of banks partnering with alternative lenders to fund qualifying loans originated through online platforms.

In the next section, we summarize the related literature. Then we discuss the secular decline in the fraction of overall small business lending provided by community banks (assets less than \$10 billion), relative to nonbank lenders and large banks (assets more than \$10 billion). Next, we discuss the tendency of small business owners to use mortgages (including a mortgage on a primary residence) to fund their businesses. We highlight the rapid growth of alternative lending—especially "big-data"-based lending and "market-place lending" (online platforms connecting individual small investors with borrowers needing credit). We describe the various methods used by online lenders. Finally, we discuss the potential benefits from partnerships between community banks and online nonbank lenders.

Literature review and our contribution

The health of SBL in the United States has been a prominent area of research and debate since the financial crisis. During the crisis lending standards tightened, and many indicators suggested that small businesses had difficulty obtaining credit. As credit conditions have thawed and new competitors have entered the sector—particularly alternative and nonbank lenders—one key point of inquiry is the future role of community banks, which were until recently the key providers of SBL. Historically, community banks have been an important source of credit for small businesses after personal resources have been exhausted.

There is a sizable body of research portraying a two-decade period during which community banks experienced a loss of SBL market share. According to Wiersch and Shane (2013), small business loan issuance by community banks began to decline consistently during the 1990s. They demonstrate that banks' balances of commercial loans of less than \$1 million (a traditional definition of small business loans) began to fall steadily between 1995 and 2012. They argue that some of this shift was attributed to a relative decline in the profitability of SBL, including time-intensive processing for smaller-balance loans.

Even as the Internet began to change the SBL marketplace, community banks' knowledge of local markets remained an advantage. DeYoung et al. (2011) and Petersen and Rajan (2002) noted increasing distance between small business borrowers and lenders as a result of changes in lending technology, such as the adoption of credit-scoring technologies by the lending banks. DeYoung, Glennon, and Nigro (2008), however, found a significant relationship between loan defaults and the proximity of borrowers and lenders. Loans made to borrowers located closer to the lending bank performed better. Whereas borrowers at least 25 miles away from their bank lenders were 10.8 percent more likely to default on their loans than those less than 25 miles away, borrowers located at least 50 miles away were 22.1 percent more likely to default on their loans. They conclude that qualitative information about borrowers is best used by small banks because of their commitment and involvement within the community, which help maximize their comparative advantages in relationship lending. This confirms findings from previous studies, such as Berger et al. (2005) and Chakraborty and Hu (2006), that small banks have an advantage in relationship lending.

In examining the intersection of mortgage credit and SBL, Mills and McCarthy (2015) analyzed U.S. Small Business Administration (SBA) data and found that the level of exposure to the housing market by small businesses is significant. During the recent recession, households that owned small businesses held

59 percent of their debt in mortgages (versus 38 percent for other households), and they held another 7 percent of their debt in residential secured debt. Mills and McCarthy also report that self-employed households took on increasing amounts of home equity debt during the boom period from 1998 to 2007, and that the number started declining after 2008. Kennickell, Kwast, and Pogach (2015) validated previous findings that households with small businesses tend to use home equity as collateral for mortgage loans that support their small businesses, thereby driving up their home equity loan—net worth ratio, suggesting the need for further research on the interplay between homeownership and small business finance. In this article, we explore the role of mortgages as a funding source for small business finance.

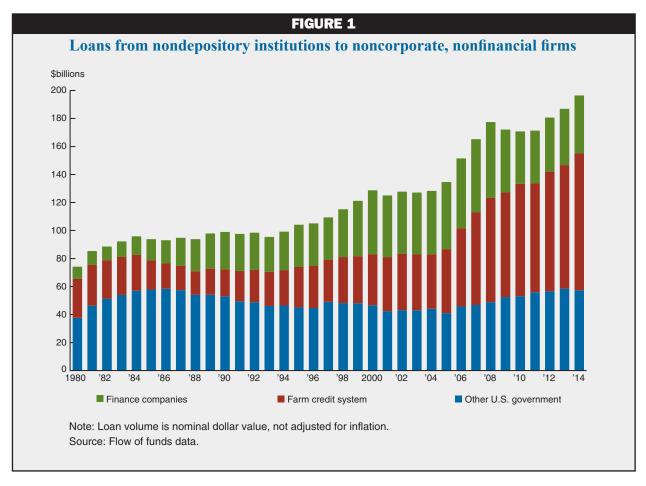
In addition to an increasing dependency on mortgage financing for small business financing, some studies find that small businesses have increasingly depended on larger banks for funding. For example, Prager and Wolken (2008), using the *2003 Survey of Small Business Finance* (SSBF) data, find that whereas 70 percent of small businesses cite a big bank as their primary financial institution, only 25 percent cite a community bank (and 5 percent cite a nonbank). Interestingly, their multivariate analysis does not support the view that community banks are the best places to serve the smallest and youngest small businesses.

Similarly, there has been some debate about whether in fact the long-term consolidation of community banks—after they become part of a big bank through a merger or acquisition—leads to reduced small business activity. Jagtiani, Kotliar, and Maingi (2015) show that mergers involving community banks (during the period 2000–14) did not have an adverse impact on SBL activities. In fact, the combined banking firms tended to increase their SBL activity following the mergers compared with small business loans made by the targets and the acquirers combined (before the merger). Consistent with this finding, Hughes, Jagtiani, and Mester (2016) find that as small community banks grow larger (with assets between \$1 billion and \$10 billion) to achieve scale economies, they would have greater incentives to lend to small businesses to further enhance their financial performance.

In addition to small businesses' increasing reliance on mortgages and larger banks, there is evidence (from SSBF data) of a significant increase in the past decade in their reliance on nontraditional credit, such as loans from nonbank institutions and business credit cards. Mester, Nakamura, and Renault (2007) report that finance companies have been responsible for an increasing share of loans to businesses over time, reaching one-third by 2006. For other nontraditional credit, Simon (2015) reports that J.P. Morgan's Ink small business credit card accounts for over 90 percent of the firm's loans to businesses with revenues of \$1 million or less.

It should be noted that different definitions of SBL have been used in the literature, and each definition has its limitations. Examples include commercial and industrial (C&I) loans with origination amounts less than \$1 million regardless of whether the borrowers are actually small (the definition used in bank *Reports of Condition and Income*, or Call Reports), loans made to businesses with less than \$1 million in gross revenue (the definition used in Community Reinvestment Act, or CRA reports), loans made to businesses with fewer than 500 employees regardless of loan size (the definition used in the SSBF), and C&I loans to nonfinancial, noncorporate borrowers regardless of the size of the loan and of the borrower (the definition used in the Flow of Funds Accounts). Because of these different definitions, the results may not be comparable across studies.

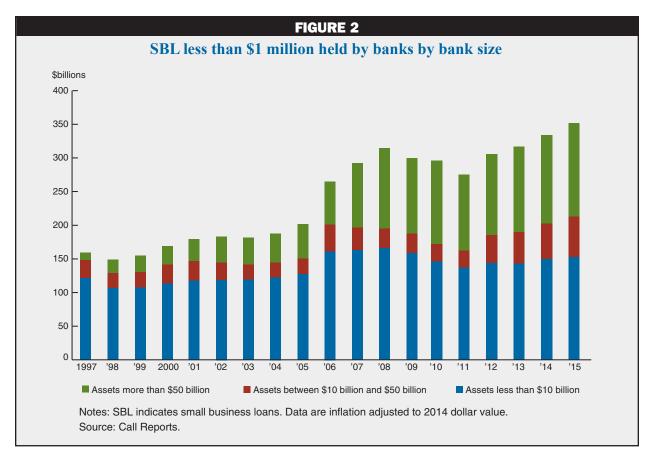
We add to the growing body of SBL research by exploring various data sources in the same study, and we further explore the effects of competition and lending conditions before and after the financial crisis. By using data from all three sources, we can identify overarching trends. First, we find, using flow of funds data and other sources, that banks have been losing their share of SBL to nonbank lenders. Second, among bank lenders over the past decade, large banks have increased their share of SBL and community banks



have lost SBL market share. Third, our work shows that as property prices began to rise before the recent financial crisis, small businesses increasingly tapped equity in real estate to fund their businesses, exposing them to the mortgage crisis. Finally, this article explores the growth rates and strategies among the expanding sector of alternative and nonbank lenders, some of which have established formal lending relationships with community banks. We find that while alternative lending is still a small fraction of overall small business credit originated by traditional banks, it has grown exponentially in recent years. There are opportunities for community banks to gain or at least maintain their market shares by partnering with these alternative lenders.

Increasing roles of nonbank institutions and large banks in small business lending

Using flow of funds data, we explore changes in the volume of small business loans (loans to noncorporate, nonfinancial companies) originated by nonbank institutions over time. Figure 1 shows that small business loans originated by nondepository institutions increased significantly from the late 1990s and continued to rise through the financial crisis and post-crisis periods. The category "other loans and advances" to nonfinancial noncorporate businesses is interesting because this is where alternative lending will show up in the flow of funds data. As we can see, loans from finance companies and farm credit system loans have increased approximately threefold since the early 1980s, while other loans from the U.S. government (such as farm loans) have been relatively flat during the same period.

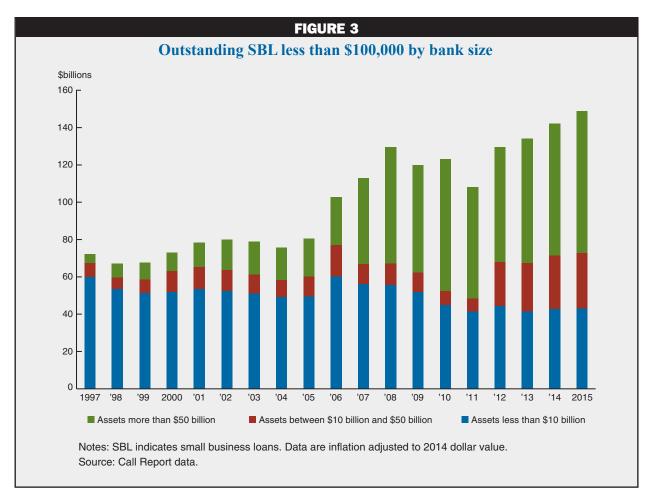


The growth of SBL outside the community banking sector is a relatively new trend. For decades, community banks were the primary source of credit for small businesses. We explore this new trend of SBL originated by the banking sector using Call Report data² from 1997 to 2015. We inflation-adjust both the asset size of the banks and the SBL amount to 2014 dollars.³ Figure 2 shows that the overall outstanding SBL amount held by depository institutions more than doubled from about \$150 billion in 1997 to about \$350 billion in 2015. Interestingly, we observe that most of the increase in SBL volume during this period came from large banks (with total assets over \$10 billion). In contrast, small banks (less than \$10 billion in consolidated assets) accounted for 77 percent of SBL lending in 1997 and only 43 percent in 2015.

Figure 3 shows that the decline in small banks' SBL market share has been even more severe at the smaller end of the sector—loans with origination amounts less than \$100,000, rather than the usual \$1 million cut-off. For these smaller loans, small banks' share declined from 82 percent in 1997 to only 29 percent in 2015.⁴

Despite this downward trend, banks with less than \$10 billion in total assets still provide a greater percentage of SBL than their share of assets in the banking industry. As of March 2015, these banks accounted for 16.5 percent of all banking assets but funded 43 percent of SBL originated by all banks. Still, their degree of commitment has been declining over the years as shown by the declining SBL—assets ratio in figure 4, while larger banks have held their SBL—assets ratio steady.

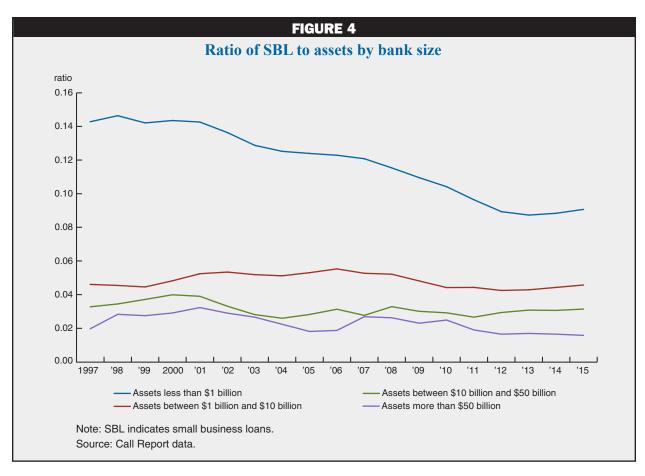
Next, we examine the newly originated SBL (flow data) over time using CRA data, which provide detailed information about newly originated (or purchased) SBL by banks.⁵ Figure 5 maps the ratio of newly originated (and purchased) small business loans in each county that were made by large banks (with assets more than \$10 billion) relative to total small business loans in the county for 1997 (panel A) and 2013 (panel B). The blue areas indicate a high ratio of SBL originated by large banks, while the red areas indicate a high ratio



of SBL originated by small banks. Counties on the West and East Coasts tend to be dominated by large banks, while the Midwest tends to be dominated mostly by small banks in 1997. The number of counties where the SBL market was dominated by small banks (red) fell by more than 70 percent between 1997 and 2013. Most of the midwestern counties are no longer red in 2013. These maps demonstrate the changing landscape in the SBL market as large banks have been taking market share from small banks, consistent with the trend discussed earlier based on Call Report data.

Robustness testing

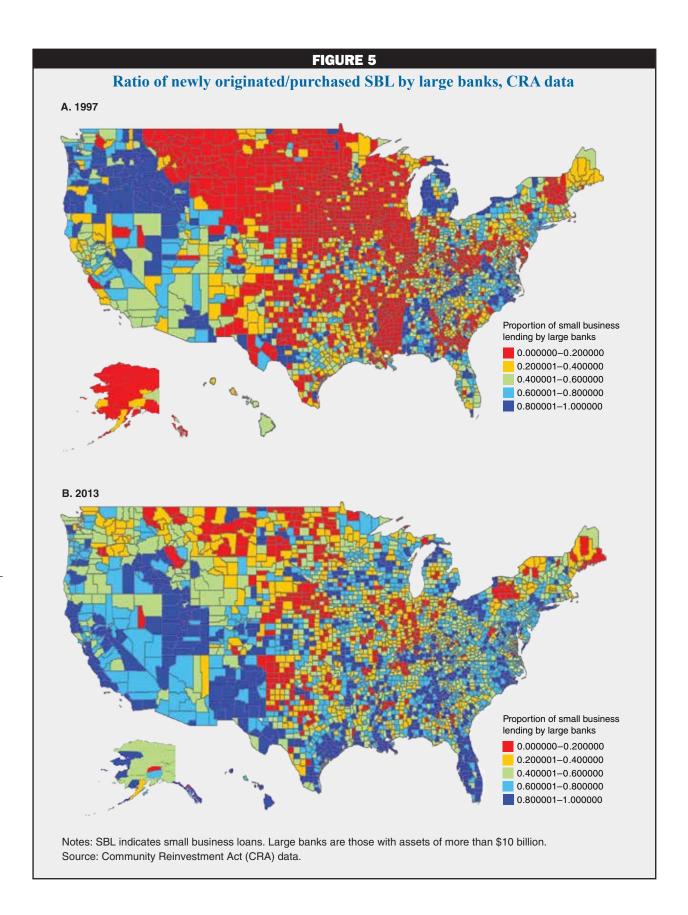
It should be noted that these maps are plotted based on the CRA data that exclude banks with less than \$1 billion in assets; thus, the blue areas are likely to be overestimated. To extend our analysis to all banks, including those with assets less than \$1 billion, we create similar maps using total SBL outstanding (stock data) from the Call Reports. While this method allows us to look across all banks, the Call Report data only provide total SBL outstanding amounts with no county breakdown. To create similar maps to those in figure 5, we use the Federal Deposit Insurance Corporation's *Summary of Deposits* data, which report deposits at each bank at the county level and allocate the total SBL data to county level. We assume the same county distribution for SBL and for deposits for those banks that do not report CRA data. For banks that do report CRA data (larger than \$1 billion), we distribute each bank's total SBL outstanding from the Call Report to each of the counties based on their actual newly originated SBL distribution (as reported in the CRA data). Figure 6 presents the maps that include all banks in the United States for 1998 (panel A) and 2013 (panel B), respectively.

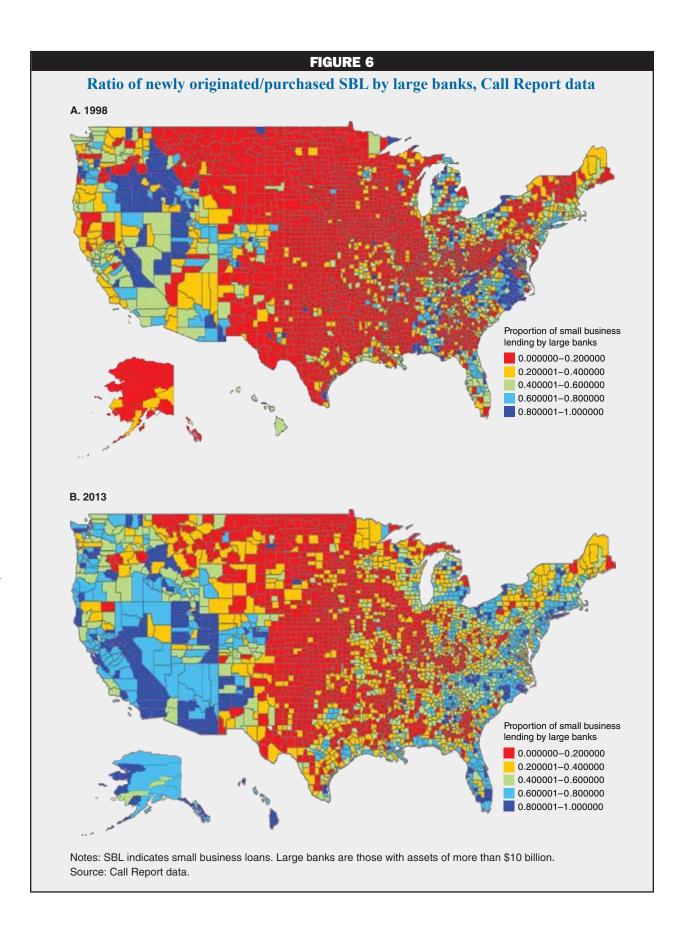


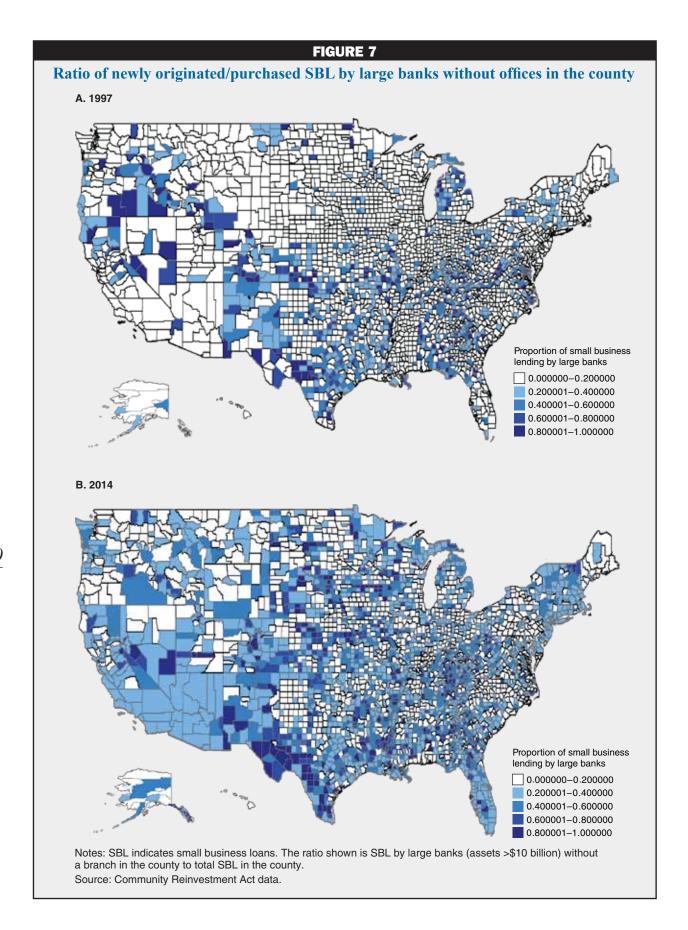
Although adding the data for smaller community banks and switching to the stock data of SBL outstanding (Call Reports) versus the flow data of newly originated SBL (CRA reports) leads to fewer blue counties, we still see the trend of a declining number of counties dominated by small banks in the SBL market. The number of counties where small banks fund more than 80 percent of the SBL fell by more than 40 percent between 1997 and 2013. The results confirm our earlier findings based on the SBL origination data from the CRA reports. Again, large banks have been expanding their SBL market shares relative to small banks in most parts of the country except for the midwestern regions.

We further examine the changing landscape in the SBL market by focusing on counties where banks do not have a physical presence. We create similar maps based on CRA data (newly originated and purchased SBL) over the period 1998–2014. In view of the evolving lending technologies and increasing online lending activities in recent years, we would expect banks to be better able to make loans in counties where they do not have any physical offices.

Figure 7 shows the proportion of SBL loans made by large banks that do not have branch offices in the county. The ratios are calculated as follows. The numerator includes newly originated (and purchased) SBL by large banks (larger than \$10 billion) that do not have a branch office in the county. The denominator is total newly originated (and purchased) SBL by all banks that report CRA data (regardless of their asset size and whether they have branches in the county). The blue areas represent a large share of SBL originated by large banks that do not have branches in those counties. We observe that the maps get darker blue over the years, which is consistent with our expectations about the growing importance of technology and online lending. Large banks have been better able to use new lending technologies to compete in the SBL market without the need for a physical office in the local market.







Overall, our evidence suggests that small banks have been encountering an increasingly dynamic competitive landscape over the years, with greater competition from both large banks and nonbank institutions as lending technology has advanced. The historic comparative advantage community banks had in making small business loans was their ability to leverage "soft" information, such as knowledge of a firm's cash flow from lockbox and checking account relationships, to make sound small business loans. Now community bank competitors have developed technology that more efficiently uses multiple sources of information to make speedy lending decisions, greatly reducing the competitive advantage of the type of information community banks have about their customers. The technology also reduces the involvement of lending staff, which reduces the cost of making these loans.

Increasing role of mortgages as a source of SBL funding

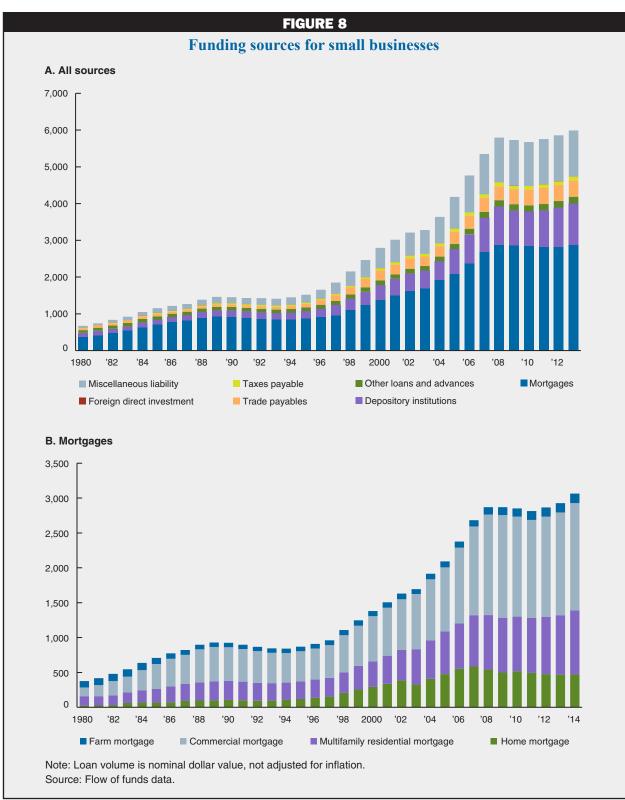
In this section, we discuss the tendency of small business owners to use mortgages (including a mortgage on a primary residence) to fund their businesses. In examining the role that mortgage credit played in the profile and condition of small business borrowers before and during the financial crisis, we find that mortgage credit in broad terms—residential and commercial alike—rose sharply as a source of small business funding in the years preceding the financial crisis. As property values rose, businesses tapped the underlying equity.

The flow of funds data are benchmarked against the Internal Revenue Service (IRS) *SOI Small Business Survey* and incorporated survey data collected by the Board of Governors of the Federal Reserve System to obtain a comprehensive view of financing for small business. Figure 8 shows the increasing role of mortgages as funding sources for small businesses (defined as noncorporate, nonfinancial business) based on these data, particularly during the housing market boom period of 2000–07. Furthermore, panel B of figure 8 shows the breakdown of mortgages used to fund SBL. Commercial mortgage balances among noncorporate, nonfinancial business liabilities rose by a factor of 2.5 between 1999 and 2008 to \$1.45 trillion, the largest funding source. Multifamily mortgage balances rose 2.3 times during the same period, and single-family mortgage credit rose by a factor of 2.1. The data likewise suggest that commercial and multifamily credit experienced higher growth relative to the prior decade than did single-family mortgage balances, whose growth rate was modest over the same period. From 1990 to 2000, single-family mortgage credit originated to fund small businesses (nonfinancial and noncorporate businesses) rose by a factor of 1.3, compared with a threefold rise in commercial and multifamily balances during the same period.

Role of online lending—Challenges and opportunities

In this section, we discuss the increasing role of alternative lending, especially technology/Internet big-data-based lending and so-called marketplace lending (online platforms connecting individual small investors with borrowers needing credit). The shadow lending sector has historically presented challenges for researchers attempting to gauge its size and scope; SBL is no exception. Although a variety of data sources exist, no source is authoritative. Nonbank lenders are subject to little regulatory oversight, including disclosure requirements, and data reporting is therefore largely voluntary. Only when these companies become publicly traded is more financial information made available. There has been substantial anecdotal evidence that while the nonbank alternative SBL sector is still a small fraction of the overall SBL credit market, it has been growing rapidly.

According to research by Morgan Stanley (2015), in the United States, marketplace loan origination doubled yearly since 2010, to \$12 billion in 2014. It was projected that marketplace loan volume in the global market (including Australia, China, and the UK) would reach \$490 billion by 2020. Table 1 (in the appendix) lists some of the better-known nonbank lenders and the information available about their lending volume. Although some of these "new" models have been established for some time (for example, CAN Capital was



founded in 1998), most entrants have appeared in the past seven to eight years. DeYoung et al. (2008) have partially attributed the growing distance between lenders and small business borrowers shown in the SBA data to the growth in the shadow banking system. The faster application process, use of alternative data, and reduced collateral requirements continue to make nonbank lenders appealing to small business owners. Although the growth rates in the past several years are impressive, the total volume of lending by nonbank lenders (about \$190 billion overall, including about \$40 billion in loans by finance companies) does not come close to the total of about \$350 billion in small business loans made by the banking industry in 2015.

The growth rates reported by the nonbank lenders are impressive. For example, Kabbage (a working capital lender) was established in 2009 and it issued over \$1 billion in credit in 2015.8 During 2015, the company increased daily lending volume from \$3 million to \$5 million between the first and third quarters. In addition, OnDeck Capital said its quarterly loan volume in the fourth quarter of 2015 was \$557 million, 51 percent higher than the same quarter one year earlier. Moreover, payment processors PayPal and Square have entered the market and are demonstrating strong growth rates—PayPal Working Capital lent \$1 billion from September 2013 to October 2015 to small- and medium-sized businesses (Ruthven, 2015), and Square had lent more than \$225 million to 20,000 small businesses within 15 months of launching (Rao, 2015). It will be interesting to see if these growth rates continue as an increasing number of new start-ups enter this space.

Business models used by nonbank lenders

Table 1 provides a quick overview of the various business models used by nonbank lenders—marketplace lenders, balance-sheet lenders, and payment processors—with a brief description of their business strategy and growth. Many of the earliest nonbank entrants have historically been referred to as *peer-to-peer* (P2P) lenders. As business models have evolved and become more hybrid in nature, they are frequently referred to as *marketplace lenders*. Examples include Lending Club, Prosper, and Funding Circle, which were established in 2006, 2007, and 2010, respectively.

In general, marketplace lenders use online platforms that serve as intermediaries to connect borrowers with investors (individuals, institutions, or both). Rather than holding loans on their balance sheets, marketplace lenders generate revenue from transaction fees when they match borrowers with investors wishing to buy loans. Marketplace lenders also generate revenue via servicing fees as they remain the loan servicer after loans are sold. Although marketplace lenders used to be characterized by their focus on *consumer* credits, they have recently expanded their product offerings to include small *business* loans.

Lending Club has shifted away from a pure P2P model in which loans were funded by individuals who purchased the loans as investments in \$25 increments. In 2015, 33 percent of its funding came from institutional investors while the remainder came from retail investors. The company received considerable attention in 2014 when it released a new product of unsecured business loans initially ranging between \$5,000 and \$300,000 in size.

Unlike marketplace lenders that connect borrowers to investors, *nonbank balance sheet lenders* retain the loans they originate. These lenders often raise capital from private equity and debt financing. Many of these alternative lenders, including OnDeck Capital (established in 2007) and Kabbage (established in 2009), focus on working capital loans. These entities generally charge a premium in return for ease of application, reduced collateral requirements, and expedited funding. The lending platforms developed by these alternative balance sheet lenders differentiate them from banks. Balance sheet lenders typically use big data to build proprietary platforms that analyze a loan application quickly; for example, Kabbage claims it can assess a loan application in minutes. Many of these entities also directly interface with QuickBooks, PayPal, Square, and IRS tax returns.

Certain payment system providers/processors have become lenders. PayPal (beginning in 2013) and Square (beginning in 2014) have created their own niche in SBL by using data they collect while processing payments to conduct credit analyses and expedite lending decisions. Loans are issued through the payment processors' existing infrastructure and then repaid automatically through deductions from incoming receipts. *Payment processors* have demonstrated an advantage in their direct access to borrowers' sales, cash flow, and other financial data. They hold the loans on their balance sheet. PayPal has used SBL as a means to grow its volume of payments transactions rather than as a stand-alone new line of business (Laplanche et al., 2015).

Table 2 (in the appendix) provides a summary of the underwriting standards, the application process, interest rates and fees, and terms for the loans provided by the various nonbank alternative lenders. Overall, it is evident from table 2 that much of the focus of nonbank lenders is on smaller-dollar loans for working capital. The largest origination amount of loans reported is \$300,000 for Lending Club and \$500,000 for Funding Circle and OnDeck Capital. Many of the lenders only require a personal guarantee. Some take a lien on business assets, but none report taking a lien on personal assets. Interest rates can be competitive with traditional banks, but they do report the potential for much higher loan rates. For example, Lending Club reports annualized percentage rates (APR) of 6 percent to 36 percent for consumer loans and 8 percent to 32 percent for business loans. OnDeck Capital reports APR ranging from 14 percent to 36 percent on their line of credit. All firms report application processing times of less than 15 minutes, and some report funding in under three days.

As far as approval criteria are concerned, many nonbank lenders do use traditional credit scores. For example, Lending Club states that the minimum credit score considered (typically the dividing line between subprime and prime borrowers) is 660; for Prosper, it is 640. OnDeck reports that it will consider lower credit scores for certain types of loans. An exception to the use of credit scores is PayPal, which states that it does not consider business or personal credit scores. It relies on PayPal sales history. With the streamlined credit approval process, time will tell how well these loans season. In February 2016, J.P. Morgan paid almost \$1 billion to acquire loans (average credit score over 700) with \$900 million par value from Lending Club. This suggests that some creditworthy borrowers are also attracted to nonbank lenders and that some qualified applicants may in fact prefer to apply to Lending Club than to a traditional bank (Demos, 2016).

Nonbank lenders continue to develop and adjust their business models, forming a variety of partnerships and alliances with other companies. In 2015, for example, Lending Club established formal relationships with Google and Alibaba, in which the two tech companies provide lump-sum lending capital for their small business customers through the Lending Club platform. Lending Club will handle the underwriting and servicing of those loans, and Google and Alibaba will fund the loans. Another interesting partnership illustrates a new way for alternative lenders to expand the marketplace for their loans. RiverNorth Capital Management recently sought permission from the U.S. Securities and Exchange Commission to create a closed-end mutual fund focused on loans originated through P2P lending platforms (Wack, 2015).

Post-crisis environment: Potential benefits from bank/nonbank partnerships

Some community banks have started to adjust to the rise in nonbank lenders, as evidenced by new partnerships between banks and alternative lenders. In an effort to compete, banks are faced with the choice of *building* their own technology platforms, *buying* or *licensing* technology, or *partnering* with an organization that has developed a technology platform. Current partnership models between banks and alternative lenders include origination, loan purchase, technology licensing, and referral programs.

Behind many of these marketplace lenders are banks. For example, WebBank, an insured, Utah-chartered industrial bank, makes the loans and holds them for a short time (two to three business days) and then sells them back to the marketplace lender. The marketplace lender then sells these loans to investors. Lending Club, Prosper, and PayPal reportedly originate loans through WebBank. Kabbage originates loans through Celtic Bank, which is also a Utah-chartered industrial bank. Similar arrangements have been made by 14 different marketplace lending platforms with Cross River Bank, a state-chartered bank in New Jersey.

Marketplace lenders benefit from having banks originate the loans for several reasons. Different states have different requirements. Some states require nonbank lenders to be licensed in the state if they are making loans to residents of that state. This is more common for consumer lending, but a few states (California, Nevada, North Dakota, South Dakota, and Vermont) require nonbank small business lenders to obtain licenses as well. Having a bank originate the loans removes the requirement for the nonbank lender to obtain a license in multiple states. Another reason is the ability to preempt state usury laws. Whether nonbank lenders can take advantage of the same exemption from state usury laws is currently up for debate. A third reason is less tangible. Investors may have greater confidence in the underwriting process if the underwriting is done by a bank that is subject to oversight by banking regulators.

Partnership: Bank/nonbank partnerships have expanded rapidly among marketplace lenders. In early 2015, Lending Club partnered with BancAlliance, a nationwide network of approximately 200 community banks. Under the agreement, banks direct customers who need small-dollar loans to Lending Club. In return, the bank is provided with the opportunity to purchase the loans made to their customers. If a loan does not meet the bank's lending criteria, that loan is made available to Lending Club's broader investor pool. Banks can also purchase loans from the wider Lending Club customer base, allowing them to add loans outside their area to their portfolio. Similarly, in early 2015 as well, Prosper, which is one of Lending Club's competitors, entered into an arrangement with another consortium of 160 small community banks, Western Independent Bankers (Prosper, 2015). These partnerships are gaining in popularity.

This type of partnership has allowed small community banks to leverage Lending Club's proprietary platform to make small-dollar loans efficiently without investing in new technology. Lending Club benefits from increased transaction volume and from having a larger pool of investors to purchase loans. Meanwhile, banks grow their loan portfolios with minimal overhead by using Lending Club's infrastructure, allowing community banks to mimic the economies of scale of larger national banks (Graham, 2015).

Licensing: In addition to the partnership model described earlier, there are also examples of community banks licensing technology directly from alternative lenders to combine cost-efficient technology with their existing borrower relationships and knowledge of their local markets (Lunden, 2014). Licensing soon may become a more widespread option as one market leader, Kabbage, recently announced its intent to offer licenses to banks (PYMNTS.com, 2015b). In December 2015, J.P. Morgan Chase announced its licensing plan with OnDeck to create a new small business product marketed under the Chase name. The loans will be kept on J.P. Morgan Chase's balance sheet while using OnDeck's technology. OnDeck will be paid fees for origination and servicing (Rudegeair, Glazer, and Simon, 2015).

Referral: In addition, community banks can increase customer loyalty by referring them to nonbank lenders when the bank does not offer a product that meets the customer's needs. By providing customers with viable alternatives, it is more likely that these customers will maintain deposit and other banking relationships with the bank and return to the bank for future lending needs (Wisniewski, 2014). For example, BBVA Compass entered into such a referral agreement with OnDeck in mid-2014, whereby BBVA Compass's customers will get favorable pricing for loans from OnDeck (Clark, 2014). In addition, in mid-2014, Santander Bank entered into a reciprocal referral agreement with Funding Circle, whereby Santander

Bank would proactively refer customers looking for small business loans to Funding Circle. In return, Funding Circle would refer its customers looking for banking services to Santander (Cummings, 2014).

To summarize, nonbank lenders are growing rapidly, but they are far from approaching the volume of traditional bank lenders. Morgan Stanley (2015) estimates marketplace lenders to comprise 16 percent of small and medium enterprise (SME) loans by year 2020. However, these estimates were made prior to the recent events at Lending Club. In May 2016, the company lost about one-third of its market value when it revealed managers had sold \$22 million in loans to an institutional investor despite knowing they did not meet the investor's explicit criteria, and the CEO resigned. Subsequently, the company has reported losses in the second quarter of 2016, become the subject of a U.S. Department of Justice investigation, admitted that the departed CEO took out loans to inflate loan volume in 2009, and laid off 179 employees (see Varadhan and Somerville, 2016). It is unclear how these events will affect the long-term growth of the industry.

These revelations do raise concerns about the many types of associations that banking organizations may have with online lenders. The Federal Deposit Insurance Corporation (FDIC) has cautioned banking organizations not to abrogate their responsibility for maintaining lending standards by relying on marketplace partners. All banking regulators have clearly articulated the importance for banking organizations to do their own due diligence before making any investments or participating in any lending arrangements. Additionally, there are concerns that small business loans, which are not subject to the same disclosure rules and protections as consumer loans, may not provide sufficient information for SBL borrowers to fully understand the loan rates and terms of their loan contracts (see Lipman and Wiersch, 2015).

In May 2016, the Treasury Department issued a report on marketplace lending and called for the formation of a working group that would include the Office of the Comptroller of the Currency, the Federal Reserve, the FDIC, the Consumer Financial Protection Bureau, the Federal Trade Commission, the Securities and Exchange Commission, the Small Business Administration, and a state bank supervisor. Regulators are carefully considering the role of financial technology (fintech) in the financial sector. For example, in a speech earlier this year, Federal Reserve Governor Lael Brainard (April 14, 2016) said that:

Current developments in the digitization of finance are important and deserving of serious and sustained engagement on the part of policymakers and regulators. The Federal Reserve Board has established a multi-disciplinary working group that is engaged in a 360-degree analysis of fintech innovation. We are bringing together the best thinking across the Federal Reserve System, spanning key areas of responsibility, from supervision to community development, from financial stability to payments. As policymakers, we want to facilitate innovation where it has the potential to yield public benefit, while ensuring that risks are thoroughly understood and managed.¹⁵

While the growth of nonbank lending raises important regulatory and risk management concerns, the sector's technology platforms and ability to use alternative information sources to judge creditworthiness may also provide value by expanding the SBL market and making credit more readily available to small businesses, particularly to newer businesses that do not have the credit history required by traditional lenders. Additionally, as more millennials make up the pool of small business owners, borrowers may be more comfortable with technology and may prefer dealing with an online lender versus an in-person loan officer.

Daye and Siroya (2016) report that the overall marketplace lender (MPL) securitization volume peaked in 2016:Q2 at \$1.7 billion, representing an increase of about 15 percent from the previous quarter. In addition, Athwal (2016) reports that despite the market volatility and the concerns around recent issues at Lending Club, "most alternative lending startups continue to experience phenomenal growth" (p. 1).

We have outlined the various business models and the opportunities for community banks to overcome the challenges they face and compete better in the new banking landscape through partnerships with nonbank alternative lenders. Small community banks could look to nonbank lenders as sources of innovative loan platforms and access to a wider pool of loans that can help them meet the needs of their communities and possibly reduce their concentration risk by investing in loans from a larger area. Nonbank lenders also benefit from their partnerships with traditional banks, as they look to banks for funding and referrals. There are also indications that nonbanks find it advantageous to originate loans through traditional banks. Given the speed of innovation to date, there is likely to be increased innovation in this space, allowing community banks to make small business loans more efficiently to a wider group of borrowers.

Conclusion

There is little doubt that U.S. community banks, the nation's dominant source of small business loans for decades, are facing a new competitive landscape. Our research shows the emerging landscape features fast-growing nonbank lenders as well as growing competition from large banks. The decline in SBL among community banks was well underway as long as a decade before the financial crisis, including a secular shift away from smaller-balance loans. Even so, our research adds to existing evidence showing that the crisis, combined with technological advancements, served to perpetuate the ongoing decline in community banks' market share in SBL.

We find that alternative lenders often partner with banks. Banks benefit by being able to refer customers to alternative loan providers when the bank does not have an appropriate credit product. Many marketplace loans are actually originated by banks, then sold back to the marketplace lenders. Many alternative lenders directly access multiple data sources to assess the credit quality of a potential borrower in minutes. PayPal and other payments networks leverage their proprietary sales transaction data when considering a loan application. Regulators are monitoring these trends and, in the words of Governor Brainard, balancing the "potential to yield public benefits, while ensuring that risks are thoroughly understood and managed" (see note 15).

Our research suggests that the rise of alternative nonbank lenders represents both challenges and opportunities for community banks. By using technology and unconventional underwriting techniques, alternative lenders are competing for borrowers with offers of faster processing times, automatic applications, minimal demands for financial documents, and funding as soon as the same day—all services most community banks would struggle to imitate. At the same time, our research suggests that these nonbank lenders may offer growth opportunities for community banks, most notably in the examples of formal partnerships and alliances.

NOTES

¹As with other data sources, the flow of funds uses an imperfect definition of SBL—noncorporate borrowers are not necessarily small businesses, whereas some corporate borrowers might in fact be small.

²Call Report data only include SBL activity by bank lenders. Call Report data define SBL by the size of the loan. That is, all loans with origination amounts less than \$1 million are considered SBL.

³The outstanding SBL here includes small C&I loans and small farm loans with origination amounts less than \$1 million. Small business loans backed by CRE are not included. Our analysis confirms that our results are not sensitive to whether or not SBL amounts include small loans backed by CRE.

⁴This is consistent with Puri, Rocholl, and Steffen (2011), who separate the supply effect and the demand effect in their analysis, using a unique data set from Germany. They find that banks tend to cut back on their lending to preserve liquidity. Small banks, in particular, tend to curtail their lending when facing more liquidity constraints.

In the CRA data, SBLs are defined as loans to businesses with gross annual revenues of less than \$1 million.

⁶Most very small banks have been relieved from filing this SBL and CRA information.

⁷Note that the denominator remains the same as in figures 5 and 6.

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¹⁵See http://www.federalreserve.gov/newsevents/speech/brainard20160414a.htm.

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TABLE 1 Growth of nonbank and other alternative lenders **Marketplace lenders** Lending Club^{1,2} Launched lending platform for consumer loans with balances <\$35K (including small business loans) in 20063 • From launch through the fourth quarter of 2015, issued nearly \$16.0B in Ioans4 • Small business loan originations with balances <\$35K grew 45.7% from 2014 to 20155 • In 2015, \$6.4B in loans with balances <\$35K were originated through the fourth quarter6 Expansion of small business loan offerings • March 2014: Launched new unsecured small business loan product with loans ranging in amounts from \$5K to \$300K7 January 2015: Google partnership⁸ February 2015: Alibaba partnership⁹ Prosper Marketplace¹⁰ Established in 2007: "relaunched" in 201311 • Valued at \$1.9B after fundraising in spring 2015 • Originated more than \$6B in loans since its 2007 launch¹² • In 2015, facilitated \$3.7B in loans13 **Funding Circle** Founded in the UK in 2010; expanded to the U.S. in 2013¹⁴ USA • Lending ~\$75M a month as of April 2015¹⁵ >40K investors participating in the marketplace as of October 2015¹⁶ • Originated \$2B in small business loans (global) from launch through August 201517 **Balance sheet lenders** Established in 2007; IPO in 201418 OnDeck Capital Originated more than \$4B in small business loans since 2007 launch¹⁹ • Loan originations increased at 81% compound annual growth rate from 2012 to 201520 Originated \$557M small business loans during 4Q2015, up 51% from the prior year²¹ Kabbage Founded in 2009 • Originated more than \$1B in small business loans since its 2009 launch²² • Tripled its daily small business loan origination volume in less than one year (2015: \$3M a day vs. 2014: \$1M a day)23 **Payment processors** PayPal Working Capital Launched in September 2013 • As of October 2015, funded more than \$1B in credit to small and midsized businesses since its 2013 launch²⁴ Raised maximum loan amount to \$85K from \$20K²⁵ Square Began offering loans in 2014 • Loaned more than \$100M to 20K small businesses within one year of launch²⁶

TABLE 1 NOTES

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TABLE 2 Alternative lenders: Underwriting and terms **Alternative Application SBL** lender Loan amount Interest rates and funding **Borrower criteria Marketplace lenders** • Consumer SBL: Apply in minutes⁵ Lending Club Consumer • No collateral required SBLs: Annualized rates · Approval and for loans under \$100K7 \$1K-\$40K1 of 6%-36% funding process • Minimum standards · SBL Loans and (including originatypically takes for consumer small lines of credit: tion fees of 1-6% 7 days6 business loans \$5K-\$300K² of balance)3 include (but are not • SBLs: Annualized limited to) minimum rates of 8%-32% credit score of 660, (including originathree years of credit tion fees, which history, and limited are 1%-7% credit inquiries within of balance)4 the past six months8 Minimum standards for other small business loans and lines of credit: annual sales greater than \$75K, in business for at least 2 years, own at least 20% of the business, have at least fair or better personal credit, and no recent bankruptcies or tax liens. Business plans, projections, and visits to the business are not required.9 Prosper Consumer SBLs: 5%-36%11 Online • No collateral required15 Marketplace \$2K-\$35K10 application13 Minimum standards Plus 1%-5% origination fee12 • Funding occurs for loans: minimum 2-8 business credit score of 640, days after debt-to-income ratio investors are of less than 50%, secured14 annual income greater than \$0, have not filed bankruptcy in the past year, and maximum of 7 inquiries in the past 6 months¹⁶

TABLE 2 (CONTINUED) Alternative lenders: Underwriting and terms **Alternative Application SBL** lender Interest rates and funding **Borrower criteria** Loan amount Marketplace lenders (continued) 5.5%-21.3%18 **Funding Circle** \$25K-\$500K17 Loan application • Collateral required: lien USA Plus 1%-5% takes less than on business assets and origination fee19 10 minutes²⁰ a personal guaranty • Funding in fewer from primary business than 10 days²¹ owners are required²² • Factors considered in application: credit score; real-time cash flow; three years of business tax returns; 1 year of personal tax return; 6 months of business bank statements; online customer reviews; for loans over \$200K: balance sheet and income statement and outstanding loans and credit profile²³ **Balance sheet lenders** OnDeck Capital • Term loans: • Term loans: · Application and • No collateral required; \$5K-\$500K²⁴ APR ranged approval in lien on business • Lines of credit: from 7.3%-98.4% minutes²⁷ assets and a personal \$100K • Line of credit: • Funding as guaranty are required29 maximum²⁵ APR ranged from soon as 1 · Underwriting standards: business day²⁸ 14.0%-36.0%26 minimum credit score of 500, >\$100K in annual revenue, and in business for at least 1 year30 Median borrower has been in business for 7 years and has annual revenue of \$580K31

TABLE 2 (CONTINUED) Alternative lenders: Underwriting and terms **Alternative Application SBL** lender Loan amount Interest rates and funding **Borrower criteria Balance sheet lenders (continued)** Lines of credit: Loans are paid Application and • No collateral is required; Kabbage \$2K-\$100K32 off over 6 or funding in minutes35 personal guarantee is required 36 12 months33 No "interest" • Minimum requirements: charged. Fees must be in business are 1%-12%, and for more than one year the disclaimer and have over \$50K third-party in annual revenue37 partners may Kabbage performs charge an verification by autoadditional 1.5% matically obtaining fee each month³⁴ business data and instantly verifying bank account information38 · Factors considered in application: proprietary model that looks at real-time business data (e.g., IRS, QuickBooks, eBay, PayPal, Amazon, Etsy, Square), credit score, average monthly revenue, seller rating, time in business, and other unconventional metrics (online reviews and Facebook and Twitter followers)39 Application in 10 **CAN Capital** · Business collateral • Term Loans: Installment Loans: \$2.5K-\$250K40 Rates starting at minutes or less; required; no personal 13%, plus 3% funding can occur collateral required; Installment Loans: \$50K-\$100K41 origination fee42 in as little as 2 personal guarantee business days.43 required.44 • Minimum Requirements for Term Loans: gross monthly revenue of \$4,500 or more; stable monthly revenue; in business for at least 4 months.45 • Minimum Requirements for Installment Loans: at least \$350K in annual revenue; in business for at least 7 years.46

TABLE 2 (CONTINUED) Alternative lenders: Underwriting and terms				
Balance sheet lend	ders (continued)			
Fundation	Working capital loans: \$20K-\$150K Business expansion loans: \$20K-\$500K.47	APR from 8%–30% inclusive of origination and closing fees. ⁴⁸	 Application takes less than 10 minutes⁴⁹ Funding can occur in as little as 3 business days⁵⁰ 	 No specific collateral required; lien on business assets and a personal guaranty are required⁵¹ Factors considered in application: credit score, 2 years of business tax returns, 3 months of business bank statements⁵² Minimum standards for loans: annual sales greater than \$100K, in business for at least 2 years, and have at least 3 employees⁵³
Payment processo		0: 1 " 11		
PayPal Working Capital ⁵⁴	Maximum loan of 15% of annual PayPal sales, up to \$85K	Single fixed fee based on PayPal sales history, loan amount, and daily repayment deduction	Application and funding in minutes	 No personal guarantee required Factors considered in application: PayPal sales history of the business; personal and business credit scores are not considered Minimum standards for loans: >\$20K annual PayPal receipts, processes payments with PayPal for at least 3 months⁵⁵
Square Capital	Cash advance of \$2K-\$50K ⁵⁶	 Fixed percentage (10%–14%) taken out of sales in addition to processing fees Effective APR around 35%⁵⁷ 	Approval time of 1 business day ⁵⁸	 Eligible to Square merchants only with a history of processing volume.⁵⁹ Factors considered in application: processing volume (generally prefer >\$10K annual Square receipts); number and frequency of payments; business growth history; whether the business has received a payment in the past week; and customer mix.⁶⁰ No personal guarantee

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