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Federal Reserve Bank of Cleveland

The Bank Credit-Card Boom: Some Explanations and Consequences

by Paul R. Watro

What is behind the surge in credit-card lending and the sharp rise in credit-card charge-off rates at banks? Factors related to risk-taking help explain why some banks have higher charge-off rates than others.

In financial activities, there is a trade-off between risk and return. The higher the risk, the greater the required return.

This fundamental principle helps explain why credit-card interest rates are still in the 17-18 percent range, even though rates on most other kinds of bank loans have fallen significantly since the early 1980s.

Credit-card loans have higher interest rates because they generally lack collateral and involve more risk. If such loans are not repaid, banks often must charge them off and suffer a loss.

In the last three years, the rate of such charge-offs has more than doubled, indicating a decline in credit quality. In spite of this, however, strong consumer demand and attractive profit margins have led to greater credit-card lending by banks.

This increased lending comes at a time when fewer potential customers are without credit cards and when banks are using market segmentation to combat the more intense competition, which has made growth in credit-card operations more expensive.

In view of the expense, the risk, and the higher rate of charge-offs, are banks acting irrationally when they try to increase their credit-card lending business? The answer depends on the trade-off between risk and return.

In this article, we discuss factors behind the surge in credit-card lending, and identify factors related to risk-taking that help explain why some banks have higher charge-off rates than others.

■ Consumer Demand

Consumer spending has propelled economic growth, particularly in the early years of the current economic expansion, which began in November 1982.[1] Rising income levels and improved wealth positions have contributed to increased consumer spending. Consumers have also been borrowing more. For instance, consumer installment debt as a percentage of disposable personal income rose from 14 percent in 1982 to over 18 percent in the last year or two.

Credit cards have been the fastest-growing form of consumer credit. In the last five years, credit-card balances have more than doubled and now account for nearly 25 percent of all consumer installment debt, compared to 20 percent in 1982. This growth has occurred even though lenders charge higher rates on credit-card loans than on other consumer loans, such as auto loans. One reason for the higher rates is that credit-card credit has no collateral.[2] If the cardholder defaults, the credit-card issuer is without recourse against the merchandise purchased with the card.

The growing popularity of credit cards may be attributed to many factors. From a user standpoint, acceptance, convenience, safety, and flexibility have encouraged consumers to make greater use of charge cards. Credit-card transactions provide users with a convenient way to maintain records for tax and other purposes and a way to minimize the risk and financial cost of carrying large cash

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balances. Credit cards might even be superior to checks or cash for some transactions, such as those in foreign countries and those over the telephone and through the mail.

Banks' Role

Spurred by growing consumer demand, high returns, and declining commercial lending profits, many banks have placed greater emphasis on consumer lending, especially on credit-card lending. As a percentage of total bank loans, credit-card receivables jumped from 3 percent in 1982 to over 5 percent by year-end 1986. Banks now hold close to two-thirds of the credit-card outstanding balances, up from just over one-half in 1982.

Technological advances, economies of scale, deregulation, and favorable market conditions have encouraged lenders to mass-market credit on a nationwide basis. Banks issuing credit cards face sizable volume requirements in order to achieve profitability because of high operating costs. This is why many banks that offer credit cards participate with larger banks or organizations that actually issue cards and determine their rates, fees, and service features.[3] Because of economies of scale in credit-card operations, banks have an incentive to expand and become the low-cost issuers.[4]

When the cost of money fell significantly in the mid-1980s, banks generally sought to expand credit-card lending through mass-mailing solicitations with preapproved credit. Banks have largely relied on credit-card availability and services rather than on price in issuing cards.

Credit-card issuers generally have increased credit limits, have provided a wider range of enticements, and have offered credit to riskier groups of consumers who were previously unable to obtain credit cards. The spreads between funding costs and credit-card interest rates enable banks to buffer the expected higher credit losses associated with lending to riskier customers.

Credit-card accounts may be more valuable than their direct dollar return if they provide banks with useful marketing and credit information. For instance, banks could judge the creditworthiness of cardholders for larger loans based on their payment history. Some banks, such as Citibank, have apparently used credit-card customers as target groups for selling insurance products and for penetrating out-of-state markets. Moreover, banks typically include advertisements in monthly bill statements in an effort to sell other banking services to credit-card customers.

Perhaps earnings have been the underlying force behind the rapid expansion in credit-card operations at banks. Chart 1 shows that credit-card profit margins have improved sharply and have been better than those from other types of lending in recent years.[5] From 1984 through 1986, the annual pretax net returns on bank credit-card balances averaged 3.6 percent. In the same period, banks earned 2.4 percent on real estate mortgages, 2.7 percent on consumer installment debt and 1.4 percent on commercial and other loans. Bank credit-card returns have benefited not only from the robust consumer demand, but also from the removal or relaxation of state usury laws in the early 1980s and from the large decline in funding costs from those years.

Over a longer period, however, credit-card profits look quite different. Credit-card issuers experienced a severe profit squeeze in the 1979-81 period because of historically high interest rates and binding usury laws. Credit-card earnings were generally more volatile and lower than earnings from other loans. Greater volatility may have reflected a combination of factors, including changes in the cost of funds, binding usury ceilings, and the higher degree of default risk in credit-card lending.

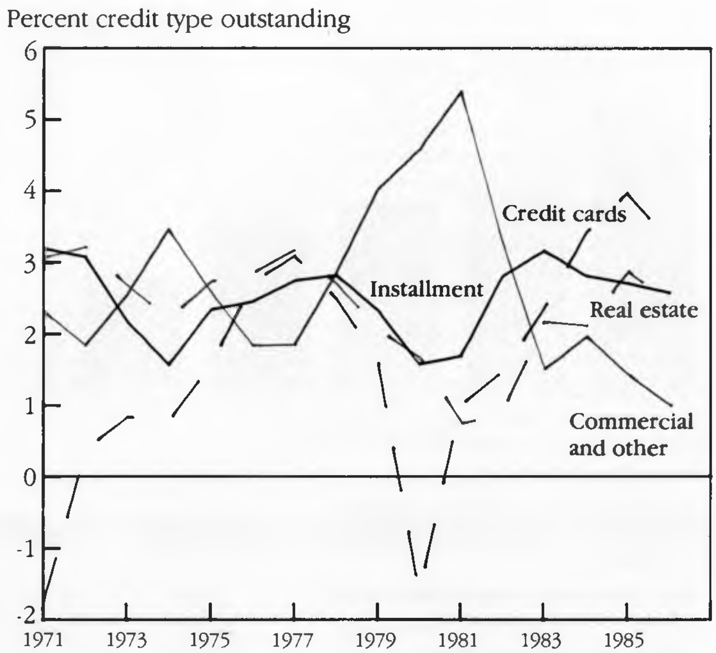
Credit-card performance was also quite poor during the developing stages of bank credit-card systems.[6] In addition to operating problems, banks underestimated the burden of controlling credit losses. In an effort to grow and to gain market acceptance, banks turned to mass mailing of unsolicited credit cards during the late 1960s. This marketing strategy led to large-scale credit and fraud losses, that, in turn, led to legislation prohibiting the unsolicited distribution of credit cards.[7]

Despite a shaky track record, the recent prosperity in credit-card earnings has spurred new entrants and more intense competition in the credit-card business. A few years ago Sears introduced the Discover Card, which has not become profitable yet.[8] American Express also introduced the Optima card, which offers a revolving credit line with a lower interest rate than most bank cards.[9]

With greater competition and fewer consumers without credit cards, however, large-scale expansion is probably becoming more expensive and more risky. Nevertheless, mass solicitations with preapproved credit lines, waived annual fees, and other enticements continue to be common among large issuers.

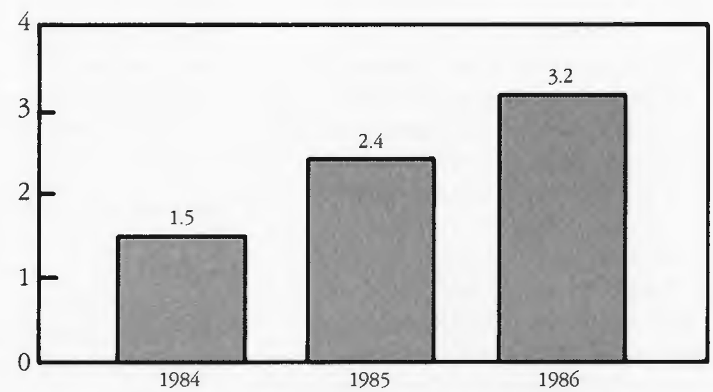
In an effort to build consumer loyalty, many banks have sought to tie credit cards to affinity groups such as airlines, hotel chains and alma maters during the past year or two. The sponsoring organization typically endorses the bank's card for financial compensation based on members' acceptance and use of the card. While aggressive marketing and liberal credit policies have promoted credit-card growth, some of the expansion came at the expense of loan quality.

CHART 1 NET PRETAX PROFIT MARGINS ON VARIOUS TYPES OF BANK CREDIT



NOTE: Based on annual data from the Federal Reserve System's Functional Cost Analysis.

CHART 2 NET CHARGE-OFFS ON BANK CREDIT CARDS (AS A PERCENT OF CREDIT-CARD AVERAGE BALANCES)



NOTE: Based on data from reports of income and condition for all banks.

Credit Quality

One widely used measure of loan quality is net charge-offs.[10] These are loans judged to be uncollectable in a given year, minus any recoveries of loans previously charged off. Banks generally write off unsecured loans, such as credit-card receivables, faster than well-secured loans like home mortgage loans.

Chart 2 shows that bank credit-card quality has deteriorated. Net charge-offs as a percentage of credit-card balances have more than doubled, jumping from 1.5 percent in 1984 to 3.2 percent in 1986. The deterioration reflects many factors, some and perhaps the most important of which have no relation to the business cycle.

In our study, we examine 148 large banking organizations to identify the level and variability of credit-card charge-off rates among individual banks. We look at banking organizations as a unit rather than as individual banks because some organizations have shifted credit-card balances among subsidiary banks. In fact, more than 20 bank holding companies operate special banks dealing primarily in credit-card accounts.[11]

Our sample included all bank holding companies established before 1982 that have a subsidiary bank with assets over $1 billion and that have total credit-card receivables of more than $25 million. These banking organizations hold 80 percent of bank credit-card receivables and accounted for nearly 85 percent of credit-card charge-offs at banks in 1986.

Credit-card charge-off rates varied considerably among our bank sample. Net charge-offs as a percentage of credit-card balances ranged from -0.6 to 8.9 percent and averaged 2.2 percent for 1986.[12] Charge-off differences could be due to numerous factors including differences in luck, economic conditions, and risk-taking.

TABLE 1 BANK CHARGE-OFF DIFFERENCES ON CREDIT CARDS

	High-Charge-off Group	Low-Charge-off Group	Difference
Credit-card balances/ total loans	7.9%	3.7%	4.2%[a]
Change in credit-card balances/ total loans (1983 to 1985)	2.5	-1.0	3.5[a]
Loans/assets	63.9	60.8	3.1
Revenues from credit-cards/ average credit-card balances	19.3	14.9	4.4[a]
Credit-card balances (billions)	$1.8	$0.1	$1.7[b]
Assets (billions)	27.8	5.0	22.8[b]

a. Denotes statistical significance at the 1 percent level.
b. Denotes statistical significance at the 5 percent level.
NOTE: Data are as of year-end 1986, unless otherwise noted.
SOURCE: Federal Financial Institutions Examination Council's Reports of Income and Condition for banks.

We examine credit-card growth, specialization, volume, revenue, loan-to-asset ratio and organizational size as potential explanatory factors for interbank charge-off differences. Each of these factors is related to risk-taking in one way or another.

Banks that experience faster credit-card growth might be expected to incur higher charge-offs because a trade-off may exist between credit growth and credit quality. Lenders that specialize in or devote more resources to a certain type of lending may also be more aggressive and extend riskier lines of credit in those areas. Alternatively, those banks may be better at managing risk. Specialization is measured by the current share of loans held in credit-card receivables and growth is measured by the change in this ratio over the two previous years.

There is a positive relationship between risk and returns. Lenders charge higher rates or require higher revenues for riskier loans. Accordingly, one would expect to find higher credit-card charge-offs at banks that generate higher revenues per dollar of credit-card balances. We also examined loan-to-asset ratios as a measure of an organization's overall attitude towards risk. Higher ratios are thought to reflect greater risk-taking since loans are usually riskier than other assets, such as government securities.

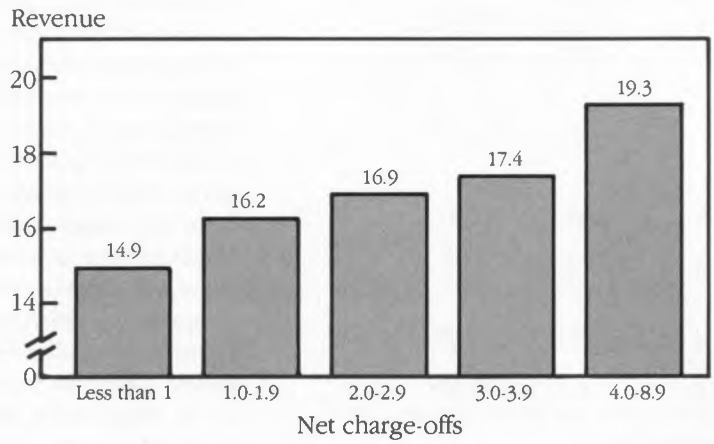
Product and geographical diversification helps to reduce risk. The largest credit-card issuers with a nationwide customer base should have more geographically diversified portfolios that could lower charge-off rates. On the other hand, the largest banking organizations might choose to have lower credit standards for issuing credit cards because of potentially lower risk levels from greater product and loan diversification.

We use two common tests to ascertain whether or not credit-card growth, specialization, volume, revenue, loan-to-asset ratios, and organizational size had any influence on charge-off rates. First, we compare the sample extremes—those with the highest and lowest charge-off rates. The high group included those with charge-off rates greater than 4.0 percent and the low group included those with charge-off rates less than 1.0 percent. For each variable, average values were computed for both groups and the difference was tested for statistical significance. Second, to explain differences in charge-off rates for the whole sample, we use a statistical technique that isolates the effects of one variable while taking into account other factors.

Our analysis, as expected, revealed that the 18 banking organizations in the high-charge-off group differed significantly from 21 banking organizations in the low-charge-off group. The table shows that the high-charge-off banks were much larger, placed greater emphasis on credit-card lending, and charged higher prices. The high-charge-off organizations experienced much faster credit-card growth and, on average, they held $1.8 billion in credit-card receivables, which accounted for nearly 8 percent of their loans. Average credit-card revenues generated by the high-charge-off group were 4.4 percent higher than the low-charge-off group.

Although we do not know if higher revenues were sufficient to offset higher default costs, this finding suggests that banks are taking credit risk into account at least to some degree when pricing credit cards. Higher

CHART 3 CREDIT-CARD REVENUE BY CHARGE-OFF GROUPS (AS A PERCENT OF CREDIT-CARD AVERAGE BALANCES)



NOTE: Based on 1986 data from reports of income and condition for bank sample.

charge-offs, therefore, do not necessarily imply inferior performance or cause for immediate concern, as long as lenders are being adequately compensated for credit risk.

The strong positive relationship between revenues and charge-offs is also depicted in chart 3. The chart shows average credit-card revenues for the whole bank sample broken out into five groups according to the level of credit-card charge-offs. Banks in the higher charge-off groups progressively earned higher revenues, suggesting that they charge higher rates and fees but lend to riskier customers.

However, the loan-quality/revenue relationship could be spurious, that is, other factors could be causing it. When we isolated the influence of individual factors while taking into account other factors, such as asset size and the percentage of loans in credit-card balances, we still found that banking organizations with higher credit-card charge-offs had significantly higher credit-card revenues.

Other results were also similar to the findings listed in the table.[13] One important exception was that credit-card balances were found to be negatively related to charge-off rates when asset size was taken into account. This finding, although statistically insignificant, is consistent with the view that larger portfolios are generally more diversified and carry less risk than smaller portfolios.

■ Conclusion

Bank credit-card lending has increased rapidly since the early 1980s. This increase has been fueled by a range of factors, including robust consumer demand, improved technology, removal or relaxation of state usury laws, economies of scale, cross-selling potential, substantial decline in funding cost and attractive profit margins. Higher credit-card earnings have attracted new competitors, more aggressive marketing and more liberal credit standards that, in turn, led to a sharp rise in credit-card losses.

Credit-card charge-offs varied considerably among issuers. Banks with higher propensities to take risk incurred higher charge-off rates. As long as issuers receive adequate compensation for credit risk, however, charge-offs are not necessarily a problem. Also, the potential impact of high credit-card charge-offs on the financial condition of banks is reduced by the fact that even the most aggressive banks in credit-card lending still have relatively small portions of their assets and loans in credit-card receivables.

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The views stated herein are those of the author and not necessarily those of the Federal Reserve Bank of Cleveland or of the Board of Governors of the Federal Reserve System.

Footnotes

1. See K. J. Kowalewski, "Is the Consumer Overextended?," *Economic Commentary,* Federal Reserve Bank of Cleveland, November 1986.

2. However, this does not necessarily explain why credit-card rates have not fallen in tandem with other loan rates.

3. There are approximately 3,000 banks and other institutions that issue credit cards. "Interest Rate Controls on Credit Cards — An Economic Analysis," Lexicon, Inc., October 1985.

4. See Christine Pavel and Paula Binkley, "Costs and Competition in Bank Credit Cards," *Economic Perspectives.* Federal Reserve Bank of Chicago, March-April 1987, pp. 3-13. The authors found economies of scale in credit-card operations for a sample of small- and medium-size banks.

5. Figures are based on data provided by banks participating in the Functional Cost Analysis of the Federal Reserve System. For a discussion of credit-card profitability, see Glenn Canner and James Fergus, "The Effects on Consumers and Creditors of Proposed Ceilings on Credit Card Interest Rates," Staff Study 154, Board of Governors of the Federal Reserve System, October 1987.

6. Peter S. Rose, "The Promise and the Peril," *The Canadian Banker & ICB Review,* Volume 85, November 6, December 1978, pp. 64-65, and Joel P. Friedman, "Golden Goose or Ugly Duckling?," *ABA Banking Journal,* September 1986, pp. 73-77.

7. The Consumer Protection Act (October 1970) also limited the cardholder's legal liability for unauthorized use of the card to a maximum of $50.

8. "Sears Is Discovering Discover Credit Card Isn't Hitting Pay Dirt," *Wall Street Journal,* February 10, 1988, p. 1.

9. Kathleen Hawk, "Plastic Warfare," *U.S. Banker,* June 1987, p. 40.

10. Delinquencies, or past due loans, are another measure of loan quality, but some of these figures are treated as confidential by bank regulations.

11. A list of so-called credit-card banks is provided by the *American Banker,* January 4, 1988, p. 15.

12. The weighted average net charge-off rate was 3.4 percent for the sample.

13. Credit-card charge-off rates were regressed on the six variables listed in the table. Each of the variables except credit-card balances was positively and statistically related to credit-card charge-offs at least at the 5 percent level of significance. The variables collectively explained 40 percent of the variance in the credit-card charge-off rates across the 148 banking organizations that were examined.

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