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Peer-to-peer lending to small businesses

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Abstract

The current paper examines loan-level data from Lending Club to look at peer-to-peer borrowing by small businesses. We begin by looking at characteristics of loan applications that were and were not funded and then take a more in-depth look at funded applications. Summary statistics show an increasing number of small business loan applications over time. Beginning in 2010—when consistent measures of loan purpose were recorded for all applications—loan applications for small businesses were on average less likely than loans for other purposes to have been funded. However, logistic regression results that control for the quality of the application show that, holding all else constant, applications for a loan for a small business were almost twice as likely to have been funded than loans for other purposes. Focusing on funded applications, we note that funded business loans were slightly larger on average than loans funded for other purposes but paid similar interest rates. However, relative to small business loans from traditional sources, peer-to-peer small business borrowers paid an interest rate that was about two times higher. Regression results that control for application quality show that peer-to-peer loans for small businesses were charged almost a percentage point interest rate premium over non-business loans. Logistic regression results that look at loan performance indicate that loans for small businesses were much more likely to be delinquent or charged off.

*The views expressed herein are those of the authors. They do not necessarily reflect the opinions of the Federal Reserve Board or its staff.

Introduction

As distrust and dissatisfaction with commercial banks grew during the recent financial crisis, there was large growth in nonstandard types of borrowing arrangements. One such arrangement that has seen substantial growth in the past five years is crowdfunding —peer-to-peer (P2P) lending, in particular. Crowdfunding arrangements involve groups of individuals, not institutions, providing funding. As the name suggests, P2P loans are generally personal loans. However, small business owners often intermingle their personal and business finances so as overall P2P lending grew, so too did P2P borrowing for small business purposes.

The current paper looks at the individual loan-level data from Lending Club, focusing on those loans that were used by small business owners for their businesses. We begin by looking at the characteristics of loan applications that did and did not get funded. While loan purpose is not one of the criteria taken into account when evaluating loan applications, we find that loans intended for small business purposes were more likely to be funded than loans for other purposes. We then look at the interest rate paid on those loans that did get funded. Again, while loan purpose is not taken into account in assessing the credit quality of the application, loans for business purposes paid nearly one percentage point higher interest rate than other loans, holding borrower characteristics constant. Finally, we look at the loan performance. Our results indicate that loans for small business purposes were more than two-and-a-half times more likely to perform poorly.

The rest of the paper is organized as follows. We begin with a short discussion of crowdfunding and how P2P lending fits into the general crowdfunding framework. Then we look at the small business credit market and examine where small businesses have traditionally gotten their credit and how that may have been more difficult over the recent period. We next take a closer look at the data from Lending Club. The final three sections present our econometric results and the last section concludes.

Crowdfunding

The term crowdfunding has come to represent a spectrum of activities. The underlying idea is that funding that one would typically have to borrow through a bank or other financial institution is gathered from a group of individuals, or “the crowd.” This is not a new concept; rotating savings and credit associations (ROSCAs) operate under a similar premise and have been long used in developing countries and within minority communities in the US.¹ However, the growth of the internet has given the concept a boost, allowing for a much larger and diverse “crowd.”

¹ A ROSCA is a group of individuals who meet at regular intervals; at each meeting, each member contributes a given sum of money which is then given to a single member at the end of the meeting. Meetings continue until all members have received the lump sum. See Ardener (1964) and Geertz (1962) for a historical perspective on ROSCAs.

There is no longer a need for the individuals in the group to live in close proximity to one another or to actually know each other; crowdfunding sites are proliferating.

Early adopters of the internet for crowdfunding essentially used their websites as fundraisers. In some instances the crowd receives nothing in return, donating the money out of a sense of altruism. This is the model of websites like Kiva and Crowdrise.² In other cases, the crowd is essentially pre-buying the good or service being produced. This is the model of websites such as Kickstarter where funders are often given a copy of the book or CD that is being produced.³ In both models, borrowers do not pay interest to the crowd or specifically repay the funds.

A second form of crowdfunding is equity crowdfunding as laid out in the JOBS Act of 2012.⁴ In such cases, rather than receiving interest and principal for their investment, investors receive equity in the business. Prior to the JOBS Act, it was illegal for private companies to publicly solicit investments. It is only recently that the SEC has finalized its ruling making equity crowdfunding legal for accredited borrowers.⁵ In an even more recent occurrence, the SEC has proposed rules to allow entrepreneurs to raise capital online with fewer restrictions on who can invest.⁶

The final piece of the crowdfunding pie is debt-based, so-called peer-to-peer (P2P) lending. In P2P lending, the individuals fund small portions of loans and receive their principal plus interest when the borrower repays the loan. The two largest P2P sites are Prosper and Lending Club. Prosper started in 2006 and Lending Club started about a year later.⁷ Both websites use a credit score-based model for evaluating investment options. Applicants allow the evaluation of their credit to be translated into a letter grade and investors can then choose how much risk they wish to take on when funding a loan. As in traditional credit markets, higher risk translates into higher interest rates. P2P lending provides funding that might not be available elsewhere and rates are lower than for alternatives, such as payday loans.

Between 2006 and 2008 peer-to-peer lending grew steadily. It hit a snag in 2008 when the SEC determined that their loans should be classified as securities and, thus, regulated.⁸ This led both Prosper and Lending Club to put any new loans on hold until they properly registered with the SEC. Both organizations survived the reclassification and moved back onto a path of steady growth.

² For more information, see the individual websites of these companies, <http://www.kiva.org/> and <http://www.crowdrise.com/>.

³ See <http://www.kickstarter.com/>.

⁴ See <http://www.whitehouse.gov/the-press-office/2012/04/05/president-obama-sign-jumpstart-our-business-startups-jobs-act>.

⁵ See <http://www.bizjournals.com/portland/blog/perspectives/2013/09/secs-solicitation-ends-but.html>.

⁶ http://www.washingtonpost.com/business/on-small-business/sec-introduces-unanimously-approves-crowdfunding-proposals/2013/10/23/f5709630-3bee-11e3-b6a9-da62c264f40e_story.html

⁷ See <https://www.prosper.com/> and <https://www.lendingclub.com/> for more information on the individual companies.

⁸ See <http://www.sec.gov/litigation/admin/2008/33-8984.pdf>

The steady increase in peer-to-peer lending suggests the potential for much more growth. Currently, Lending Club loans are available to borrowers in all but six states while Prosper is available in all but three states. Investors face greater restrictions. Investors in only 29 states plus the District of Columbia are given access to Prosper. Investors in a slightly different set of 28 states have access to Lending Club.⁹ If P2P lending were to become available throughout the rest of the U.S., investment dollars and P2P borrowing could grow substantially.

Small Business Credit

Traditionally, small businesses have been thought to face increased difficulties in accessing credit than do larger businesses. Lending to small businesses is generally considered to be riskier and more costly because small firms have higher failure rates and are more vulnerable to downturns in the economy. Lending to small businesses is further complicated by their informational opacity. Most do not have the detailed financial statements and rarely have publicly traded equity so obtaining reliable information on the creditworthiness of small businesses is difficult. Previous research has found that relationship lending provides a way of mitigating the information problem (Petersen and Rajan 1994, 1995; Berger and Udell 1995; Degryse and Cayseele 2000). Because commercial banks typically provide small businesses many products other than loans, commercial banks are able to use information gathered about the business over a longer term to their advantage in assessing the creditworthiness of small businesses. For these reasons, small businesses are thought to be relatively dependent on commercial banks for loans.

During the recent economic crisis, standards on business lending at commercial banks tightened substantially. These tighter credit conditions for small business lending by banks have eased notably since 2010. Results from the Federal Reserve Board's Senior Loan Officer Opinion Survey on Bank Lending Practices (Figure 1) indicate that lending standards for small borrowers tightened substantially in 2008 and 2009 but loosened in 2010 and 2011. The net percentage of National Federation of Independent Business (NFIB) respondents reporting that credit had become more difficult to obtain, which had remained low by historical standards in the years prior to the financial crisis, rose in 2008 and reached its highest levels on record in 2009 (Figure 2). Since then, it has retraced a good portion of its increases during the financial crisis, but still remains well above pre-recessionary levels.

Coincident with the tightening of standards on lending terms, there was also a large drop in commercial lending by banks (Figure 3). Some of the drop is likely a result of the higher

⁹ See <http://www.prosper.com/help/investing/>
<http://www.prosper.com/help/borrowing/>
<http://blog.lendingclub.com/2011/06/10/is-lending-club-available-in-my-state/>

standards, but some of it is also likely attributable to diminished demand from small businesses uncertain about their future. In addition, some of the decrease is likely due to deterioration in the financial conditions of many banks during this period.¹⁰

Small businesses get their credit from many different sources. Statistics from the 2003 Survey of Small Business Finances (SSBF) indicate that while commercial banks are an important source of finances for small businesses, they are not the only source (Table 1).¹¹ Nearly 60 percent of outstanding credit to small businesses in 2003 was provided by commercial banks, but finance companies provided over 15 percent, and other sources provided just under 10 percent. The median loan outstanding was \$20,000, but this varied with the type of provider, ranging from the median \$90,000 outstanding loan from mortgage companies to the median \$8,000 outstanding loan from a brokerage or mutual company.

There are also differences in the amount and types of credit used according to the size of the firm. For example, the median loan for firms with fewer than 10 employees was less than \$18,000 compared to \$40,000 for larger firms. This was true across all different types of lenders. The share of outstanding credit provided by each type of lender was similar across firm size for most types of lenders. The exceptions to this were mortgage companies and other providers; nearly 11 percent of funds for small firms were from mortgage companies and about 5 percent of funds were from other sources compared to 2 percent and about 11 percent of funds, respectively, for larger firms.¹²

Given the downturn in the real estate market, the availability of home equity loans to finance the business may have become more difficult in the recent period. Table 2 provides additional insights into this question. In 2003, business owners reported using personal real estate to collateralize—at least in part—loans for their businesses a fair amount: 15.6 percent of total dollars outstanding and 11.0 percent of all loans used personal real estate as collateral. Among loans from mortgage companies, the shares were even higher, with more than a quarter of outstanding dollars and nearly 60 percent of outstanding loans secured by personal real estate.

Overall, commercial bank lending to small businesses is down in the recent period; while much of this may be due to lack of demand, there is also evidence that traditional routes may have been difficult, especially for the smallest small businesses (Figure 4). Such firms often require small amounts of credit which may not be profitable for commercial banks to lend and may be turning

¹⁰ Kiser, Prager, and Scott (2012) find that the distribution of banks' supervisory ratings shifted towards worse ratings between 2007 and 2010 and those ratings downgrades were associated with significantly lower rates of growth in small business lending over this period.

¹¹ While somewhat dated, the data from the 2003 SSBF provide the most current enumeration of small business borrowing from all sources with dollar amounts.

¹² "Other" providers include: venture capital firms, small business investment companies, other business firms, family or other individuals, government agencies, suppliers, credit card processors, check clearing companies, factors, owners, retirement plans and consolidated institutions.

to more alternative sources such as peer-to-peer lending. The impact of such a choice is not clear. Even though such loans may allow the firm to remain in business in the short term the high cost may not be sustainable in the long run.

Data

The current paper is, to our knowledge, the first paper to examine the growing peer-to-peer borrowing among small businesses. In this paper we use data on individual loans and applications from the LendingClub.com website to examine more closely the characteristics of loans that get funded as well as the interest rate paid on those loans.¹³ Lending Club makes their data available publicly. The data include borrower characteristics, loan status and payment information of loans that are funded, and details about all of the loan applications that were rejected. Our data set consists of more than 670,000 rejected loan applications and just under 100,000 funded loans.

Both the number of loans and the average dollar amount of loans disbursed through Lending Club has grown tremendously since Lending Club's inception in 2007. Table 3 shows the volume of lending from mid-2007 through 2012. Total loans funded for small businesses grew from about \$850,000 in 2007 to over \$22 million in 2012. Loans for other purposes grew from just under \$4 million in 2007 to nearly \$700 million in 2012. The average loan size for small business loans started near \$15,000 in 2007 and then fell slightly until 2010. In 2012, the average loan for small business was \$16,200. On the other hand, non-business loans grew slowly from 2007 to 2012, from \$3,600 to \$13,400 for. The interest rate was sometimes higher and sometimes lower for small business loans than loans for other purposes, but they were generally within a percentage point of each other.

Over the entire time span, small business was the sixth most frequently cited loan purpose among funded loans, totaling 3.5 percent of all funded loans. Debt consolidation was the most common loan purpose, accounting for just over half of the total, credit card payoffs follow with about 17 percent, "other" was almost 8, home improvement/purchase is just over 6, and "major purchase" was 3.8 percent. The average amount funded for "other" or "major purchase" is not presented in the table because these categories can encompass a variety of things and is less informative. Comparing small businesses loans to other popular loan purposes, the average amount funded and the interest rates across the groups were comparable, although loans for small businesses were a bit larger on average (Table 4).

Small business and non-business loans had roughly the same rate of rejection, with about 8 percent of all small business loans over the period being funded and about 12 percent of all non-

¹³ The data are publicly available at <https://www.lendingclub.com/info/download-data.action> and are continuously updated. The data used for analysis in this paper were downloaded on August 13, 2013; analysis is restricted to loans issued prior to December 31, 2012.

business loans being funded (Table 5).¹⁴ The rejection rates for small business loans were understated in 2007 - 2009 because it was not until mid-2009 that the rejected and funded loan data sets started to categorize loan purpose in the same way. In order to attempt to correct for this, every rejected entry with a loan description that included the word “business” was designated as a small business loan. Nonetheless, it is likely that many more small business loans than we are counting were rejected in those earlier years. The percent funded in 2012 picked up in both small business and non-business loans, but only by 0.5 percent from 6.8 to 7.3 in terms of small businesses, where it has increased by almost 5 percent for non-businesses, from 9.5 to 14.2.

Figures 5 and 6 break down the number of applications and acceptance rates by state. Not surprisingly, the more populous states had more small business loan applications. However, they did not necessarily have the highest share of small business loan applications that were funded. For example, while Florida was home to more than 4,000 applications for small business loans, fewer than 300 of them were funded. It is interesting to note that funding rates were fairly high in some of the more rural states such as Mississippi and Tennessee, but this may be at least partially explained by the relatively low numbers of applications from these states.

Table 6 provides overall mean and median characteristics of applications according to whether or not the loan was funded. Only 12 percent of all loan applications received by Lending Club over this time period were funded. The applications that were funded were about \$1,000 smaller on average than the unfunded requests. The fraction of applicants with less than a year’s work experience was quite different in the funded and unfunded applications, with only 10 percent of funded applicants employed for less than a year versus 77 percent of the unfunded applicants. One also saw a sizeable difference in FICO scores, with funded applicants having an average FICO score of 706 versus 636.

As less traditional lending vehicles such as peer-to-peer lending are usually associated with higher interest rates, we are interested to see how the rates that small businesses receive through Lending Club loans differ from those that a small business may receive in a more formal lending setting. Figure 7 and Table 7 explore this by comparing the Lending Club small business lending rate with that reported by National Federation of Independent Business (NFIB) members. NFIB firms are split into two categories, the smallest firms – those with fewer than 10 employees – and larger small businesses, those having 10 or more employees. It is possible that small business owners who are seeking financing through an alternative lending vehicle, such as Lending Club, are less creditworthy and therefore unable to receive financing through a traditional lending institution, such as a commercial bank. As mentioned in the previous section, assessing the creditworthiness of small businesses is difficult, particularly among the smallest businesses. For

¹⁴ The total number of funded small business loans is slightly larger in Table 5 than in Table 3. This is because Table 3 is split by the year of issuance of the loan whereas Table 5 is by year of loan application. There is some lag between application and issuance.

this reason we would expect that the rates for the smallest NFIB firms would be more comparable to the Lending Club small business rates. Although it is the case that the NFIB firms with fewer than 10 employees paid about a 0.5 to 1.5 percentage point higher rate than those with 10 or more employees, the NFIB reported rates were much lower than the Lending Club rates, with the smallest NFIB firms averaging about 7 percent over the period, and the Lending Club small businesses averaging over 5 percent more. Also, the NFIB firms did not experience the spike in late 2009 that the Lending Club small businesses did, which is evident in both the table and the figure.

Figure 5 tracks the mean interest rates on a monthly basis, and although there is volatility from month to month, the Lending Club small business rate fluctuated much more than the NFIB rate. This can be partially explained by the fact that there were fewer observations in the Lending Club data. Also, the NFIB rate has trended slightly downward since mid-2007, when the series began, ending with a 2012 mean rate that is about 3 percent lower than the 2007 mean. The Lending Club rate did not experience this decline, and the small business loan rate averaged about 0.9 percent higher in 2012 than 2007, and about 1.9 percent higher in 2012 than 2007 for non-business loans.¹⁵

Funded vs. unfunded loan applications

Because some of the variables are analogous between the rejected loan applications and funded loans data sets we are able to do some regression analysis in order to discern some of the determinants of loans being funded, and if small business loan applications were more or less likely to be funded. We estimate a logistic regression, using the following variables:

$$Funded_{i\{0,1\}} = f(SmallBusiness_i, Amount_i, Employment_i, HPI_i, Fico_i, Year_i)$$

Where i refers to the individual application. *SmallBusiness* is a dummy which equals 1 if the application was for a small business loan, and 0 if not. *Amount* is the amount of money requested in the application, in thousands of dollars, and *Employment* is a dummy indicating that the applicant had been employed less than a year at the time of application. *HPI* is the mean of the Corelogic house price index in the state where the applicant resided, indexed such that 100=1, and averaged over the previous year. *Fico* is the Fico credit scores of the potential borrower at the time of application. Finally, *Year* represents the year of application, and we include state fixed effects. We estimate the model initially with all time periods. Because the identification of loan purpose is not consistent until 2010 and we are likely to underestimate the share of loans for small business purposes, we estimate the model again using only applications from 2010 forward. Despite the incomplete information in the early years, the results from both models are quite similar.

¹⁵ There are several months in 2008 when there were no peer-to-peer loans for small business when Lending Club was coming into compliance with SEC regulations.

Table 8 presents our results from the model described above, displayed as odds ratios. When controlling for quality of the application, loans were about two times as likely to be funded when they were designated for small businesses. As expected, requesting greater amounts of money decreased the likelihood of a loan being funded; each additional \$1,000 requested decreased the likelihood of funding by about 4 percent. Having worked less than a year decreased the likelihood by about 97 percent. Having a higher FICO score positively affected the likelihood of acceptance, with each additional point increasing the odds by about 2 percent. We also see a positive relationship between higher home prices and the likelihood of having one’s application accepted.

Interest Rate Paid

Turning to funded loans, we estimate a linear regression on the interest rate paid on the loans.¹⁶

$$InterestRate_i = f \left(\begin{matrix} SmallBusiness_i, Amount_i, Employment_i, HPI_i, Fico_i, \\ Year_i, Population_i, Income_i, Long_i, Home_i \end{matrix} \right)$$

SmallBusiness, Amount, Employment, Fico, and Year are defined as in the previous model. HPI is the Corelogic house price index, averaged over the previous 12 months in the county where the applicant resided.¹⁷ Long indicates that the loan agreement was for 60 rather than 36 months, and Home indicates that the borrower owned his/her own home at the time of the application. Population and Income are the population, in thousands of people, and the per capita income, in thousands of dollars in the county where the borrower lived. These county level controls are gathered from data provided by the U.S. Bureau of Economic Analysis.¹⁸ We also control for state level fixed-effects in the regression.

The results of this regression are displayed in Table 9. The results indicate that, all else equal, loans that were for small businesses were charged an interest rate nearly a full percentage point higher than loans for other purposes. Each additional \$1,000 requested increased the interest rate by 0.14 percentage points. Having a higher FICO score negatively affected the interest rate paid by borrowers; for each additional FICO score point, the interest rate was 0.09 percentage points lower. The year with the highest interest rates, as seen in the descriptive statistics, was 2009.

¹⁶ In doing our research, we noticed that interest rate downloaded on different days was not identical for a handful of observations. For the 21 observations that did not have the same value across the two time periods, we compared the rate paid and the credit grade of other loans issued at the same time and used the reported rate that mostly closely fit with other loans from that period. For example, one loan on the data downloaded in August 2013 had an interest rate of 6.00 percent; that same loan had an interest rate of 14.91 on the data downloaded in December 2012. Because the 14.91 rate was more in line with the other loans made at the same time with a D2 rating, we used the 14.91 interest rate in the analysis.

¹⁷ The location data for the denied loans is of much lower quality than for the funded loans. For the denied loans, the state is the finest level of geography that we are able to ascertain for most of the applications. For the funded loans, we are able to ascertain the county from the city and state for most loans. Thus, we use state-level controls in the logistic model, but county-level controls in the regression.

¹⁸ The data used is the “Local Area Personal Income accounts CA1-3” series, downloadable from <http://www.bea.gov/regional/downloadzip.cfm>.

Relative to the omitted category of 2007, all the years had positive coefficients, or higher interest rates, but at over a 2 percentage point increase, 2009 was the highest. Living in a county with a higher per capita income slightly decreased the interest rate charged. There was no statistically significant relationship between either the county population or the local house price index on the interest rate charged.

Loan Performance

Our finding that loans for small businesses were charged a premium over other types of loans despite controlling for the credit quality of the borrower is interesting. In order to explain this finding, we investigate whether such loans perform differently than other types of loans. We estimate the following logistic regression:

$$Delinq_i = f \left(\begin{array}{l} SmallBusiness_i, Amount_i, Employment_i, HPI_i, Fico_i, \\ Year_i, Population_i, Income_i, Long_i, Home_i \end{array} \right)$$

All covariates are as defined in the interest paid regression and the dependent variable is a dummy variable equal to one if the loan was charged off, in default, or 31 to 90 days delinquent.¹⁹ In addition, the model included state fixed effects.

Results from estimation are in Table 10. The results indicate that after controlling for observable differences in the quality of the borrowers, loans for small businesses were more than 250 times more likely to perform poorly than loans for other purposes, which may give some insights into why such loans are charged a higher rate. The other covariates in the model behave as one would expect.

Conclusions

Peer-to-peer lending has grown substantially since its inception in 2007 and has shown no signs of slowing. To the contrary, Prosper, the largest competitor in the peer-to-peer space, recently received a \$20 million equity injection and may considerably expand its lending in the very near future. In addition Lending Club received \$125 million dollar investment led by Google.²⁰ Shortly thereafter, Lending Club announced that they had plans to launch a separate platform to make small business loans.²¹ Unlike the personal loans to business owners on the traditional Lending Club platform which are underwritten based on the characteristics of the owner, loans on the small business platform would be based on the characteristics of the firm. The other large difference that is likely to occur is an increase in the size of the loans available. While final details are not yet available, there is an expectation that loans as large as \$250,000 may be available on the new platform.

¹⁹ While we cut off applications at December 31, 2012, we pulled data on all these loans on August 14, 2013 to get updated performance data.

²⁰ See http://dealbook.nytimes.com/2013/05/02/google-to-invest-in-lending-club/?_r=0.

²¹ See http://news.cnet.com/8301-1023_3-57588175-93/with-rising-revenues-lending-club-ceo-plans-expansion-q-a/.

While a relatively small fraction of peer-to-peer lending in the US currently goes to businesses, one might expect this to grow rapidly with a platform dedicated to small business lending based on two factors. First, beginning in June, community banks Titan Bank and Congressional Bank began purchasing loans through the Lending Club platform and Titan Bank started to offer personal loans to their customers through Lending Club.²² With nearly 7,000 community banks in the US, the potential for additional partnering with Lending Club as it expands into the small business space is substantial. The passage of the SEC crowdfunding rules will certainly expand the pool of individuals eligible to provide funding to small businesses but it is unclear what the overall impact will be on P2P lending.

Second, consider the experience in the UK. UK-based Funding Circle is a peer-to-peer platform dedicated solely to making loans between £5,000 and £1 million to small businesses for 6 months to 5 years. It was founded in August 2010; as of August 2013, it had already made loans to nearly 2,500 businesses totaling more than £135 million.²³ This information is particularly relevant now that Funding Circle has merged with Endurance Lending Network in the US and are providing loans to businesses in the United States.²⁴

As small business owners are increasingly turning to this alternative source of money to fund their businesses, policy makers may wish to keep a close eye on both levels and terms of such lending. Because such loans require less paperwork than traditional loans, they may be considered relatively attractive. However, given the relatively higher rate paid on such loans, it may be in the best interest of the business owner to pursue more formal options. More research is required to understand the long-term impact of such loans on the longevity of the firm and more education to potential borrowers is likely in order.

²² See <http://banklesstimes.com/2013/08/11/community-banks-partner-with-lending-club-as-p2p-continues-to-evolve/>.

²³ Statistics were pulled from the Funding Circle page on August 7, 2013.

²⁴ <http://blog.endurancefn.com/2013/10/announcing-funding-circle-usa/>

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Table 1: Balance on loans to small business with any outstanding debt, by number of employees of firm

	All small businesses			Fewer than 10 employees			10 or more employees		
	Share of total	Mean per loan	Median per loan	Share of total	Mean per loan	Median per loan	Share of total	Mean per loan	Median per loan
All firms	100.0	182,288	20,000	100.0	97,999	17,149	100.0	359,096	40,000
Commercial bank	56.8	221,241	25,000	54.7	116,414	20,000	58.0	430,685	60,000
Savings bank	5.3	212,533	37,000	6.8	139,046	34,000	4.4	393,789	90,000
Savings and loan association	1.0	243,238	35,000	1.0	115,862	9,959	1.0	600,116	130,000
Credit union	0.5	27,720	15,000	1.1	23,978	13,000	0.3	43,918	30,000
Finance company	16.2	114,050	18,000	15.9	62,206	15,000	16.4	213,064	26,079
Insurance company	2.2	694,474	21,000	2.0	268,761	14,000	2.3	2,899,123	38,000
Brokerage or mutual fund company	1.0	246,251	8,000	0.7	96,853	8,000	1.1	550,066	55,000
Leasing company	3.1	126,893	9,200	2.6	60,314	8,500	3.5	238,794	14,839
Mortgage company	5.3	587,029	90,000	10.7	566,467	84,000	2.2	652,478	245,000
Other	8.5	141,832	20,000	4.6	39,503	15,000	10.8	392,207	80,000

Note: Weighted statistics from the 2003 Survey of Small Business Finances. Balances include loans include outstanding balances on lines of credit, capital leases, mortgages, motor vehicle loans, equipment loans, loans from owners, and other loans.

Table 2: Share of loans to small businesses secured by personal real estate, by number of employees of firm

	All Institutions		Fewer than 10 employees		10 or more employees	
	Share of dollars	Share of loans	Share of dollars	Share of loans	Share of dollars	Share of loans
All firms	15.6	11.0	18.5	14.7	13.9	8.8
Commercial bank	18.7	17.1	24.0	22.1	15.8	14.0
Savings bank	23.9	29.7	32.9	34.3	16.0	25.5
Savings and loan association	19.5	24.2	53.2	36.8	1.2	7.1
Credit union	27.9	13.4	20.3	10.7	45.8	18.1
Finance company	8.5	1.7	3.8	2.4	11.1	1.3
Insurance company	2.2	5.7	0.8	5.9	2.9	5.6
Brokerage or mutual fund company	4.9	7.5	0.0	0.0	6.6	10.3
Leasing company	0.0	0.0	0.0	0.0	0.0	0.0
Mortgage company	25.5	57.8	11.5	58.1	64.3	57.1
Other	5.9	5.5	11.5	5.1	4.5	5.8

Note: Weighted statistics from the 2003 Survey of Small Business Finances. Balances include loans include outstanding balances on lines of credit, capital leases, mortgages, motor vehicle loans, equipment loans, loans from owners, and other loans.

Table 3: Peer-to-peer lending volume and interest rate by Lending Club, by loan purpose and year of issue

Year	Non-business loans				Small business loans			
	Number of Loans	Dollar amount funded	Average dollar amount funded	Average interest rate	Number of Loans	Dollar amount funded	Average dollar amount funded	Average interest rate
2007	547	3,946,350	7,215	11.75	56	845,200	15,093	12.54
2008	2,266	18,291,776	8,072	12.07	127	1,683,250	13,254	11.95
2009	4,913	47,422,624	9,652	12.27	368	4,392,125	11,935	14.63
2010	12,071	120,966,304	10,021	11.97	466	5,384,875	11,556	12.45
2011	20,746	243,501,696	11,737	12.18	975	13,861,950	14,217	13.13
2012	51,981	695,395,520	13,378	13.65	1,386	22,547,076	16,268	13.39
Total	92,524	1,129,524,352	12,208	12.98	3,378	48,714,476	14,421	13.25

Note: Statistics are calculated from LendingClub.com loan issue data through December 31, 2012. Year is based on the year the loan was issued.

Table 4: Peer-to-peer lending volume and interest rate by LendingClub.com, by loan purpose and year of issue

Year	Loans to pay off credit card		Loans to pay off debt		Loans for home improvement/ home purchase		Loans for small businesses	
	Average \$ amount funded	Average interest rate	Average \$ amount funded	Average interest rate	Average \$ amount funded	Average interest rate	Average \$ amount funded	Average interest rate
2007	8,065	12.05	8,680	12.65	6,358	10.99	15,093	12.54
2008	7,994	12.02	9,198	12.61	8,267	11.63	13,254	11.95
2009	10,155	12.01	11,072	12.74	9,652	11.78	11,935	14.63
2010	11,242	11.63	11,476	12.34	9,356	11.72	11,556	12.45
2011	12,222	11.90	13,268	12.72	11,707	11.69	14,217	13.13
2012	13,067	13.33	14,438	14.11	12,995	12.51	16,268	13.39
Total	12,468	12.82	13,585	13.52	11,671	12.08	14,421	13.25

Note: Statistics are calculated from LendingClub.com loan issue data through December 31, 2012. Year is based on the year the loan was issued.

Table 5: Denied and funded applications from Lending Club, by application year

Year	Non-Business Loans			Small Business Loans*		
	Rejected	Funded	% funded	Rejected	Funded	% funded
2007	5,298	630	10.63%	8	65	89.04%
2008	25,319	2,254	8.17%	450	124	21.60%
2009	55,805	4,936	8.13%	1,393	370	20.99%
2010	106,602	12,245	10.30%	6,472	468	6.74%
2011	204,571	21,370	9.46%	13,875	1,018	6.84%
2012	319,335	52,955	14.22%	17,366	1,360	7.26%
Total	716,930	94,390	11.63%	39,564	3,405	7.92%

Note: Statistics are calculated from LendingClub.com loan data and declined loan data up to December 31, 2012. Year is based on when the application was received. * The rejected loan data set does not start identifying “loantitle” with categories that are comparable to the funded loans data set until 2009. Business loan applications are identified as any application containing the word “business” in the “loantitle.”

Table 6: Mean characteristics of Lending Club loan applications by whether or not the application was funded¹

	All Applications		Funded		Not funded	
	Mean	Median	Mean	Median	Mean	Median
Funded	0.12	0	1.00	1	0.00	0
Small Business Loan	0.05	0	0.04	0	0.05	0
Amount Requested (\$1,000's)	13.16	10.00	12.56	10.40	13.25	10.00
Employed less than 1 year	0.68	1	0.10	0	0.77	1
Mean state house price index ²	1.42	1.39	1.44	1.43	1.42	1.38
Fico Score (lower range, nonmissing)	644.63	658	706.12	700	635.97	649
<680	0.64	1	0.23	0	0.70	1
680-714	0.21	0	0.41	0	0.18	0
715-749	0.10	0	0.23	0	0.08	0
750-779	0.03	0	0.09	0	0.02	0
780+	0.02	0	0.04	0	0.01	0
Year of Application	2011.07	2011	2011.21	2012	2011.05	2011
Number of Observations	766,761		94,688		672,073	

Notes: 1. Standards for loans have changed over time; the statistics reflect whether or not the loan applications met the standard at the time the application was submitted. 2. Due to the volatility and seasonality of the house price index, we use the moving average of the previous 12 months in the state where the application was submitted.

Table 7: Interest rate for Lending Club loan compared to other interest rates for NFIB members, by year

Year	LC Non-Business Loans	LC Small Business Loans	NFIB Firms with 10+ employees	NFIB Firms with <10 employees
2007	11.75	12.54	8.67	9.23
2008	12.07	11.95	6.92	7.74
2009	12.27	14.63	5.54	6.92
2010	11.97	12.45	5.55	6.77
2011	12.18	13.13	5.47	6.56
2012	13.65	13.39	5.29	6.09
Total	12.98	13.25	6.06	7.03

Note: Lending Club statistics are calculated from LendingClub.com loan issue data through December 31, 2012. Year is based on when the loan was issued.

NFIB statistics are calculated from monthly membership surveys done by the National Federation of Independent Business through the December 2012 survey.

Table 8: Logit estimates of whether or not the loan application gets funded

	Odds Ratios (May 2007 - Dec 2012)	Odds Ratios (Jan 2010 - Dec 2012)
Small Business Dummy	1.969*** [27.01]	1.796*** [20.90]
Amount Requested (\$1,000's)	0.955*** [-90.23]	0.957*** [-82.43]
State House Price Index (1 year lag, 1=100)	1.348*** [17.69]	1.318*** [14.70]
Fico Score	1.018*** [175.28]	1.017*** [147.88]
Employed less than 1 year	0.035*** [-276.65]	0.028*** [-274.02]
Application year (2007 is omitted)		
2008	0.504*** [-13.06]	
2009	0.430*** [-16.98]	
2010*	0.803*** [-4.52]	
2011	1.272*** [4.99]	1.610*** [32.68]
2012	2.574*** [19.78]	3.249*** [88.62]
Constant	0.000*** [-149.78]	0.000*** [-148.08]
Pseudo R2	0.415	0.445
N	766,761	683,599

Note: t-statistics in brackets. *** indicates significance at the 1% level; ** indicates significance at the 5% level; and * indicates significance at the 10% level. Applications from prior to 2010 do not fully identify all business loans.

Table 9: Regression results for interest rate paid on loan

	Linear Reg
Small Business Dummy	0.893*** [24.06]
Amount Requested (\$1,000's)	0.141*** [136.43]
Treasury Rate	-0.152*** [-2.68]
Fico Score	-0.088*** [-422.52]
Annual Income (\$1,000's)	0.000 [0.60]
County Population (1 year lag, in 1,000's)	-0.000 [-0.00]
County Per Capita Income (1 year lag, in \$1,000's)	-0.000 [-0.84]
Home Owner	-0.118*** [-7.86]
County House Price Index (1 year m. avg lag, 1=100)	-0.075* [-1.70]
Loan Length (0 is 36 months, 1 is 60 months)	3.630*** [193.46]
Employed less than 1 year	0.101*** [4.38]
Application year (2007 is omitted)	
2008	0.552*** [3.53]
2009	2.110*** [9.70]
2010	0.417* [1.86]
2011	0.292 [1.27]
2012	0.942*** [4.10]
Constant	71.795*** [251.26]
Adjusted R2	0.769
N	84,342

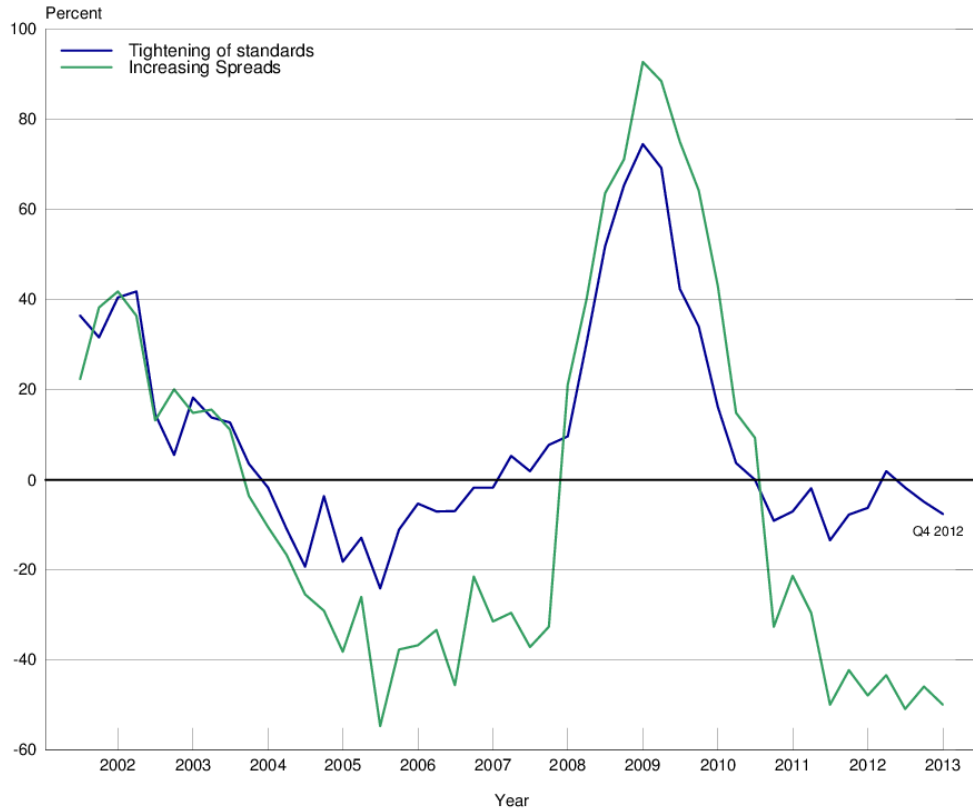
Note: t-statistics in brackets. *** indicates significance at the 1% level; ** indicates significance at the 5% level; and * indicates significance at the 10% level. State fixed effects included in estimation.

Table 10: Odds Ratio from logit estimates of whether or not the loan performs poorly

	(May 2007- Dec 2012)
Small Business Dummy	2.710*** [19.61]
Amount Requested (In Thousands)	1.017*** [8.42]
Fico Score	0.988*** [-27.31]
Annual Income (\$1,000)	0.995*** [-11.58]
County Population (1 yr lag, in 1,000's)	1.000 [1.40]
County Per Capita Income (1 yr lag, in \$1,000's)	0.996*** [-3.70]
Home Owner	0.956 [-1.57]
County House Price Index (1 yr m.avg lag, 1=100)	1.173** [2.09]
60 month loan	1.621*** [14.64]
Employed less than 1 year	1.042 [0.99]
Application year (2007 is omitted)	
2008	0.993 [-0.06]
2009	0.758** [-2.34]
2010	0.583*** [-4.64]
2011	0.435*** [-7.13]
2012	0.190*** [-14.25]
Constant	486.619*** [12.24]
Pseudo R2	0.076
N*	84,333

Note: Poor performance is defined as having a loan status of “charged off,” “default,” or “late (31-120 days); t-statistics in brackets. *** indicates significance at the 1% level; ** indicates significance at the 5% level; and * indicates significance at the 10% level. State fixed effects included in estimation.

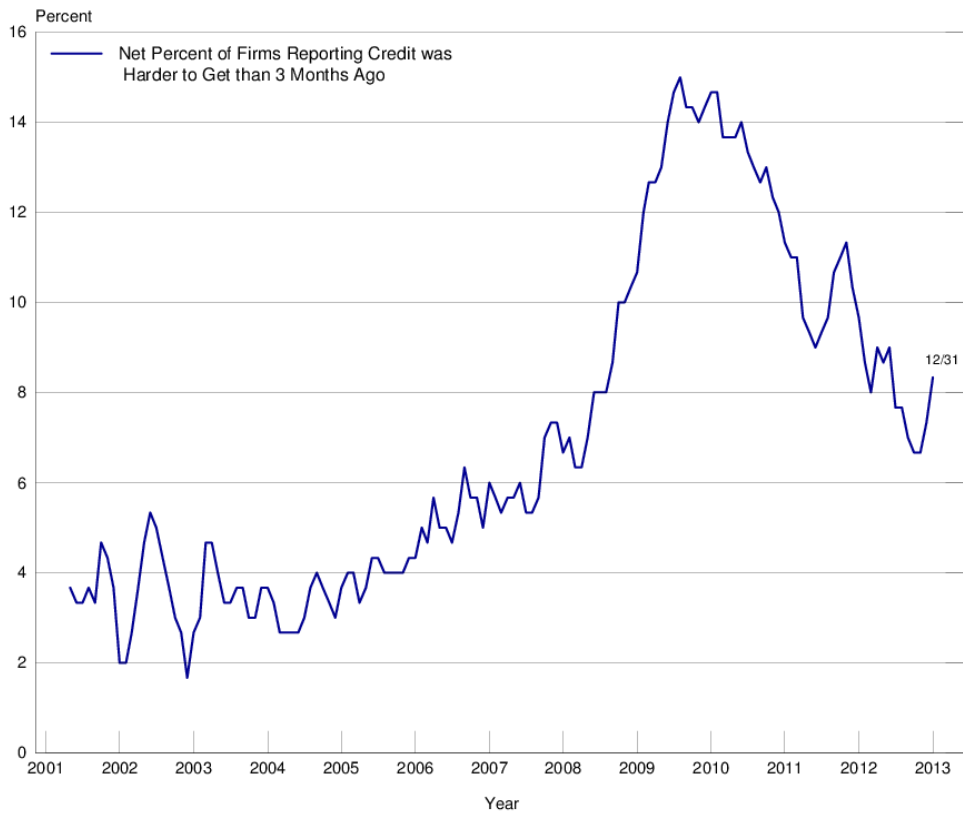
Figure 1: Net percent of domestic banks reporting a tightening of standards or terms on loans to small businesses



Note: Data are quarterly; not seasonally adjusted.

Source: Federal Reserve Board, Senior Loan Officer Opinion Survey on Bank Lending Practices www.federalreserve.gov/boarddocs/SnLoanSurvey/.

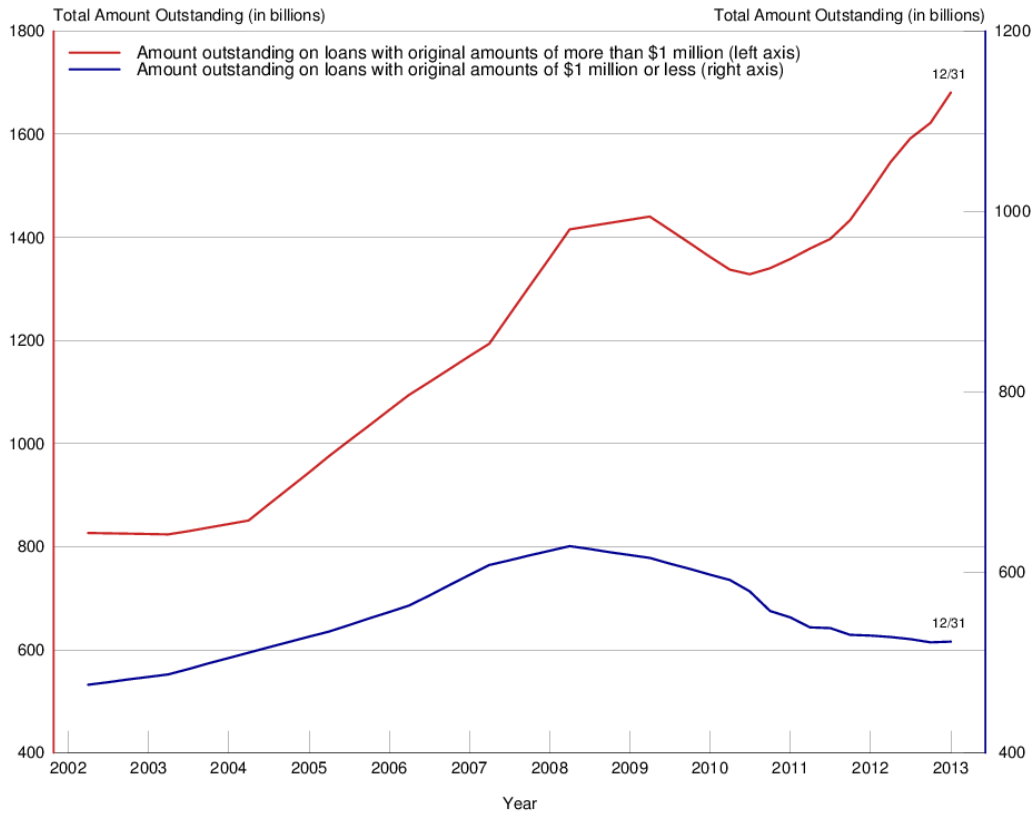
Figure 2: Net percent of firms reporting that credit was harder to get compared to 3 months ago



Note: This question is only asked of firms reporting that they regularly borrow; data are monthly; 3 month moving average is reported; not seasonally adjusted.

Source: National Federation of Independent Businesses (NFIB) Survey, Small Business Economic Trends Data <http://www.nfib.com/research-foundation/surveys/small-business-economic-trends>.

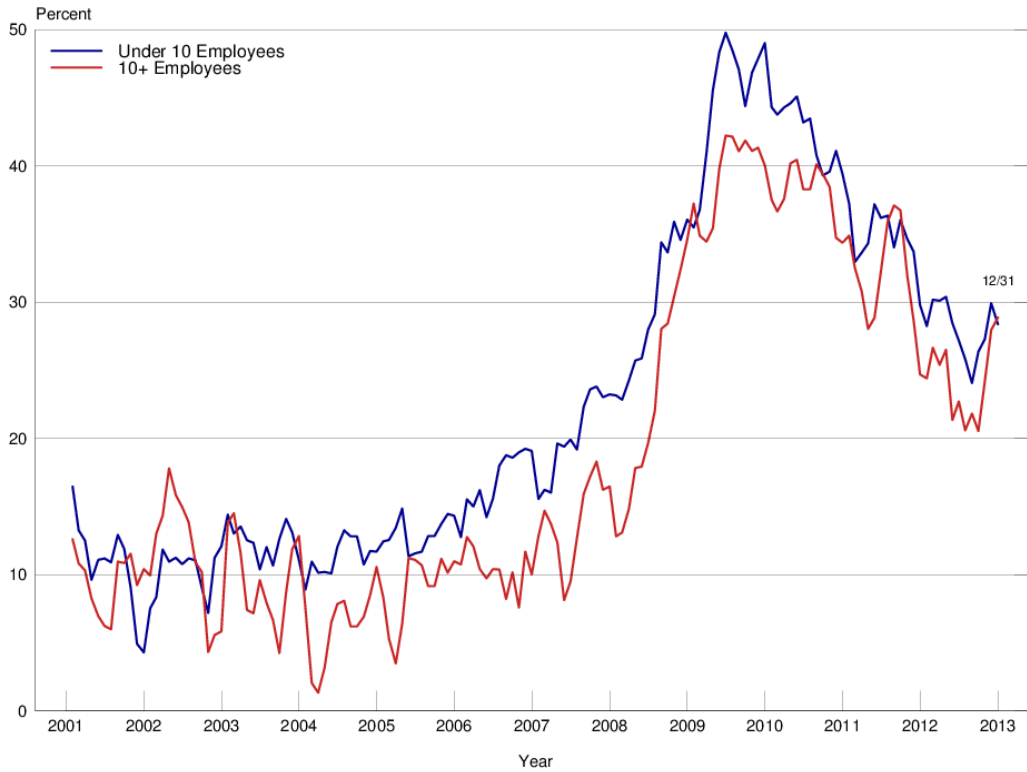
Figure 3: Amount outstanding on loans to businesses



Source: These data are constructed from special tabulations of the June 30, 2002 to September 30, 2012 Call Reports (Consolidated Reports of Condition and Income for U.S. Banks).

Note: Beginning March 2010, the data reporting frequency changed from annual to quarterly.

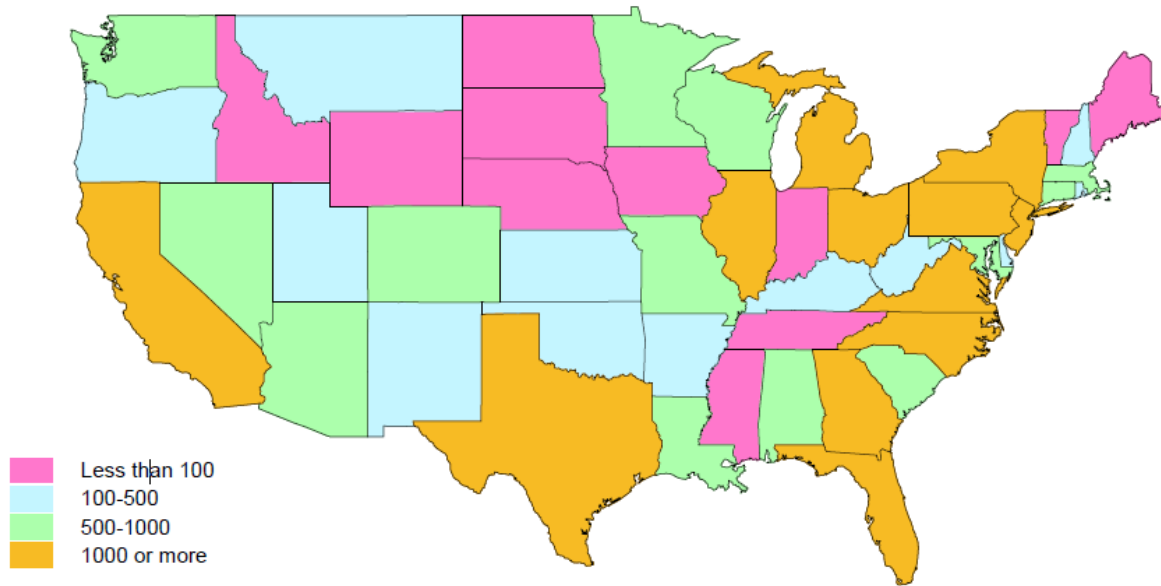
Figure 4: Net percent of firms reporting that credit was harder to get compared to 3 months ago, by number of employees



Note: This question is only asked of firms reporting that they regularly borrow; data are monthly; 3 month moving average is reported; not seasonally adjusted.

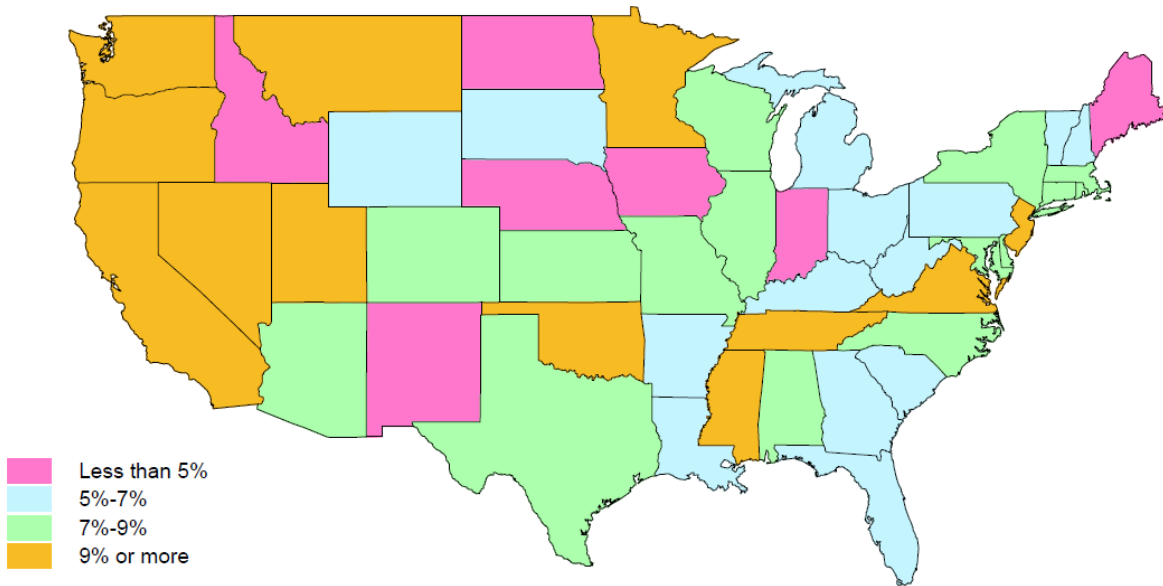
Source: National Federation of Independent Businesses (NFIB) Survey, Small Business Economic Trends Data <http://www.nfib.com/research-foundation/surveys/small-business-economic-trends>.

Figure 5: Number of loan applications for small business



Note: Statistics are calculated from LendingClub.com loan data and declined loan data up to December 31, 2012. Year is based on when the application was received. The declined loan data set does not start identifying “loantitle” with categories that are comparable to the funded loans data set until 2009; business loans are identified as any application containing the word “business” in the “loantitle.”

Figure 6: Share of loan applications for small business that were funded



Note: Statistics are calculated from LendingClub.com loan data and declined loan data up to December 31, 2012. Year is based on when the application was received. The declined loan data set does not start identifying “loantitle” with categories that are comparable to the funded loans data set until 2009; business loans are identified as any application containing the word “business” in the “loantitle.”

Figure 7: Interest rate paid by small business borrowers from LendingClub.com compared to NFIB borrowers

