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Six Causes of the Credit Crunch

(Or, Why Is It So Hard to Get a Loan?)

Many bankers, legislators, borrowers, and regulators have expressed their views about the cause of the credit crunch. Like the blind men examining an elephant, each has an opinion that has been formed from his perspective. Each has characterized the problem and potential solutions differently. None are completely correct or completely wrong. Bankers cite the lack of high quality loan demand. Legislators blame overzealous regulators. Borrowers say banks are too conservative. Regulators encourage bankers to lend and tell their examination staffs to facilitate the extension of credit but maintain the safety and soundness of the banking system.

Many economists studying the credit crunch explain it as a cyclical decline in credit demand. They often suggest that the cyclical swing is reinforced by structural changes in the demand for credit. These economists have minimized the numerous important factors that have reduced the ability of banks to supply credit or, at a minimum, have increased the cost of providing it.

In this article, we view credit crunches as localized events that occur at different times in different parts of the country. The Texas banking industry provides an important case study. The causes of the Texas credit crunch are highly similar to the causes of credit crunches that have developed elsewhere in the country. We focus on the past seven years because the contraction of bank credit began in Texas in 1986.

While demand may play an important part in the decline in loans outstanding during some of this period, we focus on the factors affecting the supply of loans from banks over the past seven years. While there are other sources of credit to business, banks continue to be vitally important, especially to small and mid-size businesses (Elliehausen and Wolken 1990). Many of the factors that are limiting credit supply from banks also affect other suppliers of credit. In some cases, however, the factors limiting credit from banks are unique to banks and place banks at a competitive disadvantage. As discussed in the next section, the definition of a credit crunch is fundamentally related to the supply of credit, as opposed to the demand for it. The following section presents the complexity of the credit crunch as it developed in Texas, where supply was reduced at both financially healthy and unhealthy banks. In the remainder of the article, we present six general factors that caused the supply of credit to contract.

What is a credit crunch, and are we in one?

The economics profession is unclear as to what constitutes a "credit crunch." The crucial differences in definition depend on the cause of the contraction and whether credit is rationed by means other than price.

Bernanke and Lown (1991) define a credit crunch as a decline in the supply of credit that is abnormally large for a given stage of the business cycle. Credit normally contracts during a recession, but an unusually large contraction could be seen as a credit crunch.

In their analysis, Bernanke and Lown compare the contraction in credit during the most

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recent recession to those in the previous five recessions. Total loans at domestically chartered commercial banks grew only 1.7 percent during the 1990–91 period, compared with an average of 7.1 percent during the previous five recessions. They conclude that there has been a credit crunch.

Bernanke and Lown attribute this reduced lending activity to demand and supply factors. Loan demand has been weak because borrowers' balance sheets have been weaker than normal, and as a result, borrowers have been less creditworthy than usual. The supply of credit has been reduced by the decline in bank capital caused by severe loan losses during the recession (Clair and Yeats 1991). Bernanke and Lown's analysis indicates that the demand factors have been far more important, accounting for three-fourths of the decline in lending in New England.

There is a disturbing dissonance created by the Bernanke and Lown definition of a credit crunch, the results of their analysis, and their conclusion that there was a credit crunch. They define the credit crunch as an abnormally large decline in the *supply* of credit. They argue that *demand* factors largely caused the reduction in lending. They then conclude that there is a credit crunch.

A second problem with the Bernanke and Lown analysis is their use of national data to determine if a credit crunch exists. Their cross-sectional analysis using state-level data assumes the imperfect substitutability of bank and nonbank credit and of bank credit from banks located in different states. Samolyk (1991) provides empirical evidence supporting this assumption. If bank credit cannot flow perfectly across state lines, however, then the problems of a credit crunch would be more likely to develop at the state level, not the national level, unless a nationwide economic shock caused the decline in bank capital.

The second definition of a credit crunch relies not on the contraction in lending but on the microeconomic principle of a shortage. If at the current market price the demand for a good exceeds the supply, then there is a shortage. The available supply will be rationed but by some means other than pricing. Nonprice credit rationing may occur even in a market that might not be described as experiencing a credit crunch (Stiglitz and Weiss 1981). Owens and Schreft (1992) define a credit crunch as a period of sharply increased nonprice rationing.

Owens and Schreft review historical episodes of nonprice rationing—that is, credit crunches that were accompanied by binding interest rate ceilings, credit controls, or coercive posturing by administrative officials and bank regulators to discourage banks from lending. In the current recession, researchers argue, administrative officials and bank regulators have actively encouraged banks to lend.[2] Owens and Schreft do state that there was probably nonprice rationing in loans secured by real estate, resulting from bank examiners' reaction to real estate loan losses. They cite the statements made by Robert Clarke, then comptroller of the currency, that discouraged banks from making real estate loans.

Owens and Schreft conclude that there is not a general credit crunch, but there might have been a sector–specific crunch in real estate. Since nonbank providers of credit also contracted their lending, Owens and Schreft attribute the decline in lending to ebbing loan demand.

The Owens and Schreft definition of a credit crunch has intuitive microeconomic appeal but may not provide the insights needed for economic policy analysis. Their definition does not consider actual lending activity. Consequently, a "credit crunch" can occur during a period of expanding credit as easily as during a contraction of credit.

Furthermore, Owens and Schreft dismiss anecdotal evidence from borrowers. They may be correct that borrowers would complain during any period of tight credit, but the type of complaint could be quite different. During nonprice rationing, borrowers complain about not being able to get a loan at any price. During periods of simply tight credit, borrowers complain about the cost of credit.

Despite their differences, both the Bernanke–Lown and Owens–Schreft studies agree that a decline in credit demand explains the major part of the credit contraction, and both find little support

[2] *At the same time that Bush administration officials were encouraging additional lending, Congress was holding hearings on bank failures and sending a signal to examiners that they should be conservative if they wished to avoid testifying before Congress.*

for the explanation that more stringent bank examination practices account for the contraction in loan supply. Owens and Schreft link the decline in credit demand to the deterioration of real estate asset values, similar to the Bernanke and Lown view of weakened balance sheets. In determining if the nation is in a credit crunch, Bernanke and Lown cite the abnormally slower growth of credit as a sign of the credit crunch, while Owens and Schreft see few signs of nonprice credit rationing and conclude that there is no general credit crunch.

In ascertaining that demand factors are a primary cause of the decline in bank credit, both studies cite the lack of credit supply response from nonbank sources of credit. Nonbank sources of credit to businesses are growing increasingly important (Pavel and Rosenblum 1985). Approximately 25 percent of small and mid-size businesses obtain credit from nonbank sources (Elliehausen and Wolken 1990).

If bank credit alone were being rationed or constrained, both studies argue, other providers of credit should have increased their activity. Most nonbank sources of credit to corporate businesses have contracted during the 1990–91 recession. From 1989 to 1991, not only did the annual flow of funds from bank loans contract but so did the flow of funds from finance companies, commercial paper, mortgages, and trade credit. At the same time, the flow of funds needed for capital expenditures contracted sharply. These national aggregate data are consistent with the hypothesis that demand factors have driven the credit contraction.

In a comment on the Bernanke and Lown study, Benjamin Friedman points out that they assumed that other nonbank credit providers did not suffer the same constraints (Bernanke and Lown 1991). If loan losses have caused capital to decline at banks, might not similar losses reduce the capital of nonbank creditors, such as insurance companies? Michael Keran (1992), vice president and chief economist of the Prudential Insurance Company of America, has acknowledged that financial intermediaries other than banks have also suffered declines in capital resulting from real estate and other loan losses.

Because of their analytical approaches, both of these empirical analyses have misdated the beginning of the credit crunch. The Bernanke and Lown analysis uses national data that mask important differences among various regions of the country. The Owens–Schreft analysis begins in late 1989 and focuses on New England. Texas suffered a severe contraction of its economy and of bank credit during the last half of the 1980s when the national economy was growing. By failing to examine state-level data, both studies misdate the start of the credit crunch by several years and fail to establish its regional nature (Rosenblum and Clair 1993).

Because Texas began its credit crunch earlier, Texas is a better case study to examine long-term effects. Texas' banking industry was so severely affected that even after the state's economy began a recovery in 1987, the banks did not increase their lending. Even though Texas' economy outperformed the nation's during the 1990–91 recession and experienced only a modest slowdown, lending at Texas banks did not increase for six years.

The life cycle of a credit crunch: the Texas experience

Until 1987, Texas' loan cycle was in line with the regional economic cycle. During the economic expansion of the first half of the 1980s, loans extended by Texas banks more than doubled from $52 billion in 1980 to $119 billion in 1985. In the midst of continued growth in the national economy, Texas entered a recession, triggered by a precipitous decline in oil prices in 1986. Declines in lending during an economic downturn are normal.

The abnormality in the Texas lending pattern surfaced about 1987. Despite an economic recovery, lending continued to decline. From 1987 to 1990, lending declined another 30 percent, even though employment increased 6.8 percent. Even the modest increase in loans outstanding that began in 1992 does not reflect new lending as much as it does acquisition of failed savings and loan associations (S&Ls), their assets, or assets from other nonbank institutions and consolidation of national lending operations into Texas banks.

A credit crunch is not a necessary consequence of an economic downturn. Lending declines during an economic downturn, but primarily because of decreases in business and consumer loan demand. In Texas, however, the economic climate has played an important role in the credit

crunch. A chain reaction of huge shocks to the Texas economy resulted in the near destruction of several key industries the state had relied on for growth throughout the 1970s and 1980s. To under-stand the Texas credit crunch, we must first understand the nature of this abnormally strong downturn and its repercussions on the economy.

In the late 1970s and early 1980s, the Texas economy prospered as the oil and gas industry boomed. Growth in the oil industry fostered employment growth in all sectors of the Texas economy. The climate was especially hospitable for commercial real estate.[3] Low vacancy rates, changes in tax laws, and financial deregulation in the early 1980s motivated investment in commercial real estate.[4] The state's strong economy and a drop in interest rates also encouraged the flow of funds to the real estate sector (Petersen 1992). As a result, office building permit values nearly doubled from $1,143 million in 1980 to $2,184 million in 1985.

Even when an initial weakening of oil prices in 1982 triggered a downturn in parts of the Texas economy, commercial real estate activity continued. Bankers' and other investors' interest in office buildings persevered in the face of skyrocketing vacancy rates. Office vacancy rates in major Texas cities increased from 8 percent in 1980 to 24.3 percent in 1985, as office building permits continued to rise (Petersen 1992).

Texas was not so lucky after a second sharp decline in oil prices in 1986. Recession struck the state but not the nation. Texas is an oil-producing state and an exporter of oil-field machinery, while the nation is an oil importer. Reversals of the tax laws that had favored commercial real estate investments exacerbated the state's economic problems by accelerating the flow of funds out of the office construction arena. The state lost 250,000 jobs and gained the burden of an extraordinary amount of vacant office space. In 1987, vacancy rates were near 30 percent in most major Texas cities.

Unfortunately, the shocks engendering the collapse of petroleum and construction were only the beginning for Texas. Like other investors, many aggressive banks were caught holding loans to both oil and gas producers and commercial real estate developers (Gunther 1989). Nonperforming loan rates at Texas banks increased steadily from 1984 to 1987, and troubled assets caused declines in equity capital and bank failures (Robinson 1990).

During the 1980s, equity capital at Texas banks followed the same pattern as lending. From 1980 to 1985, equity capital increased by 85 percent, or $6.2 billion. After the downturn in the Texas economy, equity capital declined by 41 percent, or $5.6 billion. The declines in equity capital resulted from $10.8 billion in loan losses experienced by Texas banks during the second half of the 1980s.[5] Although equity capital improved somewhat in 1989 and 1990, it was 23 percent below its peak.

[3] See Petersen (1992) for an excellent description of and outlook for the Texas commercial real estate industry.

[4] Petersen (1992) explains that the Economic Recovery Tax Act of 1981 redefined the business depreciation allowance for some real estate properties to allow for an accelerated recovery of investments, thus making those investments more attractive. For an extended discussion of the effects of depreciation rates on real estate decisions, see Yeats (1989). Also, the Depository Institutions Deregulation and Monetary Control Act of 1980, which helped phase out interest rate ceilings on time and savings deposits, and the Garn–St Germain Depository Institution Act of 1982, which created the money market deposit account, resulted in a large source of new funds. The Garn–St Germain Act further liberalized investments that S&Ls could make (although Texas state-chartered S&Ls already had these powers) and included provisions for the creation of nonexistent capital through the issuance of capital certificates. Together, these changes provided tremendous incentives favoring investment in commercial real estate.

[5] When loans are charged off as losses, these losses are deducted from the allowance for loan loss (a reserve account on the balance sheet), which historically was considered a part of regulatory capital. If the charge-offs are large, then the allowance must be replenished because the adequacy of the allowance is judged relative to the size of the loan portfolio and its risk. This is done by increasing the provision for loan losses (an expense item on the income statement). If this provision is large enough, it can cause net income to be negative; in other words, the bank sustains a net loss. If income is negative, then the equity capital position is reduced by the amount of the loss. Essentially, if the decline in the allowance for loan loss is so large that it cannot be absorbed by current income, then monies are diverted from equity capital to the allowance for loan losses.

Table 1
Texas Banking Statistics
(all figures are percentages)

	1988	1989	1990	1991	1992
Healthy Bank Index[1]	38.12	49.53	60.60	68.30	81.57
Return on Assets	–1.21	–.33	.41	.65	1.07
Nonperforming Loan Ratio[2]	6.41	6.59	3.14	2.85	1.70
Primary Capital Ratio[3]	6.40	6.02	7.20	7.44	7.68
Growth Rate of Securities	10.42	10.95	18.66	14.65	3.67
Growth Rate of Loans	–17.61	–7.43	–4.59	–2.53	6.69

[1] This index is the percentage of assets held by healthy banks. A bank is defined as healthy if it is earning a profit, has a troubled asset ratio below 3 percent, and has a capital ratio at least one-half percentage point above the regulatory minimum.
[2] Nonperforming loans are all loans 90 days or more past due or nonaccruing divided by total loans.
[3] Primary capital ratio is the sum of bank equity and loan loss reserves divided by the sum of total assets and loan loss reserves.

SOURCE: Federal Reserve Bank of Dallas.

For many banks, the decline in bank capital was fatal. Bank failures skyrocketed to levels not seen since the Great Depression. No Texas banks failed in 1981, but thirty-seven did in 1986, and the numbers kept climbing.[6] Texas bank failures peaked in 1988 at 149 and were down to 31 in 1992. The savings and loan industry suffered an even higher failure rate.

Pathology of a credit crunch

Researchers at the Federal Reserve Bank of Dallas have examined the connection between financial health of banks and their lending activity and have found that during the latter half of the 1980s, many Texas banks were too unhealthy to lend. Financially unhealthy banks are those with capital-asset ratios below 6 percent, with negative income, or with a troubled-asset ratio of 3 percent or more. In 1986, 55 percent of Texas banks holding 72 percent of the state's total banking assets were unhealthy by this standard. Increased lending by these banks would have exposed them to unacceptable risk of failure. Lending would have been discouraged or prohibited by bank supervisors and, in all likelihood, by the banks' own boards of directors.

Since the second quarter of 1988, the health of the state's banking industry has steadily improved. By the fourth quarter of 1992, 72 percent of Texas banks, with 82 percent of the state's assets, were healthy (*Table 1*). The improvement resulted from the failure of many unhealthy banks, from customers' switching their business from unhealthy banks to healthy banks, and the financial recovery of some unhealthy banks. However, the fact that 304 unhealthy Texas banks were holding approximately one-fifth of the state's assets as of the fourth quarter of 1992 indicates the im-provement has been slow (Clair and Sigalla 1993).

The inability of healthy Texas banks to take market share away from unhealthy banks in a timely manner contributed to the slow recovery of Texas banking. When banking problems escalated

[6] *Banks failures had slowly increased in the four years preceding the oil and construction bust. Although no Texas banks failed in 1981, five banks failed in both 1982 and 1983, six banks failed in 1984, and thirteen in 1985. This slow but steady increase signaled the increasing fragility of the banking industry before the economic shock.*

in 1986, healthy banks were small compared with their unhealthy competitors. The average healthy bank had only $67 million in assets compared with $136 million for unhealthy banks. Healthy banks controlled only 28 percent of Texas banking assets. Thus, for healthy banks to take over the market share of unhealthy banks would have required an inconceivably rapid expansion.

The rate at which healthy banks can take over the market share of unhealthy banks is limited by healthy banks' capital in excess of regulatory minimums. Raising capital in the equity markets was and is difficult for these healthy banks. Their small size means small equity offerings, which are costly to sell. Moreover, the chaotic state of the Texas banking market caused investors to shy away from Texas bank stocks. The only alternative left open to banks was to raise capital through the slow process of retaining earnings. Even if the average-size healthy Texas bank retained 75 percent of its earnings and maintained its primary capital-to-asset ratio, individually it could increase lending by only $2.4 million per year. If all healthy banks followed the same strategy, they could have only increased total lending by $2 billion—only a 1.7-percent annual increase.

But not all healthy banks increased their lending activity, which indicates an important pathology. The term pathology applies in this case because a bank in good financial condition in a growing region would normally be expected to increase its lending activity (Rosenblum 1991).

Those healthy banks not building their loan portfolios represented a significant share of the healthy banks in Texas. Of the 619 banks that were healthy as of the first quarter of 1991 and that had reported data for the past ten quarters, nearly 40 percent did not increase their lending from the first quarter of 1990 to the first quarter of 1991 (Rosenblum 1991). These banks accounted for 40 percent of the assets and 35 percent of the loans of healthy Texas banks at that time.

The pathology of financially healthy banks in a growing state not increasing their lending raises the need for an examination of the possible causes. The extension of bank credit, especially to small and mid-size businesses, supports new job creation and economic expansion. The remainder of this article discusses serious impediments affecting the supply of credit.

Six causes of the credit crunch

Declines in bank capital

Business-cycle effects typically do not cause a credit crunch. Business lending after adjusting for inflation typically moves with the business cycle with a lag. Both demand and supply shifts contribute to the cyclical movement. During a slowdown, demand for credit declines and the supply of credit also contracts because loans become riskier. After the recovery is established, demand increases and banks begin lending again.

In an atypically severe cycle, the ability of banks to begin lending after the recovery is established may be hindered. During the recession phase of a severe cycle, the larger than normal loan losses result in larger than normal reductions in bank capital and numerous bank failures. Loan losses in the recent regional and national recessions have been severe, especially when viewed relative to bank capital. During the 1985–90 period, banks in Texas made provisions for $14.5 billion in loan losses, and their total capital at the end of this period was $10.3 billion. Even among surviving banks, capital may fall below either the level desired by bank management or the minimums established by regulatory agencies. In either case, the expansion of credit will be limited by the bank capital levels (Clair and Yeats 1991, Hancock and Wilcox 1992).

Not only did loan losses reduce bank capital, but minimum capital standards rose. Baer and McElravey (1993) have examined the factors causing an increased demand for bank capital in the two-year period beginning in June 1989. By their estimates, meeting higher capital standards, whether imposed by regulators or adopted by more conservative bankers, had twice the effect of loan losses in creating the need for new bank capital.

Bank capital standards rose substantially over the 1980s and early 1990s (Baer and McElravey 1993). In the 1970s, bank supervisors set minimum capital ratios for each bank, based on ratios at similar banks. Bank capital ratios had been declining during the 1970s, and concerned regulators established a minimum primary capital ratio of 5.5 percent in late 1981, to be phased in over time.

By the latter half of the 1980s, bank regulators, as part of an international agreement, established risk-based capital ratios. Regulators assign

risk weights to various types of assets and off-balance-sheet risks and require capital to be held in proportion to the credit risk of the bank portfolio. For example, short-term Treasuries have a zero credit risk weight, and business loans have a 100-percent risk weight.

Risk-based capital ratios may have raised the relative cost of lending compared with investing in securities. If these risk-based ratios are a binding constraint on banks, then increasing business lending will require additional capital to be raised, but investing in short-term Treasuries requires no additional capital.[7] Since capital is costly, the risk-based system increases the cost of business loans relative to securities, thereby discouraging business lending.[8]

In addition to risk-based capital ratios, regulators removed the primary capital ratio requirement and replaced it with a leverage ratio requirement. Whether the leverage ratio is a higher constraint is uncertain. The required leverage ratio is dependent on a bank's risk rating. Nominally, a top-rated bank could have a leverage ratio of 3 percent, but most banks were expected to maintain leverage ratios in the neighborhood of 4 percent to 5 percent.[9] The old primary capital ratio was 5.5 percent, but it included loan loss reserves in the definition of capital, which the new leverage ratio does not.

While a direct comparison of these new capital regulations is not possible, an empirical analysis by Baer and McElravey (1993) indicates that banks are behaving as though their minimum capital requirements have risen substantially over the past few years. Based on their analysis, banks now respond as though their required leverage ratio has risen from 4 percent in the 1973–75 period to 7 percent in the 1989–91 period. Banks are behaving as though they are setting internal minimum capital standards much higher than the regulatory minimums. The pressure on banks, whether from regulators or internal management, to maintain higher capital ratios has severely limited their ability to extend new credit.

FDIC and RTC resolution of failed depository institutions

While loan losses directly reduced capital, the resolution of failed banks and thrifts increased the demand for capital. After a depository institution fails, its assets are taken over by the deposit insurer. Typically, the insurer sells the institution, often after cleaning the portfolio of the nonperforming assets.[10] The acquiring institution must have sufficient capital in excess of regulatory minimums to be able to increase its total asset holdings without becoming undercapitalized.

The resolution of failed banks and thrifts was not the only source of assets to be acquired. Many banks that did not fail but were undercapitalized reduced their assets to improve their leverage ratios. They had to sell these assets to healthier institutions that had sufficient excess capital to purchase the assets and remain sufficiently capitalized.

Baer and McElravey (1993) term this process the recycling of assets, suggesting that assets are recycled from undercapitalized to well-capitalized banks and thrifts. During the two-year period beginning June 1989, undercapitalized bank holding companies sold $82.8 billion in assets, failed banks accounted for $58.6 billion, and failed thrifts accounted for $177 billion, for a total $318.4 billion in recycled assets. Recycling these assets increased the need for capital by more than $22 billion, a

[7] There is a requirement for a minimum leverage ratio that requires a bank hold some capital regardless of the composition of its asset portfolio.

[8] Risk-based capital is not a bad idea in theory. That riskier institutions should hold greater capital is logical. If the loans diversify the bank's overall portfolio, however, then increased lending may decrease a bank's risk.

[9] It is erroneous to think that a bank is permitted to operate with a leverage ratio of 3 percent. There is a catch-22. Banks are rated from one to five on the CAMEL scale, with one being the highest rating possible. CAMEL is an acronym for capital, asset quality, management, earnings, and liquidity. A bank can't get a CAMEL-one rating with only 3 percent capital, but if the bank has a CAMEL-one rating, it is permitted to have only 3 percent capital.

[10] In some cases, the acquiring institution also acted as a collecting bank for the Federal Deposit Insurance Corporation (FDIC). In these cases, it was common for the bank to carry the assets in the collection operation under a special classification of "other assets," and the bank was not required to hold capital against these assets. Since the losses incurred from these collecting bank assets would be borne by the FDIC, the bank did not need to hold capital against these assets.

28.7-percent increase in capital at the time.

Beyond increasing the demand for capital by recycling assets of failed institutions, the failure–resolution process destroyed valuable information—reducing the ability of many borrowers to obtain credit (Board of Directors of the Federal Reserve Bank of Dallas 1991). Effective lending involves the ability of bankers to develop specialized information regarding their borrowers. This information allows bankers to make informed credit decisions at minimal cost. Anything that disrupts the banker–borrower relationship can lose or destroy the specialized information a banker has about a specific borrower.

One type of this specialized information is the banker's assessment of the borrower's character —a signal of the borrower's commitment to repay a loan under adverse conditions. Bankers attempt to assess the character of a borrower prior to making a loan. This assessment is hard to quantify or document and is an important judgment call that a bank officer must make.

Many borrowers will face difficulty in repaying during an economic downturn. Some will be unwilling to accept any personal sacrifice and will be quick to declare bankruptcy or otherwise force a bank into losses. Other borrowers, those with greater character, will make every reasonable effort to repay their obligations and will make personal sacrifices in the process.

During an economic downturn, the loan documentation of borrowers with radically different characters may appear very similar. The repayment may appear poor—that is, late or partial payments or violated loan covenants. Bankers know which borrowers are making tremendous efforts to meet their obligations and which borrowers expect the bank to be the first to forgo payment. Both loans may be classified as nonperforming.

When a failed bank is resolved, nonperforming loans are often either placed in a collecting bank or are held by the FDIC for liquidation. Borrowers must establish new banking relationships. But being placed in these collecting or liquidating operations places an equal stigma on borrowers of good and poor character. Resolving the failed bank destroyed the information that distinguished low-risk from high-risk borrowers.

Being placed in a collecting bank can even tarnish the reputation of borrowers with perfect repayment records. In the late 1980s, regulators created the "nonperforming performing" loan category. These loans were current on payments and not in violation of any loan covenants. Because the examiners considered the loans unlikely to be repaid given the examiners' current economic outlook, they classified them as nonperforming. As a result, another group of borrowers may have been inappropriately placed in the collecting bank and thereby faced substantial damage to their reputations.

The resolution of the failed banks and thrifts was inevitable, and it improved the health of the financial industry. The huge demand for capital required to recycle assets was unavoidable. Still, the increased demand for capital to fund these assets limited the capital available to fund new loans. The resolution process, however, destroyed valuable information on borrower relationships, and a reevaluation of the process to determine if the negative economic impacts of closing failed banks and thrifts can be reduced is warranted.

Bank supervision overreaction

The evidence that an overreaction by bank supervisors caused the credit crunch is mixed. Since the potential impact of bank examiners on credit decisions is large, the evidence needs to be presented. There are many different ways in which bank examiners, in the process of enforcing safety and soundness guidelines, might constrain bank lending.

1. Examiners could criticize existing loans—requiring banks to increase loan loss provisions and charge-offs, and thus reduce their capital.
2. Examiners could become more conservative in evaluating a bank's condition and thereby require a higher leverage ratio.
3. The specter of examiners' criticism alone could discourage loans from being extended.
4. For more troubled institutions, examiners may be directly setting restrictions on lending activity
5. Higher loan documentation requirements could raise costs, but these requirements may be more directly related to the regulatory burden and will be discussed elsewhere.

Each of these supervisory and regulatory impositions will have different effects on bank financial statements.

The hypothesis that bank examiner overreaction caused the credit crunch arises from the February 1990 advisory sent by the Office of the Comptroller of the Currency (OCC) to all banks warning against making imprudent real estate loans. In November 1990, as the national economy weakened, the Bush administration blamed the tight credit conditions on an overreaction by bank supervisors. Most bankers responded, however, that it had been and was the lack of loan demand and deteriorating economic conditions that discouraged their lending and not supervisory excess (Owens and Schreft 1992).

The evidence indicates that bank examiners did not overreact in criticizing existing loans and requiring good loans to be charged off. Bernanke and Lown (1991) examine this issue by analyzing the trend of provisions for loan losses relative to actual net charge-offs. Certainly, provisions for loan losses and net charge-offs rose during the 1980s, but the ratio of provision to charge-offs was very steady, indicating that examiners did not raise the standard for provisioning excessively. Accordingly, Bernanke and Lown conclude that examiners have not suddenly imposed new tighter examination standards that have constrained credit.

Even so, there is evidence that bank examiners are enforcing a more conservative view of what constitutes a healthy bank. David Bizer of the Securities and Exchange Commission has argued that bank examiners have raised the financial standards for any given CAMEL rating (Bizer 1993).

This change to more conservative CAMEL ratings is related to the credit crunch because the required leverage ratio is tied to a bank's CAMEL rating. The minimum leverage ratio is set at 3 percent for banks rated CAMEL one and rises as CAMEL ratings worsen. If bank examiners raise the standards for any given CAMEL rating, they are, in fact, increasing the minimum capital standard.

Bank examiners could also affect credit decisions by raising the expected cost of funding the credit. The cost of funds is a combination of the cost of the necessary capital and the cost of deposit funds. If bankers perceive, even erroneously, that examiners might criticize new credit extensions, then they expect that a larger share of new credits will have to be funded with relatively expensive capital, driving up the expected funding cost and discouraging new lending. These concerns could drive up funding costs by 70 basis points or more. (For a detailed example of this effect, see the box entitled "Examiners and Funding Costs.")

It is possible that bank supervisors are constraining lending activity beyond their power to set higher leverage ratios. Peek and Rosengren (1993) analyzed new lending activity of banks in New England, adjusting for whether a bank was operating under a formal agreement with its primary regulator. Regulators impose formal agreements on banks considered seriously troubled or even recalcitrant in repairing their financial condition. Such agreements allow the regulator to seek civil or even criminal penalties in the case of noncompliance.

After controlling for differences in leverage ratios, Rosengren and Peek's results indicate that new lending was significantly lower at banks operating under formal agreements than at banks with equally low capital ratios but not under such agreements. They conclude that banks may be slow to constrain their lending or to rebuild their capital on their own. Once the formal agreement is in place, however, banks respond much more quickly.

In sum, regulators constrain credit growth at weak institutions that are unwilling to temper their own behavior when faced with declining capital. But constraining the credit expansion of weak institutions does not cause credit crunches. In fact, it may prevent them in the future. Texas had many institutions that lent freely despite their weak financial condition. As a result, imprudent loans were extended, especially in commercial real estate development. The overbuilding that ensued affected the value of collateral supporting what otherwise would probably have been good loans made by financially strong institutions. During the worst of the Texas banking crisis, managers of well-run banks called for bank supervisors to shut down the activity of insolvent or nearly insolvent institutions.

In conclusion, bank supervisors do not appear to have required excessive charge-offs of nonperforming loans. Supervisors did constrain lending at financially weak institutions, but that is the proper role of supervisors. Bankers' concerns

Examiners and Funding Costs

Bank examiners can change the expected cost of funding a new loan by changing the banker perception of what loans might be criticized, which would change the required mix of capital and deposits needed to fund the loan. Loans are funded by a combination of capital and deposits.[1] Baer and McElravey's (1993) results indicate that banks would want a loan to be funded with 7 percent capital and 93 percent deposits. Capital is more costly to raise than deposits. For the purposes of our example here, it is assumed that capital requires a 15-percent return, and deposits cost 3 percent. In this simple example, the funding cost of a loan is the weighted average of these two costs, 3.8 percent, or

$$(.07 \times 15\%) + (.93 \times 3\%).$$

If, however, bankers believe examiners will criticize the loan, then the funding cost of the loan will rise sharply. Suppose bankers believe examiners will criticize the loan and require 30 percent of the loan to be reserved. In this case, approximately 65 percent of the loan would be funded with deposits and 35 percent with capital (30 percent of the loan is 100 percent funded by capital by being reserved and the remaining 70 percent of the loan that still requires a 7-percent leverage ratio.) In this case, the funding cost would rise to 7.2 percent, or

$$\{[.30 + (.70 \times .07)] \times 15\%\} + (.65 \times 3\%).$$

Now, if the banker believes there is only a 20-percent probability that the loan will be criticized, then the cost of funding would be the weighted average of these two funding costs, that is, 4.5 percent, or

$$(.20 \times 7.2\%) + (.80 \times 3.8\%).$$

Therefore, just the specter of examiner overreaction could increase the expected cost of funding 70 basis points, from 3.8 percent to 4.5 percent. Given this expectation, many loans would never be made. Beyond a lack of lending, there would be no direct evidence of this effect in bank financial statements, that is, no sharp rise in provisions for loan losses or charge-offs.

[1] To be precise, loans are funded by capital and liabilities. Liabilities include deposits in addition to federal funds purchased, other debt instruments, etc. For the purposes of this example, we have simplified the bank's funding to capital and deposits only.

that new loans might be criticized, however, may have discouraged lending by raising the expected cost of funding these loans.

New credit standards set by bankers

Atypically severe recessions alter both bankers' and bank supervisors' perception of risk. After an unusually severe recession and a sharp increase in bank failures, bankers will likely reevaluate risk and change their risk-taking behavior, require more capital to buffer against it, or both. Their willingness to supply credit is likely reduced.

In hindsight, the old credit standards were too lax.[11] If loans had been properly priced, banks would have accumulated sufficient capital during expansions to absorb loan losses during down-

[11] *Hindsight is always 20-20. For example, most cities will not grant building permits for land within a 100-year flood plain. If a new record flood results in the destruction of homes, it could be said that the previous standard was too lax. Higher standards would mean less risk, but the cost would be more land that could not be used for buildings.*

turns. This is not what happened in Texas. Many banks failed because their reserves and capital were insufficient to absorb loan losses. The inability of banks to properly price risk is related to the disincentives inherent in the deposit insurance system (Short and O'Driscoll 1983).

Bankers have contracted the supply of credit by raising credit standards and denying credit to many borrowers. Some of the rejected applicants have qualified for loans in the past or are even current borrowers seeking credit extensions. This change in status from creditworthy to uncreditworthy can be difficult to accept and can damage borrowers' businesses since many planned on continued access to credit.

Probably the greatest difference between borrowers' and bankers' perceptions is that borrowers perceive creditworthiness as an individual characteristic, while bankers view creditworthiness on both an individual basis and on the basis of the entire portfolio of loans. To illustrate, suppose that prior to a severe recession, a banker expects a 2-percent loss rate on loans to a given industry but during the recession, actually sustains a 5-percent loss rate. In response, the banker raises the credit standards for borrowers in this industry with the intention of obtaining a 2-percent loss rate. The higher standards, however, might result in, say, 25 percent of the previous borrowers being unable to qualify for credit.

The majority of rejected borrowers will have repaid their loans on time and in full. These borrowers are not different—in either financial characteristics or character—from the minority that defaulted. The bank realizes that the likelihood that an individual borrower will default is not easily guessed but that the default rate for a portfolio of loans is fairly predictable. The borrowers see themselves as good bank customers—not as the inadvertently lucky ones who did not default—and do not understand why they have been rejected. They complain, accordingly, that there is a credit crunch.

Returning to the issue of real, rather than hypothetical problems, the reevaluation of risk-return tradeoffs during the 1980s in Texas was not uniform across industries or types of loans. During this regional recession, some industries proved far riskier than bankers previously thought. In the 1980s, energy prices fell by more than 50 percent. Real estate values plunged. Consequently, many bankers revised their expectations for these industries more than for others.

Borrowers' confusion over their own creditworthiness was compounded by banks that were too weak financially to lend but pretended to consider loans for approval. If a bank's condition deteriorates to the point that it is unable to extend credit, the bank would likely want to conceal that fact. Otherwise, depositors might demand higher interest rates, and the bank's best borrowers might take their business elsewhere (Rosenblum 1991). To create the appearance of financial health, the bank pretends to continue its lending operations—including marketing activities. Even high-quality loan proposals are rejected, however, under the pretense that they are too "risky."

This masquerade is costly. The cost of camouflaging is borne by the borrowers that waste time and resources applying for loans from banks that are incapable of lending. In addition, other banks consider the rejection of the loan proposal a sign that the proposal really is too risky. As a result, with each rejection borrowers find it increasingly difficult to locate a willing lender.

Regulatory burden

Banking has been and currently is one of the most regulated industries in the United States. In its report on the regulatory burden, the Federal Financial Institutions Examination Council (1992) stated, "Certainly federal regulation of banking is pervasive in 1992; it affects virtually every aspect of industry behavior." The American Bankers Association estimates that banks employ more than 75,000 people just to comply with regulations, an average of more than six employees per bank.

The extent of the burden of regulation is best summarized by the following quote on the extension of just one type of credit (*Greater Cincinnati Business Record* 1992):

> Our biggest concern in the banking industry is the overregulation. It's unbelievable the regulations that the bank has to live with. If one of our people at one of our banking centers at one of our branches wants to make a car loan to you, here's the legislation that they have to be totally familiar with: the Consumer Credit Protection Act, the Truth in Lending Act, the Equal

> Credit Opportunity Act, the Fair Credit and Charge Card Disclosure Act, the Home Equity Loan Consumer Protection Act of 1988, the Fair Housing Act, the Real Estate Settlement Procedures Act, the Flood Insurance Protection Act, the Fair Credit Billing Act, the Fair Credit Reporting Act, the Home Mortgage Disclosure Act, the Fair Debt Collection Practice Act, the Consumer Leasing Act, the Community Reinvestment Act, the Bank Bribery Act, and the Securities and Exchange Act....And this isn't an inclusive listing. It's absolute insanity.
>
> — George A. Schaefer, Jr., president and chief executive officer, Fifth Third Bank.

There are costs and benefits to every regulation. Consumer protection and antidiscrimination laws are worthwhile goals. Achieving these goals is costly, and one cost is the effect of regulatory burden on the availability of credit. Judging whether the costs outweigh the benefits of any given regulation is outside the scope of this article, which is presenting only an explanation of some of the more hidden costs of regulation.

If banks have always faced a heavy regulatory burden, why is this now being proposed as a source of the credit crunch? The credit crunch did not begin until 1986 in Texas and even later elsewhere in the nation. It is crucial then to focus on what new regulations were enforced during this period. In addition, the financial condition of the banking industry should to be taken into account when, the effect of additional regulation is assessed.

Following the failures of banks and thrifts, Congress passed three major banking bills that increased the regulatory micromanagement of banks: the Competitive Equality Banking Act of 1987; the Financial Institutions Reform, Recovery, and Enforcement Act of 1989 (FIRREA); and the Federal Deposit Insurance Corporation Improvement Act of 1991 (FDICIA). These statutes funded the closure of insolvent thrifts and constrained banking activity.

Consumer protection laws also have increased sharply, with seven new laws since 1985 (Spong 1990). In addition, enforcement of some previously passed legislation increased suddenly in the early 1980s. By many accounts, the Community Reinvestment Act of 1977 (CRA) caused bankers relatively little concern until 1989, when a major bank's application for an acquisition was denied because it failed to meet its CRA responsibilities.

The increased regulatory burden further extended the time needed for healthy banks to take over the market share of unhealthy banks and for unhealthy banks to recover. The additional costs imposed on banks lowered their net income, slowing the rebuilding of capital through retained earnings. If the capital losses of the 1980s created a credit crunch, then the increased regulatory burden extended its life.[12]

The regulatory burden's impact on the credit crunch is directly related to increased compliance costs. Four different estimates of the compliance cost are presented in Table 2 and range from $7.5 billion to $17 billion for 1992. Based on the lowest estimate of $7.5 billion, if these funds could have been applied to capital rebuilding, banks could have funded an asset expansion of $93 billion (assuming an 8-percent capital-to-asset ratio). This analysis, however, has not attempted to measure the benefits of regulation.

The regulatory burden not only contributed to the credit crunch by imposing a cost on banks, but it also discouraged lending by imposing relatively higher costs on lending than on investing in securities. Most discussions of the cost of the regulatory burden treat the cost as a lump-sum tax that must be paid by the bank. A lump-sum cost would not affect the banks' decisions to lend relative to invest in securities.

In reality, many regulatory requirements impose a greater burden on lending than on investing in securities. For example, regulatory requirements for frequent appraisals on real estate loans impose a cost on a type of loan that is not imposed on securities. If compliance costs are directly related to lending, then the regulatory

[12] *If the regulatory burden had been imposed on a healthy, thriving banking industry, then it still would have had a negative effect on lending. The effect might not have been as noticeable. It might have been the difference between slower credit growth instead of credit contraction. In either case, the effect of the regulatory burden might be equal, but in a healthy banking industry it would be offset by capital growth.*

Table 2
Cost of Regulatory Burden

Group conducting the study	Estimated annual costs for 1992 (billions of dollars)	Cost as a percent on noninterest expenses[1]
FFIEC[2]	7.5 to 17	6% to 14%
ABA[3]	10.7	10%
McKinsey	10.4*	8.1%
IBAA[4] Grant Thorton	11.1	8.7%

*Estimated value based on 1992 total noninterest expense of $128 billion.

[1] Costs do not include the opportunity cost of holding required reserves that are not bearing interest.
[2] Federal Financial Institutions Examination Council (FFIEC).
[3] American Bankers Association (ABA) estimate does not include the cost of deposit insurance premiums, which could raise their ratio by 5.3 percentage points based on the McKinsey & Co. study, and does not include the costs of FDICIA, which McKinsey & Co. estimates to be at least 1.5 percentage points.
[4] Independent Bankers Association of America (IBAA).

SOURCES: FFIEC; ABA; McKinsey & Co., Inc.; and IBAA.

burden will discourage lending even after the banks have replenished their capital.

A third way that regulation might reduce lending is through mandates for direct credit allocation. Through the CRA, Congress has sent a message to banks and bank regulators that it wants increased lending in lower income neighborhoods. If banks are required to lend more to lower income borrowers, then they will reduce their lending to other borrowers (Gruben, Neuberger, and Schmidt 1990), and they may reduce their total lending and increase investment in Treasury securities (Wood 1991). Borrowers from higher income areas could perceive this shift as a constraint on credit availability.[13]

This analysis is based on the following assumptions:

1. that banks are judged for CRA compliance by the percentage of their loan portfolio that is lent in lower income areas;[14]
2. that bankers are adverse to taking risk; and
3. that bankers believe loans in lower income neighborhoods are riskier than loans in higher income neighborhoods.

If the cost of failing to comply with CRA is substantial, then banks will raise the proportion of lower income loans in their loan portfolio. As banks hold more of the riskiest assets, bankers balance their portfolio's risk exposure by investing more in risk-free Treasury securities, and total lending declines. In an extreme case, banks may even decrease their loan portfolios so much that the lower income group receives fewer total loans than previously, even though their proportion of the loan portfolio has risen.

Consequently, the enforcement of CRA, while achieving certain goals, is an example of how regulatory burden can reduce total lending through three different mechanisms. First, by imposing compliance costs, such as those for record keeping, regulation can reduce net income and slow

[13] The reduction in lending to other borrowers would be especially severe if banks are operating at the minimum acceptable levels of capital. If banks had excess capital, then increased mandated lending to one group of borrowers might not affect credit availability to other borrowers.

[14] Currently, banks' CRA compliance is judged on the basis of making a good faith effort to serve the credit needs of low-income communities within their markets.

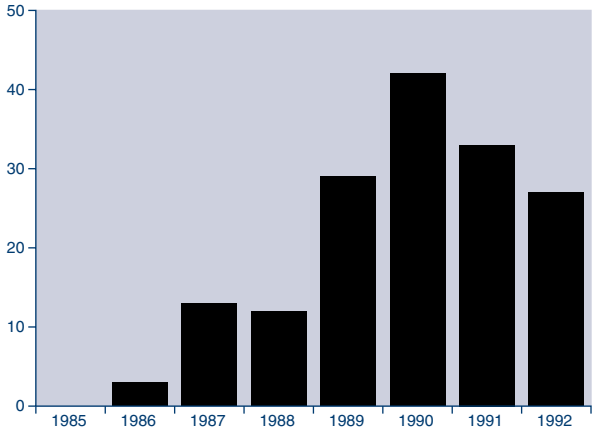
the rebuilding of capital. Second, by imposing costs on lending, such as those for geographic loan coding, that are not imposed on investing, regulation can discourage lending and encourage investment in securities. Third, the direct allocation of loan portfolio shares into loans that are perceived to be riskier can lead banks to balance their overall risk by reducing total lending.

Cost of increased legal exposure

Lender liability lawsuits. Lender liability is a growing concern and an important risk exposure for banks. Bankers' increasing concern over these issues can be demonstrated by the rise in the number of citations of "lender liability" in the *American Banker* over the past seven years (*Figure 1*). The sharp rise in citations that began in 1986 is a clear indicator of bankers' interest and concern. The timing of the increase is likely related to a 1985 case on wrongful termination of credit.

One of the biggest legal problems for banks is that uncertainty in the law makes it difficult to determine what actions create liability. Uncertainty raises the risk of extending loans, because banks are unable to estimate their exposure to lawsuits. Increased risk discourages lending and exacerbates problems in credit availability.

Figure 1
Number of Articles on "Lender Liability" in the *American Banker*



SOURCE: Federal Reserve Bank of Dallas.

A major area of concern for bankers is potential liability for environmental cleanup costs of property belonging to the banks' borrowers. Banks' environmental liability arises from several sources —the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA, or the Superfund law), the Resources Conservation Recovery Act (RCRA), and other state and federal environmental laws.

Banking environmental litigation often concerns CERCLA provisions that make owners or operators of contaminated properties responsible for environmental cleanup, even if they did not cause the contamination. CERCLA contains an exemption for creditors that take ownership in a foreclosure (Scranton 1992). An interpretation by the courts, however, left banks susceptible to liability for conducting ordinary banking activities (Garsson and Kleege 1991).

Bankers objected to this interpretation, which made foreclosures especially risky. A bank implicated under CERCLA faces liability for claims limited only by the total cost of the cleanup, possibly billions of dollars. The size of the bank's loan to the owner or operator of the contaminated property does not limit the bank's total exposure to claims (Kleege 1992). The Environmental Protection Agency (EPA) has settled with banks for smaller amounts, but as American Bankers Association associate counsel Thomas J. Greco notes, "If a bank hasn't done anything, why should it be paying anything at all?" (Kleege 1991a).

Some relief has been given. The EPA has written new rules that define the terms when a bank is liable for cleanup costs. These new rules, however, have not been fully challenged in the courts, and attempts to make the rules into law have been unsuccessful in Congress.

Requiring banks to pay for property contamination cleanup expenses has contributed to the credit crunch. The cost of screening loans for environmental risks discourages lending. Banks shy away from extending loans to businesses that utilize hazardous materials. Many of these businesses are small, local businesses such as dry cleaners, funeral parlors, gasoline stations, and farms (Garsson and Kleege 1991). Knowledge or fears about environmental liability can halt loans to businesses of any kind, if bankers have reason to suspect contamination (Kleege 1990). Beyond legal liability, the

bank is not protected from the borrower reducing the value of the collateral through pollution.

Environmental issues are not the only ones that can land banks in court. Banks face legal liability in providing many banking services. With regard to their borrowers, banks can be sued if they exercise excessive control over borrowers or if they wrongfully terminate credit. In addition, banks can be sued under the Racketeer-Influenced and Corrupt Organizations Act of 1970, also known as the RICO Act, which was originally designed to attack organized crime.

The issue of excessive control dates to a 1984 Texas court decision that established limits as to what direct influence a bank can exert over its borrowers. The effect of this decision is best summarized by A. Barry Cappello, a lawyer specializing in lender liability, who said, "Whenever a lender has anything other than an arm's-length relationship with its borrower, the potential for liability exists" (Adkins 1992).

This decision has discouraged lending in at least two ways. First, lending is now riskier because banks are more limited in the actions they can take to enhance the probability of repayment and protect their collateral. Second, the cost of defending against such suits and the possible damages that must be paid are costs to supplying credit and must be factored in the bank's pricing. As a result, the amount of credit a bank is willing to supply at any given price is reduced.

Legal exposure for the wrongful termination of credit was a problem for banks in the mid-1980s, but it has diminished in recent years. Court rulings had made it no longer sufficient merely to stay within the terms of the loan agreement; banks had to show reasonable cause. In recent years, however, the courts have allowed banks to enforce the terms of a loan agreement without imposing additional requirements. The timing here is important. Even if this legal issue has diminished in importance in recent years, it could have contributed to the Texas credit crunch that began in 1985.

Though the RICO Act was passed in 1970, it did not become a problem for bankers until 1985, when the Supreme Court expanded RICO to include banks. The RICO designation permits the plaintiff to ask for treble damages. RICO is yet another example of an increase in lender liability that occurred in the mid-1980s. Protecting against such lawsuits is costly and discourages lending. In contrast, no one has ever been sued by the federal government for buying Treasury securities.

Regulator lawsuits. In the 1980s, financial institutions failed for a variety of reasons, only some of which might be considered criminal. Some thrift and bank managers were guilty of criminal misconduct because of insider dealing or other fraudulent acts. Many other banks and thrifts failed because they made mistakes in their loan decisions. Often these mistakes were only apparent after the fact and could not necessarily have been foreseen at the time the loan was approved.

The FDIC, however, has reacted to the bank failures with scores of lawsuits against bank officers and directors. These lawsuits serve two purposes for the FDIC. First, the lawsuits seek to collect on the director and officer insurance banks routinely purchase, shifting a portion of the costs to the private insurance industry. Second, these lawsuits tend to focus attention on the industry's responsibility for the problems.

In the 1990s, the FDIC has attempted to raise the acceptable standard for bank officers' and directors' behavior. Under the proposed standard, a bank failure in the normal course of business would be evidence of simple negligence, and the FDIC would sue for damages. The courts have failed to accept this new standard (Rehm 1993).

These lawsuits contribute to the credit crunch. Bank officers and directors are encouraged to be more cautious in assessing risk and return tradeoffs. Directors and officers are expected to avoid ex post any risk that resulted in a loss to the bank. Of course, the best way for a bank to avoid risk is to avoid lending, an inherently risky activity.

These lawsuits also increase the difficulty of recruiting highly competent individuals for positions on banks' boards of directors. High-quality directors monitoring bank management reduces regulators' burden monitoring the industry. Furthermore, these lawsuits have resulted in higher premiums for directors' and officers' insurance for nearly all banks. These higher costs must be factored into loan pricing.

Conclusion

Sometimes, six observers can find six different causes for a single problem, and they can all be

right. The credit crunch is an example. The credit crunch is the result of multiple factors adversely affecting banks' ability to supply credit at a time when banks' ability to adjust to these factors was unusually limited.

Increased lending is limited to some degree by the necessary rebuilding of banks' capital positions. The drains on capital in recent years have been substantial. Loan losses have directly reduced capital at the banks experiencing the loss; recycling the assets of failed banks and thrifts also created a huge need for additional capital; and following an atypically severe economic contraction, both regulators and bankers appear to have raised the acceptable minimum capital levels and credit standards.

The costs of lending have also risen substantially over this time period. The resolution of failed banks and thrifts destroyed valuable information. The perception of an overreaction by bank examiners has raised the expected cost of funding lending activity. Regulatory burden and increased exposure to legal liability has raised the cost of doing business for banks. By decreasing net income, these costs compound the problem of raising capital through retained earnings, and in many cases, these costs skew the cost of extending loans relative to investing in securities.

Since there are multiple causes of the credit crunch, the solutions to the credit crunch need to be multifaceted. Some causes are temporary in nature and will correct themselves over time. Other causes, however, are structural and will not be eliminated with economic recovery. Some causes are the unintended side effects of policies addressing other societal problems. Simply addressing the financial condition of the banks is unlikely to generate a quick solution. Many healthy banks in Texas have declined to increase their lending in the first five years of the regional economic expansion. While it is beyond the scope of this article to propose solutions, solutions need to be found. Many of the causes of the credit crunch are the result of policies addressing other problems, such as bank failures, community development, credit discrimination, and access to the courts. The positive outcome of these policies must be carefully weighed against the economic consequences of inhibiting the flow of credit and slowing economic growth and job creation.

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