

Working Paper

# Small Business Access to Credit: Yesterday, Today and Tomorrow

William J. Dennis, Jr.  
NFIB Research Foundation

October 2008



SWEDISH FOUNDATION FOR SMALL BUSINESS RESEARCH

# Small Business Access to Credit: Yesterday, Today and Tomorrow

William J. Dennis, Jr.  
NFIB Research Foundation

## Abstract

Small business access to credit has been turned upside down in the United States over the last 30 years. It has moved from a difficult problem for small business owners and managers as a group to a relatively modest one. The transformation is largely due to financial services deregulation, information technology, and finance innovation. Prominent among the latter is credit scoring. These developments raise policy issues that are relevant to all developed countries. Among them are: how does one measure and monitor small business credit access? What reassessments need to be made now that credit scoring has mitigated the market failure argument supporting government subsidized small business finance programs? What are the dimensions of a small business credit market? How will recent financial innovation withstand a severe recession? Within the bounds of safety and soundness, what can/should be done to promote de novo bank entry? And, what is the future of conventional small business loan-backed securitization in the light of the sub-prime debacle?

Global forces have transformed the financial systems of all developed countries.<sup>1,2</sup> Yet, when considering those changes and their implications for small business access to credit, all countries start from a different point. The author's comments focus on the changes American small business experienced accessing credit over the last 30 years, not because the U.S. experience is more instructive than any other nor because the American financial system is somehow more advanced, but simply because he knows it better and can use its context to develop implications for small business that appear applicable to most, if not all, of the world's developed countries.

The paper is organized as follows: the first section briefly addresses small business use and sources of debt finance. The second discusses small business owner access to credit and change in it. The third identifies three major factors that drove credit access's decline as a major small business problem. The fourth recognizes characteristics of the American banking system that differ from other banking systems in developed countries, and how that may affect small business access to debt capital. The fifth presents six implications for small business and policymakers in the developed world and the paper concludes with brief comments.

## 1 Small Business and Credit

The forms of capital financing small businesses can be classified as: equity, including personal, angel, venture, and stock; debt, including loans, lines and leases; and internal, including after-tax profit as a subset. This paper focuses on debt finance because debt finance, or credit, is the most common source of external finance for small businesses and one of central interest to policy-makers and business owners alike. More specifically, attention is

---

<sup>1</sup> The author wishes to thank Hans Landström, Jon Scott, and Bill Dunkelberg for their helpful comments.

<sup>2</sup> This paper was prepared prior to the events of September 2008.

directed to debt from financial institutions rather than from trading partners, i.e., trade credit, or credit card providers, even though these forms of credit along with other non-institutional sources are important to small firms. Indeed, 60 percent of small businesses have trade credit liabilities, making non-institutional debt among businesses a significant and under-explored form of financing [Board of Governors of the Federal Reserve System (2007a)]. In addition, 48 percent have a personal credit card used for business purposes and a non-mutually exclusive 48 percent have a business credit card [Board of Governors of the Federal Reserve System, (2007a)].

Sixty (60) percent of American small businesses<sup>3</sup> have one or more loans, lines-of-credit, or leases [Board of Governors of the Federal Reserve System (2007a)], a 5 percentage point increase over the prior five years [Board of Governors of the Federal Reserve System (2002)]. The same span saw possession of lines rise from 24 percent to 34 percent of the small business population. Forty-one (41) percent have loans, lines or leases with commercial banks; another 22 percent have them with a finance company, such as GE Money or General Motors Acceptance Corporation Financial Services (GMAC), 6 percent from family and individuals, and 1 percent from government. The amount outstanding extended by depository lending institutions, primarily banks, was \$654 billion as of June, 2006 [Small Business Administration (2007)] compared to \$333 billion in June, 1996 [Small Business Administration (1997)]. That represents a 50 percent increase after inflation. The amounts lent by finance companies likely also continued to grow, though the amount cannot be quantified. However, finance companies provide about 50 percent of the amount that commercial banks supply [Board of Governors of the Federal Reserve System (2007a)] suggesting a total of about \$325 billion. Thus, credit extended to American small business from all sources in 2006 approximated \$1.1 trillion.

## **2 Change in Small Business Access to Credit**

The more immediate issue for purpose of this discussion is access, and it is clear that most creditworthy small businesses have access to credit when they want it. For example, a survey conducted across a nationally representative sample of small employers in early 2006 reports that 48 percent did not want or did not need to borrow in the prior three years [NFIB Research Foundation (2005b)]. Of the remaining 52 percent, 31 percent were able to satisfy their borrowing needs all of the time. Seventy-eight (78) percent of those who could not satisfy their borrowing needs all of the time had their last loan application accepted. That translates into 9 of 10 small employers who wanted a business loan during the last three years having their most recent request approved.<sup>4</sup>

The Survey of Small Business Finances (SSBF) compiled three years earlier by the Federal Reserve yielded similar numbers. Eighty-seven (87) percent who applied for new credit once during the base period had their application approved [Board of Governors of the Federal Reserve System (2007a)]. Sixty-five (65) percent who applied multiple times had them all accepted and 17 percent had some accepted. Those figures are modestly higher than they were in the prior SSBF conducted five years before [Board of Governors of the Federal

---

<sup>3</sup> “Small business” in the present discussion is confined to small employers and to those whose primary economic activity in a year is self-employment. Excluded are the part-time operations that numerically constitute about half of the population.

<sup>4</sup> A monthly survey of association members (National Federation of Independent Business) shows similar accessibility. Averaging monthly data between July 2007 and the present yields 34 percent who satisfied all borrowing needs over the prior three months compared to 5 percent who did not [NFIB Research Foundation (series a)]. The nearly 7 to 1 ratio means that 87 percent of those wanting to borrow satisfied their needs. Loans have been increasingly difficult to get compared to the late 1990s and 2002-2004, but it is principally a cyclical phenomenon where deteriorating balance sheets make relatively more small business owners less interested in borrowing and less financially able to do so.

Reserve System (2007a)]. The data in all three sets indicate that credit is widely available to small businesses when their owners apply for it.

The principal difference in the surveys sponsored by the National Federation of Independent Business (NFIB) and the Federal Reserve is that the latter explored a group not applying for fear of denial. The SSBF found 18 percent in 2003 claimed to be discouraged as 25 percent had been in 1998. The first survey's data do not address the matter. However, recent research shows owners' fears of denial are exaggerated [Cole]. A careful analysis suggests that a significant portion of the discouraged would be successful if they only applied. As a result, including discouraged borrowers in the assessment changes the overall pattern little.

Neither study directly addressed the creditworthiness of the borrower/potential borrower. However, those most likely to have their applications rejected were owners of newer and smaller firms, a profile of riskier borrowers. For example, firms less than five years under current ownership had a Dun & Bradstreet average score of 44 compared to a 61 for those under current ownership of 25 years or more [Board of Governors of the Federal Reserve System (2007a)].<sup>5</sup> More to the point, those who had at least one loan rejected had an average credit score of 32 compared to 56 for those who applied and had all applications accepted [Board of Governors of the Federal Reserve System (2007a)]. While credit score averages do not prove that credit was unreasonably denied to at least some small business borrowers, they strongly suggest that owners who experience denial are likely not to be creditworthy.<sup>6</sup>

Documentation of trends in small business access to credit is difficult to find. The two available longer time series are both produced from membership samples by NFIB.<sup>7</sup> The first covers the period between October 1974 and July 2008 on a quarterly basis [NFIB Research Foundation (series a)]. Exhibit 1, drawn from those data, shows the percent of owners citing finance and interest rates, inflation, and poor sales as the single most important small business problem out of 10 potential problems from which survey respondents could select. Note that through the 1970s and early 1980s finance and interest rates drew a significant number of responses as the single most important problem. Since then, finance and interest rates as the single most important problem has fallen into the low single digits.

The second series is more on point, but reaches back only to 1982 [NFIB Research Foundation (series b)]. The series, conducted irregularly between 1982 and 2008, asks survey respondents to rate the severity of 75 potential small business problems. Two problems appearing on the survey are: obtaining short-term business loans (less than one year or revolving) and obtaining long-term business loans (five years or more). Note the trend of both problems in Exhibit 2. The slope from 1982 to 2008, over seven data points and 26 years, demonstrates a significant and progressive easing of the credit access problem. The 2008 data shows short-term credit the 72<sup>nd</sup> most important problem out of 75 and long term credit 73<sup>rd</sup>.

Non-quantitative evidence also argues for increasing ease of access to credit over time. For example, the U.S. Small Business Administration (SBA) was effectively established as a public lender for small businesses, particularly small manufacturers. Since its creation in the early 1950s, the agency's mission has broadened and shifted away from

---

<sup>5</sup> Dun & Bradstreet scores businesses from 0 to 100 with 100 the highest and 0 the lowest.

<sup>6</sup> The Government Accountability Office (GAO) conducted a lengthy review of the economic literature and empirical evidence for credit rationing and discrimination in the conventional lending market. It concluded that "Limited evidence ... suggests some small businesses may face constraints in the conventional lending market, but *this evidence* – which dates from the early 1970s through the early 1990s – *does not account for recent developments that have occurred in the small business lending market*" (author's italics) [Government Accountability Office, p. i.].

<sup>7</sup> The Federal Reserve's Survey of Small Business Finances is also a time series, but the survey was conducted just four times in the 16 year period from 1987 to 2003. A 2008 edition was cancelled.

lending exclusively, reflecting the changing problem set of small business and the improved access to private credit markets.

None of this incorporates the empirical evidence related to financial services deregulation and credit scoring that will be reviewed later. Much has been written about small business credit issues in response to consolidation of the banking industry and finance innovation. Its consensus is that small business access to credit has grown significantly as a result of recent developments, though debate continues over future access and access of certain geographic, demographic, and market populations. Foremost is evidence of discrimination against black business owners, though not necessarily other minority groups or women, *ceteris paribus* [Blanchflower, et al.; Cavalluzzo, et al.; Cole] and inherent difficulties handling certain groups such as innovators [Freel].

### **3 Causes for the Change in Credit Access**

Three major changes in the American financial system over the last 30 years or so increased small business access to credit and, in combination, are likely responsible for it. The changes are: deregulation of the financial services industry, principally banking; development of information technology; and finance innovation, most notably credit scoring. The three stimuli overlap in time, making it difficult to untangle cause and effect. Moreover, the three are on-going, though it is likely that the direction of at least one (deregulation) will be reversed. For purposes of this exposition, however, the three change stimuli follow the approximate sequence listed above and each plays a critical role.

#### *Deregulation of Financial Services*

The financial services industry in the United States was extensively regulated into the 1990s by legal refugees from early in the century. Three legal boundaries stood out: the McFadden Act of 1927 limited the geographic scope of financial institutions to states (no branching across state lines) and allowed the states (many did) to limit banks within their jurisdictions to a single location (unit banking); second, the Glass-Steagall Act of 1933 legally separated financial services into three separate industries – commercial banking, investment banking, and insurance; and third, Glass-Steagall required the Federal Reserve to establish a rule best known as Regulation Q which placed a ceiling on the interest rates commercial banks could pay for demand deposits. Commercial banks, as a result, often purchased government bonds or similar highly secure investments with rate-controlled demand deposits, resulting in guaranteed bank profits, few local loans, and toasters as incentives for new accounts.

Formal dismantling of this regulatory structure began with the Depository Institutions Deregulation and Monetary Decontrol Act of 1980 and was largely completed with Gramm- Leach-Bliley in 1999, 20 years later.<sup>8</sup> Deregulation proceeded in fits and starts over the period and remnants of the old structure remain. But, until the recent sub-prime debacle, some might argue the Enron-stimulated Sarbanes-Oxley, the regulatory direction has been clearly towards freer market

#### *Consolidation of the Industry and the Loss of Small Banks*

An immediate consequence of deregulation and the resulting increase in competition within commercial banking was consolidation of the industry. Exhibit 3 shows the decline in FDIC-

---

<sup>8</sup> A related deregulatory step proved hugely beneficial to the venture capital industry. In 1979, the U.S. Department of Labor altered the “prudent man” rule. The former rule held fiduciaries responsible for the safety and soundness of individual investments in a pension or insurance portfolio. The revision held them responsible for the portfolio of investments. Thus, higher-risk, higher-reward investments such as venture capital investments were not automatically excluded from pension and insurance portfolios.

insured community banks between 1985 and 2003, a period roughly corresponding to deregulation [Critchfield, et al.].<sup>9</sup> The number of community banks, not branches, fell from 14,351 to 7,337 in less than two decades; the decline continues. Most of the reduction came from mergers and acquisitions, few from failures.

Despite the overall decline, the number of new (de novo) bank entries was significant. Over the 18 years covered in Exhibit 3, 2,458 new banks were created and began operations, an average of about 135 per year. Between 2001 and 2007, a total of 798 were added with 96 percent still in business as of September 2007 [Critchfield and Yom]. The frequency of entry proved irregular, their numbers directly associated with the business cycle. Many of these de novo entries targeted the small business market, particularly in areas that had recently undergone a wave of mergers and acquisitions [Berger, et al. (2004); Seeling and Critchfield].

The extent and speed of this consolidation caused considerable angst among small business owners and their advocates. Small banks had more loans outstanding to small businesses per dollar of assets than did large institutions [e.g., Williams and Ou]. In addition, relationship lending offered many small business borrowers a level of comfort and security that impersonal large banks typically did not [Scott]. So, if small banks were driven from this newly competitive market, what would happen to small business access to credit? This question was central to small business interests throughout the 1980s and 1990s and lingers to the present [Ou].

The fear has proven unfounded to date. A voluminous literature has appeared exploring bank consolidation and small business lending. And, while scholars continue to probe the impacts of consolidation and the associated volatility of local credit markets in response, overall lending did not decline [e.g., Avery and Smolyk; Berger (2006); Jayaratne and Wolken; Scott]. If anything, it tended to rise, though the wake of consolidation created temporary disruptions that greatly annoyed a substantial subset of affected owners [Scott, et al.]. The future appears little different. With a continuing stream of de novo bank entry, incessant personnel turnover in large institutions, a demand for soft information, and a frequent preference for relationships, smaller banks, though perhaps not the very smallest, can remain viable competitors in the small business market. One observer went so far as to assert that barring any new shock to the industry, it seems likely the U.S. banking will develop “an eventual balance ... between the number of new-bank startups and charter losses through mergers and acquisitions with little net change in banking organizations nationwide” [Hanc, p. 18]. Not all would agree

### *The Competition Result of Deregulation*

Financial services deregulation led to much greater competition for small business's banking business. Owners felt the impact in the early 1980s and still do. When asked whether competition is greater today for their banking business than three years ago, a substantially higher proportion reported more competition for their banking business than reported less [Scott, et al.]. Equally important, the percentage reporting more competition increased steadily from the first measuring point in 1980 to the sixth and most recent measuring point in 2001. In 1980, a net 8 percent reported “much more” or “more” competition (net of those reporting “less” or “much less”) for their banking business than in the prior three years compared to 68 percent who reported no change in it (Exhibit 4). Twenty-one years later, a net 33 percent reported more competition while 45 percent reported no change. A different

---

<sup>9</sup> The Federal Deposit Insurance Corporation (FDIC) insures demand deposits in commercial banks up to \$100,000. Virtually all banks are insured by the FDIC. Community banks are those with less than \$500 million in assets, hence small.

sample reported even more competition in an early 2006 survey [NFIB Research Foundation (2005b)].<sup>10</sup>

The other side of the table also perceives greater competition. Annual surveys of community bankers by the consulting firm Grant Thornton between 1994 and 2003 indicate greater competition from all types of competitors, the most significant being other community banks [Critchfield, et al.]. For example, 55 percent thought that credit unions were competitors in 1994, but 68 percent did in 2003; 33 percent thought megabanks or regional banks were competitors in 1994 versus 49 percent in 2003; the comparative numbers for mortgage companies was 21 percent and 48 percent. While these data do not focus on competition for small business's business, they testify to heightened level of competition within the financial services industry.

The implication of greater competition resulting from deregulation is greater access to credit, more tailored financial services, etc. Competitive pressure forced commercial banks, particularly large banks, to find new markets and small business was a new market. But the effect compounded. Deregulation-caused greater competition also helped spawn a series of subsequent financial innovations which likely would not have been possible under the prior regulatory structure. Thus, the total impact was broader than the immediate increased competition it generated.

Arguments were also put forward for deregulation's impact by associating it with other factor outcomes for small business. Greater credit access is implicit in them, but not the measurable outcome. For example, Black and Strahan concluded that deregulation had a positive impact on entrepreneurship defined as new business formation (incorporations) by comparing states at different points as they were deregulating to the growth in new businesses [Black and Strahan].<sup>11</sup> A variant examined the generally positive association of bank consolidation (presumably caused by deregulation and the ensuing competition) and firm formation; the exception was the first two years following a consolidation of large banks [Francis, et al.]. A second positive impact of deregulation stemmed from decoupling credit flow and local/state economic conditions. Freer capital movement provided a type of cross-state insurance that made small business owner income considerably less sensitive to output shocks [Demyanyk, et al.]. A corollary is that greater access allows small business owners to smooth income occurring when cash flow shocks occur [Hoffman and Shcherbakova]. More reliable markets make credit more available when small business owners need it most – in recessions. Effectively, these studies argue that deregulation helped smooth the rough edges of credit markets for small business across space and time.

### *Technology*

Technology undermined the old regulatory structure and gave a major economic and political impetus to deregulation. More advanced means of communication (prior to the personal computer and Internet) made it relatively simple for wealthy Americans to avoid geographic and interest rate regulation by putting their money abroad or increasingly in non-bank banks.<sup>12</sup> So, as the industry grew more competitive with the circumvention and eventual breakdown of the old regulatory structure, a premium fell to those institutions that rapidly and effectively employed modern information technology.

---

<sup>10</sup> The reasons often cited for belief in more competition included: more mail solicitations and advertising (74%), more products and services targeted to small business (65%), receipt of more phone calls soliciting their business (65%), and more in-person solicitations (57%) [NFIB Research Foundation (2005a)].

<sup>11</sup> Wall challenged the Black and Strahan results on methodological grounds. His estimates based on a different methodology produced mixed results [Wall]. The author is dubious of studies associating financial services deregulation with the growth of new business formations because of the data typically used as dependent variables (new formations).

<sup>12</sup> Banks were defined as taking deposits and making loans. A non-bank bank did not take deposits, but made loans. A finance company is a reasonable proxy for one.

The financial services industry as we know it is inconceivable without information technology. But information technology means more to small business owners than checking balances and transferring money from one account to another. Rather, it revolutionizes the concepts of distance and time in the banking relationship. While small business owners with cash needs may still prefer to be located near a bank (branch), proximity is no longer necessary to obtain many other bank services, including application for and receipt of credit.

About half of small business owners bank on-line [Board of Governors of the Federal Reserve System (2007a); NFIB Research Foundation (2005b)]. The portion applying for loans or credit over the Internet in the prior three years more than doubled between 1998 and 2003 to about 13 percent [Board of Governors of the Federal Reserve System (2007a)]. That leaves a substantial majority who apply in more traditional ways. The size of firm and industry of the business has no association with on-line application; only years of ownership is related, and then negatively. However, on-line applications are likely to grow if for no other reason than younger owners who are more comfortable banking on-line will eventually transplant older ones who are less comfortable with it.

Increasing distance and impersonal communication in the banking relationship is becoming more common [Petersen and Rajan]. Small borrower distances increased between 1984 and 2001, the change accelerating toward the end of the period [Frame, et al. (2001)]. Petersen and Rajan argue that the reason is not associated with small businesses per se, consolidation of the banking industry, nor even sample bias in survey studies; rather it is bank productivity brought on by technology [Petersen and Rajan]. Technology allows banks to analyze potential credits more easily and interact with customers more rapidly. As a result, small business owners are no longer governed by distance in the banking relationship. They are not effectively compelled to use the bank (and accept its terms) next door or even the one down the street. Institutions thousands of miles away can compete for their banking business.

One important consequence of increased distance is that small business owners in underserved areas, such as inner cities and very rural areas, have more options. Historically, the borrower/lender distance was shorter in underserved areas. In 2000, the situation reversed itself [DeYoung, et al. (2007)]. The relationship became more distant in underserved areas, indicating that small business owners in those places used technology to escape the confines of their geography.

Expanded distance (hence competition and opportunities) is not just a function of technology, though technology is an essential ingredient. It occurred coincident to the development of credit scoring about which more will be said later. But while distance created opportunities, it also created problems. Greater distance was associated with higher default rates [DeYoung, et al. (2006)]. Borrowers were more difficult to assess and monitor from afar. The soft information that was often critical to lending decisions was local information. Local information was not likely to be available to distant lenders [Agarwal and Hauswald]. So, distance bears a special cost, though the rising cost is likely to flatten and remain almost constant beyond a certain geographic radius.

Note that expanded distance is not principally a function of Internet banks. Internet banks play a very limited role. Community bankers, for example, consider Internet banks modest competition compared to other lenders [Critchfield, et al.]. And, the model is questionable for making small business loans. Internet banks' costs of acquiring customers are high as are their cost of funds; moreover, they cannot build customer loyalty nor alleviate information asymmetries more than their competitors [Yom]. Thus, the small business source of Internet banking is principally the Internet arm of conventional banks or institutions such as finance companies, lying outside the immediate area.

### *Finance Innovation*

Small, privately-held businesses are typically opaque. When small business owners attempt to borrow for an opaque business, there is information asymmetry between the potential borrower and the potential lender [Stiglitz and Weiss]. The potential borrower simply knows much more about the financial health of and prospects for the firm than does the potential lender. Without public and/or audited records, the potential lender relies on the potential borrower for much of the information needed to underwrite the loan. The reliability of this information is often suspect with the greatest incentives to “fudge” possessed by those with the weakest condition. These circumstances made traditional small business lending more an art than a science and caused bankers to exercise caution in lending to small business owners.

Lenders traditionally attempted to penetrate the shadows with relationships. The better a lender got to know a potential borrower and the business, the more likely the risk of a loan would be properly evaluated and an appropriate decision made. But relationships are time-intensive and therefore expensive. When the loan amount, and hence the lender’s expected profit is small, lenders are reticent to enter the transaction. This appears particularly true in large banks. Lenders have a corollary problem. The lack of firm transparency means decisions are subjective by necessity.<sup>13</sup> Subjective decisions lead to the lack of lending uniformity within the same institution. Non-uniform decisions favor some and discriminate against others. The racial and ethnic implications are obvious; less obvious and difficult to measure is bias against unorthodox business models and strategies.

### *Credit Scoring*

The most significant financial innovation for small business over the last several years is credit scoring. Credit scoring is a mechanical process that uses a prospective borrower’s credit history to forecast the likelihood that the borrower will repay the loan in a timely fashion. The principal scoring model now employed was developed in the early to mid-1990s by Fair, Isaac and Company which now leases it to financial institutions, large and small. The firm’s Small Business Scoring Service now has several models that score various credits in various ways, for example, loans, lines, scoring with limited data, and scoring by credit size. Some institutions like Wells Fargo, have their own proprietary models [Berger and Frame]. Most importantly, the forecast results of these models appear quite accurate. The Federal Reserve recently filed a report with the Congress asserting that credit scoring was predictive of credit risk for the population and all major demographic groups [Board of Governors of the Federal Reserve System (2007b)]. While the report did not address small business per se, the personal credit record of many small business owners is effectively the credit record of the business [Berger and Frame; Cowan and Cowan; Eisenbeis].

Credit scoring was not new in the 1990s. It had been used for years in consumer lending. The impetus for scoring small business loans came from research showing that the creditworthiness of a small business was critically linked to the creditworthiness of the individual for loans of less than \$100,000 [Berger and Frame; Eisenbeis]. Once that association between the individual and the business was made, the opacity of small business had been breached. Credit scoring could be a powerful tool to streamline credit reviews. At the time, the Vice President for research at the Philadelphia Fed wrote, “Scoring has the potential to be one of the factors that change small business banking as we know it” [Mester, p. 14]. Today, credit scoring is used by large banks around the world and even by some small banks in the U.S.

---

<sup>13</sup> An associated problem is personnel turnover in the banking industry. Small business owners, while generally giving their primary bank passing to good marks on recent service changes, give them dismal marks on personnel turnover [NFIB Research Foundation (2005b); Scott, et al.]. Personnel turnover increases transaction costs and non-uniformity in banking decisions among other negatives.

The transparency issue traditionally meant small business loans were associated with small banks and relationship lending. Credit scoring allowed large banks to move into the small business loan market in a big way. A survey conducted across 99 large banks by the Atlanta Fed in the late 1990s showed 63 percent using credit scoring on small business loans and another 11 percent planning to implement scoring in the next year [Berger and Frame]. All who scored used it for commercial loans of less than \$100,000 and 73 percent used it on loans of less than \$250,000. Smaller banks are much less likely to employ credit scoring with the size of bank directly related to the propensity to score. Cowan and Cowan found 53 percent of their small bank dominated sample not using the technique [Cowan and Cowan]. Officials at smaller banks offered a number of reasons for their action including: loans do not lend themselves to scoring, lack of confidence in credit scores, low loan volume, expense, and customer resistance.

Banks use credit scoring for different functions. Forty-two (42) percent of credit scorers in the Atlanta Fed survey are known as “rules” banks, that is they use credit scores to make the accept/reject decision [Berger and Frame]. Another 32 percent, “discretion” banks, use credit scores to set loan terms. A non-mutually exclusive group uses it to monitor loans that have been extended. The Cowan and Cowan survey found the principal use of credit scoring after underwriting was periodic reevaluation of existing loans followed by loan monitoring and risk-based pricing. Still, less than 20 percent of scoring banks used it for risk based pricing compared to over 30 percent among those with over \$1 billion [Berger and Frame].

Berger and Frame conclude that “The extant literature strongly suggests that SBCS has increased small business credit availability in a number of dimensions...” [Berger and Frame, p. 17]. One study, for example, estimated credit scoring resulted in an 8.4 percent increase in portfolio share of small business loans or \$4 billion per bank across the 200 largest banks in the country [Frame, et al. (2001b)]. Another pointed out that the increases were about seven times larger in low and moderate-income census tracts examined than they were in the higher-income tracts examined [Frame, et al. (2001a)]. Berger and Frame further think that credit scoring has increased lending to relatively opaque, riskier borrowers, increased lending to low-income areas, increased distance in lending, and increased loan maturity [Berger and Frame]. In-bank uniformity also increased making banks, borrowers, and regulators happy. And, small loan processing became more efficient; a high official at Wells Fargo told the author that credit scoring allowed Wells to cut the administrative steps to approve a small business loan from nearly 50 to 2, increasing decision speed if nothing else. More information collected about borrowers should also reduce loss rates which in turn should lower credit prices. So, credit scoring seemed to offer benefits on all fronts.

Yet, credit scoring did NOT lower price. Rather it increased price in both “rules” and “discretion” banks [Berger, et al. (2002); Cowan and Cowan]. One reason is that discretion banks both score and underwrite in the traditional manner. Two costs are incurred (and passed on) rather than one. A second reason is increased credit availability to relatively risky borrowers of less than \$100,000 [Berger and Frame]. Credit scoring banks, notably rules banks, are effectively cross-subsidizing the risk of relatively small, small business loans by making highly creditworthy firms borrowing small amounts subsidize relatively poor risks. That should not happen if loan terms are associated with risk. But one banker intimately involved told the author, she was concerned because so many “amateurs” in the business failed to adjust terms for risk. The learning curve within the industry and within institutions is very high [Berger, et al. (2002)]. Scoring did not lower the default rate, either. Along with distance, credit scoring is associated with higher default rates [DeYoung, et al. (2006)]. Higher default rates occur because scoring allows banks to offer credit to more marginal

borrowers. Thus, the practical downside of credit scoring, or the trade for greater availability, is higher price for the borrower and more frequent default for the lender.

Credit scoring is not possible without an efficient and accurate infrastructure that provides reliable and comprehensive data to calculate credit scores. The United States relies on four principal data providers: Dun & Bradstreet, Experien, Equifax, and Trans-Union. All are private. As evidence of its scope, the number of businesses on which D&B maintains business credit records has grown over six percent annually during the last three decades, 2½ times as fast as the economy has grown [Rajan and Zingles]. Coordination is as important as expansion. For example, D&B has an alliance with Fair Isaac to develop credit scoring for larger credits (up to \$10 million) while Equifax maintains data for the Small Business Finance Exchange, a non-profit of 23 of the top 25 small business lenders [Berger and Frame]. The purpose of the Exchange is to pool information to reduce fraud by those who would take out multiple loans from multiple sources at the same time.

The records of these credit bureaus must not only be expansive, they must be accurate. Each year they record billions of transactions; mistakes inevitably occur. Forty (40) percent of small business owners claim to have checked their business credit record within the last year and 64 percent their personal credit record [NFIB Research Foundation (2007)]. About one-quarter of each group found errors and complained. Most who complained were satisfied with the response to their complaints, but their experiences suggest that the system cannot work well without owners' continuing attention.

### *Securitization*

“Securitization is the term used to describe the process of issuing securities backed by cash flows from a pool of underlying assets” [Barth, et al. (2005), p. 12]. Theoretically, those assets can be anything that generates cash flow. But as a practical matter, they are dominated by home mortgages (housing) with a notable share backed by credit card receivables. The first mortgage cover-bond market appeared in Prussia in 1769, though the modern version first appeared in the United States in 1970. Subsequently, the market for mortgage-backed securities expanded rapidly as the implicitly government-backed Federal National Mortgage Association (Fannie Mae) and Federal Home Loan Mortgage Corporation (Freddie Mac) gobbled them up from private lenders. By 2004, this financing method had become so ubiquitous that \$4.7 trillion of such securities were held throughout the world [Barth, et al. (2005)]. Yet, for all intents and purposes, securitization was not available to support small business lending.<sup>14</sup>

In the early 1980s, small business advocates and financiers began to seriously discuss eliminating legal impediment to the creation of small business loan-backed securities and creating a secondary market to sell them [National Federation of Independent Business]. Several practical issues arose, the most important being the economic viability of such securities without some type of direct government subsidy or guarantee. Subsequently, a serious proposal was put forward by the Chairman of the Small Business Committee of the U.S. House of Representatives to create a Fannie Mae-type, government-sponsored corporation, known as Velda Sue,<sup>15</sup> for the purpose of purchasing small business loan-backed securities. The proposal gathered little support. But as part of the general deregulatory mood of the time, the Riegle Act of 1994 attempted to remove the legal obstacles to securitization of small business loans and commercial mortgages. Six years later, the Board of Governors of Federal Reserve and the U.S. Securities and Exchange Commission declared that there were

---

<sup>14</sup> A secondary market for SBA loan guarantees was created in 1975. But the government guarantee served as a critical credit enhancement. SBA also had the advantages of standardization and volume.

<sup>15</sup> Velda Sue is the shortened name for the Venture Enhancement and Loan Development Administration for Small Undercapitalized Enterprises.

no remaining impediments to securitization of small business conventional loans that required additional legislative or administrative actions [Board of Governors of the Federal Reserve System (2000)]. Still, experienced observers often thought that widespread securitization as an effective financing mechanism lay well in the future [Mester].

Inherent difficulties dogged small business securitization from the beginning. Securitization implied reasonable loan standardization, adequate volume, and transparent borrowers. Small business loans are not standardized, frequently originate in small institutions with modest volume, and are often manually underwritten through relationship lending. Overcoming those barriers often meant too little return for the investor and/or too high a price for the small business borrower. Credit scoring provided a major break by reducing the transparency and standardization issues.

Securitization offered promise and the potential of completely changing lending practice [Yellen]. A market for conventional small business loan and commercial mortgage-backed securities slowly emerged. But by 2003, Wachovia Securities, while promoting the concept to investors, admitted the market in securities backed by conventional small business loans was still small and had a limited number of players [Koren]. Most deals remained private placements. Still, with the exception of 1999, between 1996 and 2002 securitization of conventional loans outstripped SBA guaranteed loans. Regardless, the market had little momentum. Moody's reported no more than \$5.6 billion in it for 2006 [Board of Governors of the Federal Reserve System (2007a)] and the Federal Reserve's 2007 report to Congress concluded, "... there is little on balance, to suggest that the securitization of non-SBA loans will become an important component of small business financing in the foreseeable future" [Board of Governors of the Federal Reserve System (2007a), p. 62]. Then, the sub-prime housing (mortgage) securitization debacle hit.

## **4 The Banking Industry**

Every country has its own banking structure. So, to compare the output of one banking system to another requires context. Context, in this instance, is a very brief description of the American banking system compared to others in the developed world.<sup>16</sup>

The American banking system is characterized by a large number of banks; open entry; few financial assets in banks compared to the country's total financial assets; restricted powers, including the inability to hold non-financial firms;<sup>17</sup> and deconcentrated bank assets. These are, of course, all relative. Many of the differences can be striking, however. Take the number of banks per 100,000 people. Japan had 0.11 banks/100,000 capita in 1999; Canada had about twice that number; the U.K. about one, Sweden almost two, the U.S. over three, and Germany almost four. Or, take bank assets relative to total financial assets: U.S. banks had somewhat less than 20 percent; Swedish banks about twice that amount; Japanese and Canadian banks held over 40 percent; those in the U.K. over 50 percent; and, in Germany over 60 percent. Finally, in terms of banking powers: Germany, Canada, and the U.K. fall to the broad powers end of the scale; the U.S. and Japan toward the narrow end with Japan more toward the end than the U.S.; Sweden falls more toward the middle, but closer to the former group. Comparing more visible aspects of the business, one observer contrasted the American banking system to its northern neighbor's as having a large number of depository financial institutions (not to be confused with branches); a lack of nation-wide branching; a significant use of checks and mail-based payments; restrictions on

---

<sup>16</sup> The data for the comparison are drawn principally from a report prepared for U.S. Office of the Comptroller of the Currency [Barth, et al. (2002)]. They were compiled for year 1999. Hence, they are generally reflective, but do not allow for recent developments.

<sup>17</sup> This changed somewhat with the passage of Gramm, Leach, Bliley in 1999 giving banks more powers.

corporate checking accounts; unbundled pricing of banking services; arms length relationship between banks and customers; and involvement of the central bank in processing payments [Masson].

The upshot is that while the American small business owners often feel overly dependent on banks, it appears that they are less dependent on them than those in other developed countries. Two points are particularly relevant in this regard: the comparatively small proportion of financial assets held by banks and the bank-customer arms-length relationship. The former means potential financing for American small business owners and prospective small business owners should be comparatively available from non-bank sources; the latter means banks cannot own an interest in a business. Lesser dependence on banks may help explain the Global Entrepreneurship Monitor's (GEM) finding that the early stage entrepreneurship activity (TEA Index) rate is much higher in the U.S. than in Western Europe and Japan [Minniti, et al.].<sup>18</sup> It could also help explain why American banks, most noticeably large banks, have recently "found" small business as a customer worth competing for.

## 5 Implications

The foregoing discussion raises a series of questions and implications directly relevant to public policy and practice.

### *Measuring Access to Credit*

The author recently attended the 2008 International Council for Small Business (ICSB) conference in Halifax and sat in on a session where a Swedish presenter mentioned in passing that access to credit and finance was a big problem for Swedish small business owners. At question time, the author asked the presenter what evidence he had to support his contention about credit access in Sweden. 'It is common knowledge' the presenter replied dismissively and moved to the next question. The presenter may have been correct, both in that difficult access to credit for small business is common knowledge (perception) and more importantly that common knowledge is accurate. But if access to credit is an important (potential) problem for small business, there should be measurable evidence to that effect. And, to ensure the current condition is not an anomaly or an artifact of a unique event or period, that measurable evidence should be gathered at more than one point in time.

This is not the venue for an extended discussion of an optimal data set that provides useful, contemporaneous evidence on small business credit access. But a few observations are appropriate: the definitions of small business, credit, and access are critical in any measurement effort. They influence cost, data collection methods, and capacity to examine access for groups within the overall population. The frequency of data collection not only shapes the ability to respond to changes in immediate conditions and public interest, but it also influences information quality and cost. The key in this regard is not the size of the interval; rather it is the fact there are intervals, that is, longitudinal data. There are also data collection and distribution issues. Cost issues for both public and private entities always intervene. Trade-offs are required and the perfect can never become the enemy of the good. But, if small business access to credit is important, and it is, there should be some measure of the phenomenon and it should be charted over time.

Measurement of course does not address the "complex" issue: what is the proper amount of small business lending [Rosen]? Or, what constitutes "access"? Since credit quantity begins

---

<sup>18</sup> Banks are fiduciary institutions, making it difficult to lend to customers starting firms. Relatively more capital therefore becomes available for starting businesses in locations where relatively more financial assets lie outside the banking system.

to adversely affect credit quality at some point, increased access implies increased risk; increased risk eventually becomes unacceptable risk, even for non-fiduciary lenders. For this reason, access can never be total (100 percent). Some small firms and/or their owners will be and should be credit constrained. The appropriate size of the constrained population is therefore a subjective concept, a matter of interpretation and debate. Yet, that debate should be grounded in measurement rather than anecdote.

### *Publicly Subsidized Loans*

The development of credit scoring raises a critical new dimension to the traditional policy question of: for whom and under what circumstances, if any, should government offer subsidized loans (including guarantees) to small business borrowers? And, it elaborates on the traditional question by asking: should persons/firms with good credit scores receive a subsidized loan?

The implicit assumption in publicly-financed small business lending programs, save those instituted for social purposes, is that the market cannot finance creditworthy borrowers; hence, a subsidy is required to provide small business owners access to adequate credit. It is a market failure argument. Credit scoring reduces and often eliminates it. The reason that small business lending has traditionally been so difficult is the opacity of small, private firms. Opacity gives borrowers a huge advantage over lenders because they know so much more about the condition of their firms (information asymmetry) [Stiglitz and Weiss]. However, credit scoring reduces much of that information asymmetry thereby allowing lenders to determine the creditworthiness of a small business borrower with reasonable confidence. When the bank lends and lends with reasonable confidence, the market failure argument erodes rapidly. Reduction/loss of the principal market failure argument demands a reassessment of publicly subsidized finance programs.

The issue is not abstract. A contrast of policy results difference appears in the primary small business lending programs in the United States and Canada. The American Government Accountability Office (GAO) reported “limited differences” in credit scores between small business owners that accessed conventional credit and those subsidized through the 7(a) loan guarantee program, the principal SBA finance scheme [Government Accountability Office]. The difference in scores between the two groups averaged only 1.7 percentage points per rating band. Though SBA challenged GAO calculations, SBA’s own calculations show over two-thirds of 7(a) recipients as low (not even moderate) risk. The situation in Canada appears different, though the same questions are applicable. Riding et. al. found a high likelihood of bank rejection for those in the Canadian Small Business Financing (CSBF) program, though the authors argue subsidies have relevance beyond the accept/reject decision [Riding, et al.]. Should and will these creditworthy borrowers, more in the U.S. and fewer in Canada, continue to be granted government subsidies?

### *Competition Policy or Anti-Trust*

Bank consolidation or mergers and acquisitions have raised considerable concern in the United States about its effects on small business [Ou]. Though highly relevant to the United States, the matter appears much less so to most other developed countries; many have just a few banks that are already quite large. However, individual European countries ceding regulatory authority of their financial institutions to the European Union may require a change in that assessment [Degryse].

The Internet, credit scoring, and other innovations have changed “distance” in small business lending. Changed distance raises a corollary issue: what is a market for purposes of competition policy or anti-trust? This question has been raised on a number of prior occasions [e.g., Petersen and Rajan], but remains relevant.

The difficulty assessing the lender competition problem from a small business perspective is that distance between the two is growing sometimes, but not all the time, and likely less often than not. Technology has changed bank market areas. But it is not clear how much and how often technology has changed bank market areas as they impact small businesses. So long as a loan application is self-evident, distance generally is not an issue (except to many regulators and small banks); distant as well as local lenders compete for the small business owner's business. But when the loan becomes more difficult, distance matters because soft information is likely requisite for a decision, let alone for reasonable risk adjusted terms. A local financial institution has a much greater advantage obtaining soft information about a borrower [Agarwal and Hauswald]. In these instances, the market reverts to a more traditional size. Distance again matters.

The small business borrower's situation and need dictates relevant bank market area, at least for borrowing purposes. Given the variety of borrowing situations therefore, change in the size of bank market areas may be more academic than real for all but a handful in the small business population. Still, the question is worth pursuing and one which regulators should watch carefully.

### *De Novo Banks*

Open entry and de novo banks appear critical to ensuring small business access to adequate supplies of credit in the U.S. [Hanc]. These institutions emerge where small business owners seem most dissatisfied, that is, in the wake of mergers and acquisitions [Berger, et al. (2004); Seeling]. Their youth is also associated with relatively greater proportions of small business customers [Berger, et al. (2004); Berger, et al. (2001); DeYoung, et al. (1999)]. De novo banks further help balance the loss of older institutions. It is possible, but not clear, that they also infuse the destabilizing market innovations that typify entrants in other industries.

Europe faces many of the same consolidation issues as a result of the EU Financial Services Policy that the U.S. recently faced. However, de novo entry, a frequent small business cushion following American mergers and acquisitions, is far less frequent in Europe [Degryse, et al.]. For example, Sweden, though a small country with a reasonably concentrated banking system, experienced about 30 de novo banks in a 15-year period between the late 1980s and the early 2000s, that averages only two a year [Nyblaeus]. French banking authorities oversaw establishment of just 11 de novo banks between 1995 and 2004, one bank a year for a much more populous country [Degryse, et al.]. Without a similar safety-valve, whether de novo banks or something else, European small businesses may find access restricted [Degryse, et al.]. This is especially true given the greater reliance on banks for financing than their U.S. counterparts.

The problem is how to encourage safe and sound bank entry, particularly when there has been little recent tradition of it. The standard response is flexible and reasonable regulatory requirements [Degryse, et al.; Hanc], deposit insurance [Hanc], perhaps even deposits by public entities.<sup>19</sup> Still, it is not clear that entry is associated with small business access to credit in markets outside of the U.S. The U.K. and Canada, for example, have relatively few banks and modest entry. Yet, small business access to credit appears not to be a problem in either [Bank of England; Path to Prosperity].<sup>20</sup> The time horizons involved largely moot any discussion of near-term impact of bank entry, but long-term impact is a question to consider.

---

<sup>19</sup> A De Novo Bank Forum sponsored by the Conference of State Bank Supervisors in February, 2008, in Arlington, Virginia, addressed many of these issues.

<sup>20</sup> Small business organizations in the United States (NFIB), Canada (CFIB), and Britain (Forum for Private Business) informally conducted a comparative three-nation credit survey during the late-1980s. In the study, never published, American small business owners fared better on access though much more so on price and collateral requirements than their counterparts in Britain or Canada.

De novo entry can also mean accepting foreign-owned bank entry in one's country. Many ignore this mode of entry in the American context because foreign-owned banks tend to target specific types of customers which are not small businesses and tend to be located only in money centers [Berger, et al. (2001)]. The result is no apparent discussion of their interaction with small firms. Countries possessing a smaller geography may encounter completely different situations. Or, it is possible that local market conditions might attract a foreign competitor(s) intending to target the small business market. The author is aware of one case of an American bank that had such an interest. But, that appears to be an isolated instance.

### *Experience and Shocks*

Credit scoring and the models on which it is based are relatively recent developments. As a result, they have not been subjected to a serious recession, such as the 1981-82 recession. What happens when they do, as they inevitably will? How well will the models work? And how well will institutions be able to work the models? No one knows and that is the heart of the question.

Scoring has a high learning curve within and across institutions [Berger, et al. (2002)]. So, bank reaction is likely to be sharp and blunt in the event of unanticipated scoring problems. Quick response is likely to be more pressing for "rules" banks. Since loan terms are less likely to be adjusted for relative risk in "rules" banks, the effect being cross-subsidize risk, scoring surprises are likely to result in reduced access for a class of borrower rather than for higher risk individual borrowers. The result would be a loss of access for good as well as poor small business risks, at least for a period. "Discretion" institutions, less dependent on scoring and with terms typically more risk adjusted, are likely to be more circumspect precisely for those reasons.

Similarly, Basel II allows reserve requirements in very large banks to be lower for that portion held in small business and retail credits. But the calculations determining small business and retail credits to be safer than other types of credits have been challenged by three economists at the Swedish Riksbank [Jacobson, et al.]. Not only are they not certain these groups offer better risks, but they cannot alter the groups to find reasonably similar ones that do. Moreover, large banks that adhere to the reserve requirements of Basel II will likely gain a competitive advantage in small business lending over large banks that do not; the same advantage is not likely compared to community banks [Berger]. Thus, the effect is to create a class of large banks incentivized to engage in small business lending and another group incentivized to do the opposite. The balance is not obvious. None of this implies doom, but it does suggest that banks and regulators should be highly sensitive to changes in scored loans and Basel II effects in real time. This is particularly true when the economy changes suddenly or slips into recession sharply.

A second experience-related element in credit scoring is also likely to emerge if it has not already. Cross-subsidization is how large banks in particular typically provide greater credit access to small businesses with credit scoring. One class of small businesses borrowing less than \$100,000, that is, better risks, appears to subsidize a second class of small businesses borrowing less than \$100,000, that is, poorer risks. This cross-subsidy cannot be a stable condition over the long term. At some point, a bank(s) will fully risk price its/their scored small business loans, lowering prices for attractive borrowers and raising them for the less attractive. Scored loans as a group therefore can be given relatively fewer borrowers or the bank will have to price risk more aggressively. Pricing risk on small loans is expensive, making small business loans less attractive. Hence, it is possible that the United States, and perhaps others as well, is passing through a phase in which scoring yields greater small business access to credit than it will when the scoring technology matures.

### *Moral Hazard and Migration of Securitization*

Industrialized nations issued \$27 trillion in securitized instruments between 1990 and 2004 [Barth, et al. (2005)]. The United States issued 82 percent of them followed by Germany and Britain with 3 percent each. The author is aware of no data specifically examining the national source of small business loan or commercial mortgage-backed securities, though it is highly likely that they are at least equally concentrated.

The initial promise of securitizing conventional small business loans and commercial mortgages has not been realized. While credit scoring makes securitization more feasible than a decade or two ago, securities backed by conventional small business loans recently appeared to have little momentum. All were private placements and no secondary market had developed.

It remains to be seen whether the sub-prime debacle is the death-knell for conventional small business loan-backed securities. Most likely any market for them will limp along with other securities supported by exotic assets, at least for awhile. But the idea remains as valid today as it was before the sub-prime problem. And, the moral hazard issue, while always present, is now out in the open.

Small business securitization could move in two directions. The first is that the American monopoly could be lifted. The crowd that sold hundreds of billions in securitization losses to investors are not likely to recapture their confidence and trust anytime soon, particularly on something unconventional like securities backed by small business loans. Perhaps origination of such products therefore will migrate elsewhere, principally to the benefit of small businesses in those countries. Many centers have the expertise to originate such securities and those that do not will be able to purchase it. But will there be an interest in light of recent events?

Given that Basel II grants large banks credits for holding small business loans, a second securitization model may evolve. Large banks may purchase small business loans that originate in small banks which receive no Basel II credit for them. Such transactions would benefit both sides. The model has been used before [Berger and Udell]. The deals must be carefully structured between compatible banks with close working relationships. How large the combined total of these deals and therefore how much help they can bring small business is a separate question.

Unfortunately, the most likely scenario remains the Fed's 2007 assessment that securitization is not likely to be a major source of small business finance in the near future [Board of Governors of the Federal Reserve System (2007a)].

## **6 Conclusions**

This paper traces the recent history of small business access to credit in the United States. That history shows substantial change in access, change that to date has been highly favorable to owners of small firms. The stimuli for the change, deregulation, technology, and finance innovation, are reasonably obvious – and in a global economy are available to all. So, it is not clear that the American experience is substantially different from that of developed countries as a group or from any specific developed country. But a review of American experience leads to observations that appear relevant not just to Americans, but to those outside the United States also interested in small business.

- Agarwal, S and Hauswald, R (2007). Distance and Private Information. Social Science Research Network.
- Avery, RB and Smolyk (2004). Bank Consolidation and Small Business Lending: The Role of Community Banks, *Journal of Financial Services Research*. Vol. 25, Iss. 2/3, pp.187-229.
- Bank of England (2003). Finance for Small Firms – A Tenth Report. London.
- Barth, J, Tong, L, Malaiyandi, S, McCarthy, D, Phumiwasana, T, and Yago, G (2005). *2005 Capital Market Index: Securitization in Financing Economic Activities*. Milken Institute, Santa Monica, CA. October.
- \_\_\_\_\_, Dopico, LG, Nolle, DE, and Wilcox, JA (2002). *An International Comparison of the Structure of Bank Supervision*. U.S. Office of the Comptroller of the Currency, Washington, DC. February.
- Berger, AN, Rosen, RJ, and Udell, GF (2007) Does Market Size Structure Affect Competition? The Case of Small Business Lending. *Journal of Banking & Finance*, Vol. 31 pp. 11-33.
- \_\_\_\_\_. (2006). Potential Competitive Effects of Basel II on SME Credit Markets in the United States, *Journal of Financial Services Research*. Vol. 29, Iss. 1, pp. 5-36.
- \_\_\_\_\_ and Frame, WS (2005). Small Business Credit Scoring and Credit Availability. Working Paper 2005-10. Federal Reserve Bank of Atlanta. Atlanta, GA. May.
- \_\_\_\_\_, Bonime, SD, Goldberg, LG, and White, LJ. (2004). The Dynamics of Market Entry: The Effects of Mergers and Acquisitions on Entry in the Banking Industry, *The Journal of Business*. Vol. 77, No. 4, pp. 797-834.
- \_\_\_\_\_, and Miller, NH (2002). Credit Scoring and the Availability, Price and Risk of Small Business Credit. FRB of Atlanta Working Paper No. 2002-6. Federal Reserve Bank of Atlanta. April.
- \_\_\_\_\_, Goldberg, LG, and White, LJ (2001). The Effects of Dynamic Changes in Bank Competition on the Supply of Small Business Credit, *European Finance Review*, Vol., Iss. 1-2, pp. 115-139.
- Black, SE and Strahan PE (2002). Entrepreneurship and Bank Credit Availability, *The Journal of Finance*. Vol.57, Iss. 6, pp. 2807-2833.
- Blanchflower, DG, Levine, PB, and Zimmerman, DJ (2003). “Discrimination in the Small Business Credit Market,” *The Review of Economics and Statistics*. Vol. 85, No. 4, pp. 930-943.
- Board of Governors of the Federal Reserve System (2007a). Report to the Congress on the Availability of Credit to Small Businesses. Washington. October.
- \_\_\_\_\_ (2007b). Report to the Congress on Credit Scoring and Its Effects on the Availability and Affordability of Credit. August.
- \_\_\_\_\_ (2002). Report to the Congress on the Availability of Credit to Small Businesses. Washington. September.
- \_\_\_\_\_ and U.S. Securities and Exchange Commission (2000). Report to the Congress on Markets for Small Business and Commercial-Mortgage Related Securities. Washington. September.
- Cavalluzzo, KS, Cavalluzzo, LC and Wolken, JD (2002). Competition, Small Business Financing and Discrimination: Evidence from a New Survey, *Journal of Business*. Vol. 75, Iss. 4, pp. 641-679.
- Cole, RA (2008). Who Needs Credit and Who Gets It? Evidence from the 2003 Survey of Small Business Finances. Submitted to the U.S. Small Business Administration, Office of Advocacy, Washington.
- Cowan, CD and Cowan, AM (2006). *A Survey Based Assessment of Financial Institution Use of Credit Scoring for Small Business Lending*. U.S. Small Business Administration. Office of Advocacy. Contract No. SBAH-04-Q-002. Washington.
- Critchfield, T, Davis, T, Davison, L, Gratton, H, Hanc, G, and Samolyk (2004). The Future of Banking in America: Community Banks: Their Recent Past, Current Performance, and Future Prospects. *FDIC Banking Review*. Vol. 16, No. 3, pp. 1-56.

- \_\_\_\_\_ and Yom, C (2007). Recent Trends in De Novo Chartering. <http://www.csbs.org/Contents/NavigationMenu/PublicRelations/PresentationsSpeeches/CritchfieldDeNovo.pdf>.
- Degryse, H, Ongena, S, and Penas, MF (2005). Between Lisbon and London: Financial Sector Consolidation in the Context of the Lisbon Agenda. AEI-Brookings Joint Center, Washington. December.
- Demyanyk, Y, Ostergaard, C, and Sorensen, B (2007). U.S. Banking Deregulation, Small Businesses, and Interstate Insurance of Personal Income, *The Journal of Finance*. Vol. LXII, No. 6. December.
- DeYoung, R, Frame, WS, Glennon, D, McMillen, P, Nigro, PJ (2007). Commercial Lending Distance and Historically Underserved Areas. Working Paper 2007-11a. Federal Reserve Bank of Atlanta, Atlanta, GA. July.
- \_\_\_\_\_, Glennon, D, and Nigro, P (2006). Borrower-Lender Distance, Credit Scoring and the Performance of Small Business Loans. FDIC Center for Financial Research Working Paper No. 2006-04. March.
- \_\_\_\_\_, Goldberg, LG, and White, LJ (1999). Youth, Adolescence and Maturity of Banks: Credit Availability to Small Business in an Era of Bank Consolidation, *Journal of Banking & Finance*, Vol. 23, Iss. 2-4, pp. 463-492.
- Eisenbeis, R (2000). Credit Scoring and Lending to Small Business. The Changing Bank Structure and Its Impact on Small Business: A Conference Report. U.S. Small Business Administration, Office of Advocacy. Washington. June.
- Frame, WS, Padhi, M, and Woosley, LW (2001a). The Effects of Small Business Lending in Low- and Moderate-Income Areas. Working Paper No. 2001-06, Federal Reserve Bank of Atlanta, Atlanta, GA.
- \_\_\_\_\_, Srinivasan, A, and Woosley, L (2001b). The Effect of Credit Scoring on Small Business Lending. *Journal of Money, Credit and Banking*. Vol. 33, No. 3, pp. 813-825. August.
- Francis, B, Hasa, I, and Wang, H (2008). Bank Consolidation and New Business Formation, *Journal of Banking & Finance*, Vol. 32, Iss. 8, pp. 1598-
- Freel, MA (2007). Are Small Innovators Credit Rationed? *Small Business Economics*. Vol. 28, Iss. 1, pp. 23-35. January.
- Government Accountability Office (GAO) (2007). Small Business Administration: Additional Measures Needed to Assess 7(a) Loan Program's Performance. GAO-07-769. Washington. July.
- Hanc, G (2004). The Future of Banking in America: Summary and Conclusions. *FDIC Banking Review*. Vol. 16, No. 1, pp. 1- 27.
- Hoffmann, M and Shcherbakova, I (2008). Consumption Risk Sharing over the Business Cycle: The Role of Small Firms' Access to Credit Markets. Working Paper No. 363, Institute for Empirical Research in Economics, University of Zurich. March.
- Jayaratne, J, and Wolken, J (1999). How Important Are Small Banks to Small Business Lending?: New Evidence from a Survey of Small Firms. *Journal of Banking and Finance*. Vol. 23, Iss. 2-4, pp. 427-458.
- Jacobson, T, Lindé, J, and Roszbach, K (2005). Credit Risk versus Capital Requirements under Basel II: Are SME Loans and Retail Credit Really Different?, *Journal of Financial Services Research*. Vol. 28, Iss. 1-3, pp. 43-75. October. Previously published as Working Paper No. 162 by the Swedish Riksbank, Stockholm.
- Koren, I (2003). The ABCs of Small Business Loan Securitizations: Nothing Small about Small Business in America (2003). Wachovia Securities, Charlotte, NC. March.
- Masson, DJ (2007). Commercial Banking in the U.S. versus Canada. *Graziadio Business Report*. Vol. 10, Iss. 4, <http://gbr.pepperdine.edu/074/bank.html>
- Mester, LJ (1997). What's the Point of Credit Scoring? *Business Review*. Federal Reserve Bank of Philadelphia, pp. 3-16. September/October.
- Minniti, M, Bygrave, WD, and Autio, E (2006). Global Entrepreneurship Monitor: 2005 Executive Report. Babson College, Babson Park, MA and London Business School. London.
- NFIB Research Foundation (series a). *Small Business Economic Trends*, (eds) Dunkelberg, WC and Wade, H, Washington.
- \_\_\_\_\_ (series b). *Small Business Problems & Priorities*. Washington.

- \_\_\_\_\_ (2005a). "Bank Competition," Scott, JA, and Dunkelberg, WC. *National Small Business Poll*, (ed.) Dennis, Jr, WJ, Vol. 5, Iss. 8, Washington.
- \_\_\_\_\_ (2005b). "Evaluating Banks," Scott, JA and Dunkelberg, WC. *National Small Business Poll*, (ed.) Dennis, Jr, WJ, Vol. 5, Iss. 7, Washington.
- \_\_\_\_\_ (2007). "Finance Questions," *National Small Business Poll*, (ed.) Dennis, Jr, WJ, Vol. 7, Iss. 7, Washington.
- National Federation of Independent Business and U.S. Comptroller of the Currency (1984). *Small Business Lending and Private Secondary Markets: Summary of a Roundtable*. (ed.) Kenneth P. Fain. Washington. April.
- Nyblaeus, NF (2003). Consolidation of the Swedish Banking System. [www.riksbank.se/templates/speech.aspx?id=1722](http://www.riksbank.se/templates/speech.aspx?id=1722)
- Ou, C (2005). Banking Consolidation and Small Business Lending: A Review of Recent Research. U.S. Small Business Administration, Office of Advocacy Washington. March.
- Path to Prosperity: Canada's Small- and Medium-Sized Enterprises, The (2002). Canadian Federation of Independent Business, Canadian Manufacturers & Exporters, and RBC Financial Group. [www.cfib.ca](http://www.cfib.ca) October.
- Petersen, MA and Rajan, RG (2002) Does Distance Still Matter? The Information Revolution in Small Business Lending, *The Journal of Finance*. Vol. 57, Iss. 6, pp. 2533-2570. December.
- Rajan, RG, and Zingales, L (2004). *Saving Capitalism from the Capitalists*. Princeton University Press, Princeton, NJ.
- Rosen, R (2004). Comment on Avery and Samolyk, *Journal of Financial Services Research*, Vol. 25, Iss. 2/3, p. 327.
- Riding, A, Madrill, J, and Haines, G, Jr (2007). Incrementality of SME Loan Guarantees, *Small Business Economics*, Vol. 29, Iss. 1-2, pp. 47-61.
- Scott, JA (2007). Community Banks and Small Business: Is It All About Lending Relationships?, mimeo.
- \_\_\_\_\_ and Dunkelberg, WC (2003). Bank Mergers and Small Business Finance. *Journal of Money, Credit and Banking*. Vol. 35, Iss. 6, pp. 999-1018.
- Scott, JA, Dunkelberg, WC, and Dennis, Jr, WJ (2003). *Credit, Banks and Small Business: The New Century*. NFIB Research Foundation. Washington.
- Seeling, SA, and Critchfield, T (2003). Merger Activity as a Determinant of De Novo Entry into Urban Bank Markets. FDIC Working paper 03-1. Washington. April.
- Small Business Administration, U.S. (2007). *The Small Business Economy: A Report to the President*. Prepared by the Office of Advocacy. Government Printing Office: Washington.
- \_\_\_\_\_ (1997). *The State of Small Business: A Report to the President*. Prepared by the Office of Advocacy. Government Printing Office: Washington.
- Stiglitz, JE and Weiss, A (1981). Credit Rationing in Markets with Imperfect Information, *American Economic Review*. Vol. 71, Iss. 3, pp. 393-410. June.
- Wall, HJ (2003). Entrepreneurship and the Deregulation of Banking. Working Paper 2002-032C. Federal Reserve Bank of St. Louis. St. Louis, MO. August.
- Williams, V and Ou, C (2008). Small Business and Micro Business Lending in the United States, for Data Years 2006-2007. U.S. Small Business Administration, Office of Advocacy. Washington. June.
- Yellen, JL (1996). The "New" Science of Credit Risk Management. *The Region*. Vol. 10, Iss. 3, pp. 26-34. September.
- Yom, C (2005). Limited Purpose Banks. *FDIC Banking Review*. Vol. 17, Iss. 1, pp. 19-33.

## Appendix 1

### Small Business Access to Credit: An October Update

William J. Dennis, Jr.  
NFIB Research Foundation

Small Business Access to Credit: Yesterday, Today, and Tomorrow to which this is an addendum, was developed in the early spring of 2008, previewed before the International Reference Group of the Swedish Foundation on Small Business Research in May, and formally presented on September 15, the day Lehman Brothers filed for bankruptcy. Its contents therefore do not capture the events of the last quarter as they impact small business credit conditions in the United States. Additional comments appear appropriate in light of events occurring in those months, though the situation in mid-October remains fluid and the full consequences of the financial crisis that exploded on the international scene in September and October will not be fully understood for years.

#### 1.1 Current Credit Conditions for Small Businesses

Small business credit conditions in the United States trended downward in an uninterrupted slide over the past two years. Credit markets incrementally grew more difficult for small business borrowers to access over the period as overall economic conditions generally declined in tandem, the latter accelerating in the last 12 months. July through September was no different. In fact, rather than spiking in September, to suggest an event such as the collapse of Lehman Brothers or the failure of Fannie Mae and Freddie Mac jolting a stable trend from its established course, the stolid downward pattern credit conditions exhibited throughout the past months is consistent with the normal end of a business cycle.

Data from both the borrowers' and lenders' perspective confirm this view. Credit availability data from the borrowers' perspective exhibits an uncanny parallel in the course and level of credit conditions entering the 1990-91 recession and the current period (Exhibit 5). These borrower numbers show credit becoming increasingly difficult to obtain over an extended period. September proved more of the same. Lesser demand for credit went hand-in-hand. Lender data document the same phenomena, credit standards tightening and loan demand down (Exhibit 6). The lender series unfortunately does not capture the run-up to the 1990-91 recession, so parallels cannot be drawn between it and the current situation. But the lender's perspective does extend through the run-up to the 2001 recession and the parallel between it and the current condition is also notable. (The next observation for this Federal Reserve survey is this month, but too late for inclusion here.) The difference in survey results for current purposes is that the lender's side emphasizes credit market tightness and the borrower's side emphasizes lower demand. But both show phenomena typically coincident with the end of a business cycle.

The end of a business cycle means that sales slow, balance sheets deteriorate, and the owner's desire to increase inventories and/or make capital investments wanes. It also means the demand for credit falls as lending standards become more stringent (or at least they should) and the capacity of small businesses to absorb additional credit declines. That has happened, especially over the last year. So too has the normal outcry of "credit crunch" as access becomes more limited than it once was. While it is difficult not to be sympathetic with those caught by changing conditions, such problems are symptoms of a more pervasive

ailment: poor sales and a declining economy. Survey data show small business owners are considerably more concerned about “Poor Sales”, another sign of the business cycle ending, and inflation than they are about credit (Exhibit 1). Twenty (20) percent cited Poor Sales as their single most important problem in September; 4 percent cited Finance & Interest Rates. The access issue, therefore, is not whether credit tightens during the end of a business cycle, it does and should. Lenders demand more collateral and cash flow-based borrowing particularly becomes more difficult; personal guarantees are more common; and, lines are reduced, though capital continues to flow. Thirty-three (33) percent of small business owners reported that they could access all the credit they wanted in September compared to 6 percent who could not; the remainder did not want credit [NFIB Research Foundation, series a]. This is normal, and not particularly troublesome. The issue is whether the small business credit markets rebound to their prior condition as the cycle moves into a more positive phase.

Despite anecdotes and wringing-of-hands in the media, no evidence demonstrates that creditworthy small businesses systematically cannot obtain credit due to frozen credit markets. Certainly, the survey data cited above contradicts the idea of a severe credit squeeze. If such problems existed for small firms, one should expect that the Small Business Administration’s 7(a) loan guarantee program would be oversubscribed. After all, the program’s purpose is to fund creditworthy businesses that do not have access to credit in the conventional markets, with its guarantee providing strong incentives for participating lenders to shift credit from other potential borrowers to small firms. Thus, 7(a) seems ideally suited to address the current credit freeze – should it exist. Yet, the SBA loan guarantee program experienced 30 percent fewer borrowers between October 1, 2007 and October 1, 2008, including a 50 percent decline in September 2008 from the prior September [Hess]. Eric Zarnikow, SBA’s associate administrator for capital access says the agency is finding less demand and its phone and e-mail traffic (seeking financial help) remains under control. The situation could change and that is a concern for small business advocates. But for the present, poor sales and a declining economy discourage borrowing, even as some American small business owners experience the credit pains associated with the end of a recession rather than a locking of credit markets.

## 1.2 Large Banks and Small Banks

The current financial problem in the United States is associated with a limited number of large financial institutions; the concern for many is that the well-documented problems of these institutions will spill-over into non-infected entities. But if they do not or until they do, the immediate impact of the financial problem on small business access to credit will likely be confined to customers of infected institutions and the regions in which they dominate the market. Places where community banks have a strong foothold and where responsible large banks hold a large market share are likely to escape most of the impact, at least immediately. Thus, it is likely rural small businesses will fare better than urban ones; small businesses outside California, Arizona, Nevada, Florida, and possibly New York will fare better than small businesses in those states; and small business owners with relationships will likely have fewer issues than those without them.

Community (small) banks have fared comparatively well through this period and often have had the mixed blessing of too much, rather than too little capital, as depositors have fled weak institutions to them.<sup>21</sup> The exception is the approximately 800 community banks<sup>22</sup> that on the advice of regulators used preferred Fannie Mae and Freddie Mac stock as

---

<sup>21</sup> The largest bank in the U.S., Bank of America, a healthy one, also added large numbers of depositors.

<sup>22</sup> That is roughly 10-12% of the bank population.

tier one capital. The bail-out<sup>23</sup> alleviated their problem, but did not resolve it, meaning those affected may have their lending constrained. But, for the most part, small banks have been the “good guys” and large banks not.

Current difficulties will undoubtedly re-energize the big bank/small bank issue referenced in the paper, particularly for small business owners as customers, and could resurrect the old populist refrain that if a business is too big to fail, it is too big. Indeed, small business owners repeatedly tell anyone who will listen that a very important attribute of a bank is reliability [NFIB Research Foundation, 2005; Scott, et al.] and several prominent names have been unreliable. Small business customers of those institutions are likely to retaliate by removing their patronage to more reliable institutions, despite the high cost of doing so. Thus, another likely impact of the last few months’ turmoil is a market shift in small business bank patronage back to smaller financial institutions and an even greater interest in personal relationships with their banker.

### 1.3 Six Implications: Follow-up

The paper developed six implications of the American experience for itself and other developed countries. Recent events have generally underscored the relevance of the six, though some more than others. The following are further comments on each in light of recent developments:

The first implication, a need for systematic measurement of small business credit conditions, is more pressing now than just one month ago. On a feeding frenzy, the American media has exploited anecdote and sensation to portray a condition that has no basis in fact, but flows from the preconceived idea that if a problem exists somewhere, it must be universal. The limited empirical data on small business access to credit was published too late to have an impact or halt the stampede to treat the most egregious horror stories as normal. This experience argues that less data produced more frequently is preferable to more data produced at greater intervals. More data at greater intervals becomes almost useless during periods of urgency. More frequent measurement puts numbers in the public domain to compete with anecdote more often, offers the media and opinion leaders a regular source of consistent information, and routinely reinforces the experience among most small business owners that the worst is the not the common. This leads to greater public acceptance and reference of data, though rational discourse in the face of hysteria will not always be greeted positively unless the data are in accord.

Second, the paper questioned the wisdom of subsidizing creditworthy borrowers in light of credit scoring’s capacity to erase or at least considerably reduce the opacity of potential small business borrowers. Those questions stand. The element added in the last month is the possibility of frozen credit markets blocking the borrowing efforts of creditworthy firms, in other words, market failure. With demand for an already small, by international standards, pool of publicly allocated funds undersubscribed, market failure is not the current issue in the United States. Yet, it could be at some point. So, how does government ration, because that is what government is doing, the funds available? And, should relatively more funds be made available for small firm loans than to say home mortgages, essentially redirecting those monies from one potential borrower to another? Credit scoring provides information on better and worse risks. But, in a time of frozen credit markets and a declining economy, is better and worse risk the appropriate criterion? And, if it is not, what are the criteria and how is public corruption, sometimes known as lobbying for one’s constituents, blunted? Effectively, the last few months introduced market failure

---

<sup>23</sup> The Emergency Economic Stabilization Act of 2008.

arguments to the small business credit access discussion, arguments which have not been relevant for years.

Third, distances in the banking relationship are likely to decline as small business owners reemphasize banking relationships. But distance changes in small business banking relationships are unlikely to have any immediate effect for purposes of anti-trust or competition policy until officials have time to reevaluate a restructured banking industry. Small business borrower distance is a small matter given the enormity of the other issues facing public officials.

Fourth, the existence of many banks in the United States, in part a function of common de novo entry, helped stabilize unsteady credit markets and lowered government bail-out costs, the plentitude effectively diversifying risk. The current situation underscores the desirability of greater de novo entry, but is a longer term objective in a world properly focused on the immediate.

The paper also expressed concern that the models on which small business lending was so greatly expanded, have not been tested by a severe recession. The test appears coming. The losses experienced by large, credit-scoring banks were increasing in the spring, even among institutions that performed relatively well throughout. But the open question is whether those losses were anticipated as part of cyclical decline or whether they were in excess of losses their models anticipated. The difference is a big deal for if the models perform well over what now appears will be a sharp downturn in economic activity, then the institutions using them can monitor their existing portfolios, extend additional credit as appropriate, and revert to prior lending patterns once conditions improve. The consequences of the opposite outcome are severe for all concerned, but particularly small business borrowers. Should the models fail or leave the impression that they are about to fail, lenders relying on them may halt additional extensions and start calling in loans and cutting lines, thereby putting small business borrowers in jeopardy. Few banks are rules banks that rely exclusively on credit scores for the accept/reject decision, but rules banks are large banks with considerable small business loan exposure and public visibility.

The fear lies in model treatment of losses as random events, that is, one loss is unrelated to the next. That assumption appears reasonable in normal times. But, is it reasonable in abnormal times? What if these events (defaults) are not random, but reinforcing, leading one event to cause another in a chain-type reaction [Richards]? Or more likely, what if the models built in an insufficient amount of serial default? The initial models were constructed in the 1990s and have experienced only the mild 2001 recession. Data limitations in early 1980s, the last severe recession, did not allow modelers to fully reproduce small business finances during the era.

The point is not that the models are wrong; the point is that we do not know they are right under the unexperienced circumstances they face, and the stakes are very high. The models are private and not subject to public scrutiny. But someone, including Fair, Isaac the developer of the most commonly used, needs to monitor them on a real time basis to eliminate surprises. The same principle holds for the small firm/retail preference in Basel II.

Finally, securitization of conventional small business loans as a practical means to increase small business access to capital appeared on shaky legs well before September. Last rites are not even necessary as the concept is a buried casualty of the sub-prime debacle.

## 1.4 Real Estate Ownership

One issue did not fit the paper well, so the author ignored it. The omission may have little relevance outside the United States, but is worth noting in case of wider applicability and potential consequence, if not directly for credit flows, but for balance sheets that allows credit

to flow. Small business owners in the United States are heavily invested in real estate. Households headed by a self-employed person are two to three times more likely to own “other” residential property, that is, residential property beyond the primary residence, than are other occupational groups [Bucks, et al.]. The median value of those assets held by the self-employed is also substantially higher, and the disparity in average asset value which is not publicly produced, are likely much higher. But, the issue for current purposes is not assets, nor perhaps even equity, though we know, for example, that 59 percent of the self-employed have non-home equity mortgages [Bucks, et al.]. Rather, the issue is the declining value of real estate and its use as collateral. Little data and no research of which the author is aware is available on the topic.

With real estate values declining and real estate loans the principal source of present difficulties, with small business owners heavily invested in real estate, and with personal finances never far from business finances, spill-overs from personal (non-business) real estate investments could hold serious consequences for small business owners trying to access credit markets for business purposes. Still, should the real estate carry no mortgage, it could prove beneficial in securing a business loan. The requisite detail appears available, but buried deep in the Federal Reserve’s Survey of Consumer Finances complex data base. The NFIB Research Foundation is conducting research on the issue now.

## 1.5 Conclusions

The foregoing appears to argue that nothing has changed in credit markets for American small businesses over the last few months. That impression would be false. Conditions have changed and they have deteriorated, but evidence of frozen credit markets for small business borrowers is lacking. The United States is at the end of a business cycle and credit conditions reflect it.

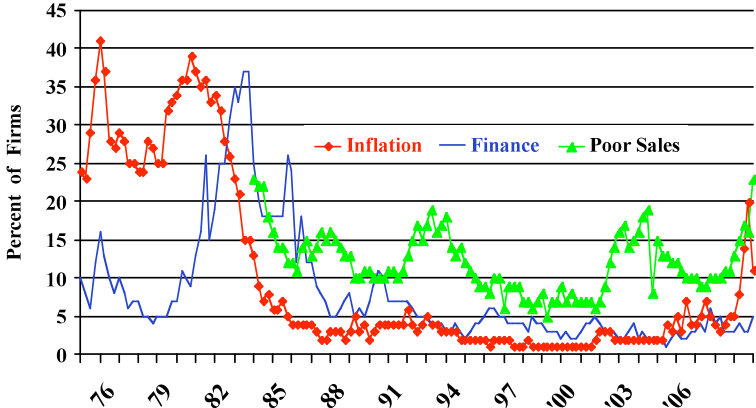
Long term, credit market changes will occur as a result of current events, most of which are not now apparent, but which retrospectively will seem obvious. The relevant question for this discussion is how those changes will affect small business access to credit. The paper observed that American small businesses may have reached a high point in the last few years, able to access credit more often, for more dollars, and under more favorable conditions than at any time in memory. The new financial landscape that inevitably will arise from the vast changes within the last few months offers little to suggest that small business will fare better in the future, let alone fare as well.

## 1.6 References

- Bucks, BK, Kennickell, AB, and Moore, KB (2006). Recent Changes in U.S. Family Finances: Evidence from the 2001 and 2004 Survey of Consumer Finances, *Federal Reserve Bulletin*. Vol. 92, Iss. 1, pp. A1-A38.
- Hess, D (2008). SBA Says Loan Demand Is Declining As Economy Slows, *Congress Dailey PM*, p. 6, October 9.
- NFIB Research Foundation (series). *Small Business Economic Trends*, (eds) Dunkelberg, WC and Wade, H. Washington.
- \_\_\_\_\_ (2005). “Evaluating Banks,” Scott, JA and Dunkelberg, WC., *National Small Business Poll*, (ed.) Dennis, Jr, WJ, Vol. 5, Iss. 7, Washington.
- Richards, JA (2008). A Mountain, Overlooked: How Risk Models Failed Wall St. And Washington, *Washington Post*, p. A23, October 2.
- Scott, JA, Dunkelberg, WC, and Dennis, Jr, WJ (2003). *Credit, Banks and Small Business: The New Century*. NFIB Research Foundation. Washington.

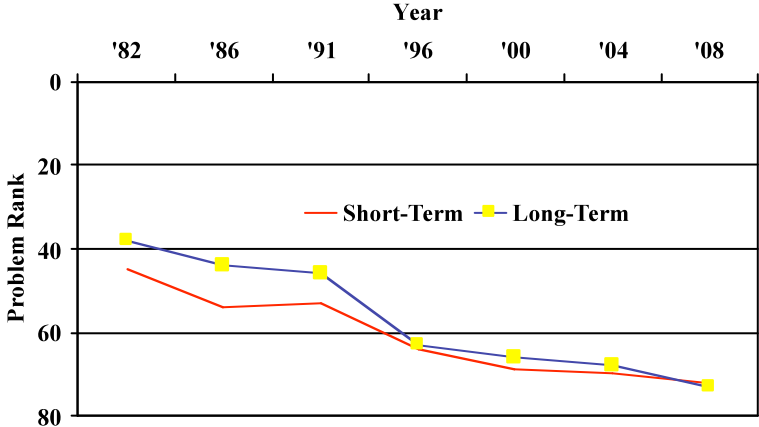
# Appendix 2 - Exhibits

Exhibit 1  
 Single Most Important Problem:  
 1975:4 - 2008:4



Source: National Federation of Independent Business

Exhibit 2  
 Loans as a Business Problem Rank:  
 1982 - 2008



Source: National Federation of Independent Business

### Exhibit 3

## Number of FDIC-Insured Community Banks: 1985-2003

Year	Number	De Novo Banks	Failures	Merger/Acquis.
1985	14,141	304	144	490
1986	13,670	214	180	581
1987	13,204	175	216	510
1988	12,613	171	339	480
1989	12,025	138	433	338
1990	11,538	118	325	345
1991	11,116	62	223	286
1992	10,692	29	133	351
1993	10,144	37	445	511
1994	9,612	32	15	515
1995	9,143	71	8	495
1996	8,776	109	6	432
1997	8,443	149	1	425
1998	8,089	166	3	482
1999	7,902	212	7	349
2000	7,782	178	5	263
2001	7,634	113	2	224
2002	7,489	79	9	198
2003	7,337	101	1	208
Total	--	2,458	2,095	7,483

### Exhibit 4

## Competition for Small Business Banking Business: 1980 - 2001

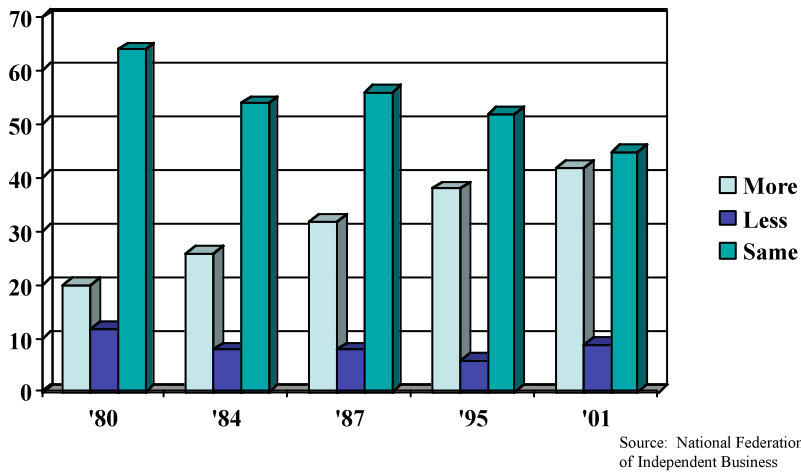
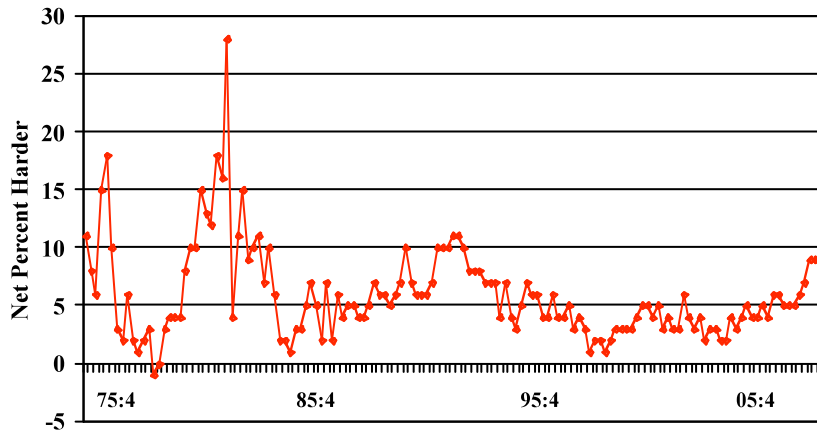
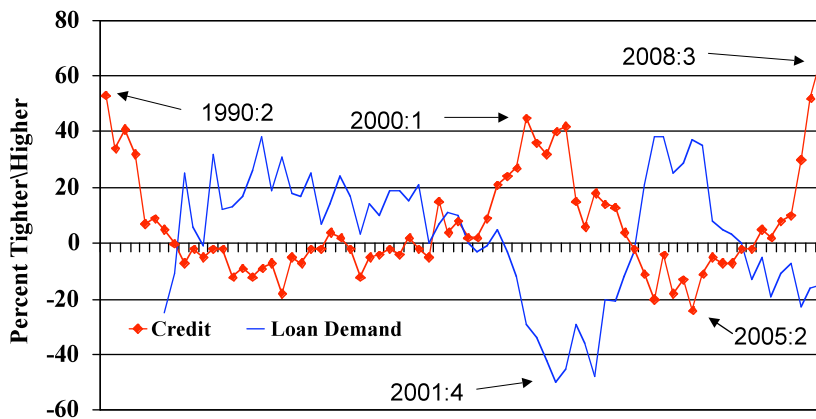


Exhibit 5  
 Small Business Credit Harder to Get  
 1973:4 - 2008:4



Source: National Federation of Independent Business

Exhibit 6  
 Senior Loan Officer Survey, Bank Lending  
 Practices Ð Small Business Loans



Source: Federal Reserve

## Appendix 3 CV

**William J. (Denny) Dennis, Jr.** is currently a Senior Research Fellow at the NFIB Research Foundation in Washington, D.C., and directs its activities. He has been employed since 1976 in various research capacities by the National Federation of Independent Business (NFIB), the nation's largest small business trade association. Prior to his employment at NFIB, Dennis spent over five years as a professional staff member in the U.S. House of Representatives.

Dennis is founder and editor of the National Small Business Poll (2001- ), member of the National Advisory Committee of the The State of the USA project (formerly, the Key National Indicators Initiative (2003 - ), and member of the International Reference Group, Swedish Foundation for Small Business Research (1997 - ). He is a former President of the International Council for Small Business (1996 – 97); Team Leader for Entrepreneurship Research Consortium, (1996 – 2002), co-author of *Small Business Economic Trends*, (1986 – 2000), a member of the Business Research Advisory Committee, U.S. Bureau of Labor Statistics (1982 - 2007), and, member of two panels for the National Academies of Science (High Schools and the Changing Workplace, and the Mathematical Sciences Education Board). Dennis received the Academy of Management's (entrepreneurship division) Advocate Award for outstanding contributions to the field of entrepreneurship (2006) and the U.S. Small Business Administration's Special Advocacy Award for Research (1998). He was named a Wilford White Fellow by the International Council for Small Business (2000) and a Justin Longenecker Fellow by the United States Association for Small Business and Entrepreneurship (1989).

Dennis has published in the major academic small business and entrepreneurship journals, and was assigned to write the Senior Scholar's paper on entrepreneurship and public policy for the United States Association for Small Business and Entrepreneurship (2005). He has also testified on policy issues before a variety of committees in the U.S. House of Representative and the U.S. Senate as well as before state legislative bodies. His principal research interest lies in smaller firms and public policy.

