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Meet the New Borrowers

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Credit card lenders have been writing off loans at sharply higher rates since 1995, suggesting that riskier borrowers are acquiring credit cards. What makes the new borrowers riskier—even more than their personal characteristics and attitudes toward debt—is the fact that they carry higher debt burdens and work in occupations where income may be more cyclical.

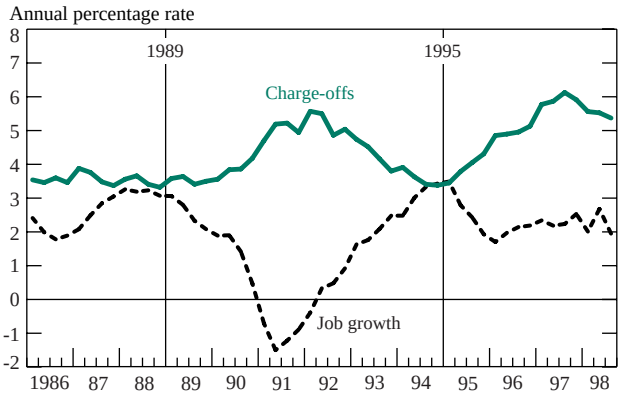
A democratization of credit cards is occurring in America.[1] According to the Survey of Consumer Finances, only 43 percent of U.S. households in 1983 had a MasterCard, Visa, or some other general purpose credit card.[2] By 1995, that share had jumped to 66 percent. Credit card carriers in the 1980s seemed like an elite club; now it seems that anyone can join.

Today's wider distribution of credit cards suggests that lenders are reaching out to riskier borrowers.[3] Credit card charge-offs—the bad loans that banks write off in a given year—turned upward sharply near the beginning of 1995 (see chart). Expressed as a percentage of all credit card loans, the annual charge-off rate rose to 6 percent in 1997—the highest in twenty-five years. The national slowdown in job growth in 1995 surely contributed to this rise in bad debt, yet charge-offs rose disproportionately and continued to rise even after job growth rebounded in 1996.[4] Even the slowdown in 1989, which ended in a recession, did not lead to as much bad debt as the mild slowdown did a few years ago. Something besides macroeconomic conditions is behind the rise in bad debt.

This edition of *Current Issues* investigates how the mix of cardholders has changed and identifies characteristics that seem to make the new borrowers riskier. Comparing data from the 1995 Survey of Consumer Finances with data from the 1989 survey, we find that cardholders in 1995 were more apt to be single, more likely to rent, and had less job seniority than cardholders in 1989. The new borrowers were also more willing to borrow, and to borrow for seemingly riskier purposes, such as vacation.

While these changes in personal characteristics and attitudes imply a higher risk of delinquency, we conclude that they are relatively unimportant in explaining

Credit Card Charge-offs and Job Growth



Sources: Job growth: U.S. Department of Labor, Bureau of Labor Statistics; charge-offs: Federal Financial Institutions Examination Council, *Reports of Condition and Income.*

the overall rise in bad debt. Much more important is the higher debt burden among cardholders: the new borrowers owe substantially more relative to their income, so even small drops in income can cause financial distress. Type of occupation also matters. The new borrowers are more likely to work in relatively unskilled blue-collar jobs; delinquency rates are higher among such workers, perhaps because their income is more closely tied to the business cycle. Greater indebtedness *and* the shift in cardholding toward people in more cyclical occupations help explain how such a mild economic slowdown in 1995 could have driven charge-offs so high today.

The Changing Mix of Cardholders

The Survey of Consumer Finances lets us view the new borrowers from several angles, including their personal characteristics, income, balance sheets, occupations, even attitudes (Table 1).[5] We use the 1995 survey—the most recent—and the 1989 survey. While data from 1995 may seem outdated, they are nearly ideal for our purposes. Credit card loans have to season for eighteen months or so before they go bad, implying that the charge-offs in the last year or two partly reflect the bad seeds in the 1995 crop of cardholders. Comparing cardholders in 1995 with those in 1989 is also ideal. Since the economy was slowing in both years, we are less likely to mistake differences in macro conditions for changes in the micro mix of cardholders. The only downside to the Survey of Consumer Finances is that the set of households covered changes over time. Since the set of households is not constant, we cannot identify exactly the *marginal* cardholder—the riskiest household that obtained a card sometime between 1989 and 1995. Instead, we look for changes in the *average* cardholder; if the average cardholder looks

Table 1
The Changing Profile of Cardholders

Borrower Characteristics	1989	1995	Borrower Characteristics	1989	1995
Cardholding and borrowing			Median stock and bond holdings	0	0
Percentage of all households with credit cards	55.8	66.5*	Mean holdings	$19,587	$28,602
Percentage with five or more cards	7.8	11.2	Liquid asset holdings[a]	$6,468	$4,700*
Limit on all credit cards	$6,098	$8,800	Debt as a percentage of income[b]	48.3	55.0*
Median credit card balance	$122	$200*	Debt payments as a percentage of income[c]	12.1	16.7*
Mean balance	$1,134	$1,671	**Percentage of cardholders in occupations**		
Personal characteristics			Executive/manager	31.5	25.8*
Age of head of household	45	46	Sales/administrative support	19.6	19.3
Percentage married	66.7	61.0*	Service	4.5	6.3*
Percentage owning a home	70.7	67.3*	Precision production/repair	11.9	9.9*
Median years at current address	9.0	6.0*	Operators/laborers	7.3	12.5*
Mean number of years	11.6	11.1	Farmers	1.3	1.6
Median years at current full-time employer	4.0	4.0	Retired	16.9	18.1
Mean number of years	7.9	7.4*	Not working	23.8	24.6
Income, assets, and debt			**Percentage of cardholders who think**		
Family income	$42,683	$38,000*	**it is "all right" to borrow for**		
Percentage earning less than $10,000	4.7	6.6*	Vacation	13.3	17.3*
$10,000-$24,999	17.5	21.3*	Living expenses when income is cut	40.1	44.0*
$25,000-$49,999	36.4	35.3	Fur or jewelry purchase	7.0	7.6
$50,000-$99,999	29.4	27.4	Car purchase	86.3	85.8
More than $100,000	12.0	9.4*	Education	85.4	85.5
Memo:					
Number of observations[d]	2,107	3,257			

Source: Board of Governors of the Federal Reserve System, Survey of Consumer Finances.

Notes: Dollar figures are in 1995 dollars. Unless otherwise noted, figures are median amounts, where the median is defined as the midpoint of the distribution. Credit cards are defined as VISA, MasterCard, Optima, and Discover. Asterisks indicate figures that differ from their 1989 values at or below the 5 percent level of significance.

[a]Liquid asset holdings include balances in checking accounts, savings accounts, call accounts at brokerages, certificates of deposit, and mutual funds.

[b]Debt includes debt owed to the family's business and debt held on property that is rented by the family.

[c]Debt payments exclude credit card payments.

[d]Observations are weighted to reflect the U.S. population as a whole.

riskier, we can infer that risky borrowers are joining the pool.[6]

Cardholding and Borrowing
"More" and "higher" summarize the changes in cardholding and borrowing patterns between 1989 and 1995: more cards, higher limits, more borrowing. More than 66 percent of all households had a credit card in 1995, up from 56 percent in 1989 (Table 1). Two is still the median number of cards per household, but holding three or even five cards is increasingly common.[7] Credit limits are also higher. The median limit available per card increased by $900, or roughly one-third. Cardholders took advantage of the higher limits by borrowing more: the mean balance increased from about $1,100 in 1989 to about $1,700 in 1995.[8]

Personal Characteristics
The safest borrowers are usually presumed to be married homeowners with deep roots in the neighborhood and substantial seniority at work. If these personal characteristics are important, then the new borrowers could be riskier.[9] Only 61.0 percent of cardholders were married in 1995, compared with 66.7 percent in 1989. Fewer cardholders were homeowners in 1995, and cardholders had lived at their current address, whether owned or rented, for a shorter period: median residency at a cardholder's current address declined from nine to six years. Cardholders in 1995 also had less job seniority: the average cardholder in 1995 had worked six months less at his or her job.

Age is another potential determinant of credit risk: older borrowers, all else equal, may be more responsible about paying bills. The median cardholder in 1995 was actually a year older than the corresponding cardholder in 1989, so the new borrowers do not appear riskier by that criterion. What Table 1 does not show, however, is a significant increase in the share of young households carrying credit cards. According to the survey, 45.5 percent of households headed by an eighteen-to-twenty-four-year-old had a card in 1995, compared with just 33.7 percent in 1989.

Income, Assets, and Debt
Lower income households now have greater access to credit cards. The median annual income of cardholders fell $4,700 between 1989 and 1995 as the distribution of cardholders shifted toward those with lower incomes. In 1989, 78 percent of cardholders were middle or upper class (with an annual income of $25,000 or more in 1995 dollars). By 1995, this figure had dropped to 72 percent. The share of lower income cardholders rose accordingly over this period, from 22 percent to 28 percent.

The weaker balance sheets of cardholders in 1995 also suggest higher risk. Holdings of stocks and bonds actually rose on average. However, since half of all cardholders in 1995 held no stocks or bonds, the decline in cardholders' *liquid* assets is more revealing: the median holding fell from $6,468 in 1989 to $4,700 in 1995, a drop of more than 25 percent. As liquidity was falling, indebtedness was rising. The ratio of total debt to income rose from 48 percent to 55 percent over the period. The ratio of debt *payments* to income, which reflects interest on the debt, rose from 12 percent to 17 percent. When borrowers are so heavily indebted, even small drops in income can trigger financial distress.

Occupations
Credit cards are no longer a privilege of white-collar workers. Although executives and managers still made up the largest share of cardholders in 1995, their share had declined 5.7 percentage points from 1989. Conversely, the least skilled blue-collar workers, operators and laborers, increased their presence among cardholders by 5.2 percentage points. Because these workers may be more exposed to wage cuts and layoffs than white-collar workers, they may benefit greatly from increased access to credit. By the same token, greater income variability also means that these workers may be riskier borrowers.

Attitudes
Risk also depends on attitudes, and the new borrowers seem to take a riskier view toward credit. Participants in the Survey of Consumer Finances are asked whether it is "all right for someone like yourself" to borrow for certain purposes.[10] Most cardholders in 1989 said they approved of borrowing to buy a car or to pay for education but they disapproved of buying fur and jewelry or taking a vacation on credit. Only 40 percent of cardholders in 1989 said they approved of borrowing to cover living expenses after a drop in income. By 1995, significantly more cardholders approved of borrowing to take a vacation or to cover living expenses after a cut in income. These more relaxed attitudes help explain why cardholders owe more relative to their income. Moreover, these specific uses of credit may be especially risky because they do not necessarily produce an asset that the lender can claim.[11]

Household Profiles and Delinquency Risk

Overall, the new cardholders *seem* riskier in several ways. They are less likely to be married and more apt to rent. They owe more (relative to income), have less work seniority, and are more likely to work in relatively unskilled blue-collar jobs, where income cuts and layoffs may be more commonplace. Even their attitudes toward credit have become more relaxed—they are willing to borrow more, and to borrow for seemingly riskier purposes.

But do these changes really make today's borrowers riskier? We can answer this question using additional information in the Survey of Consumer Finances. Survey participants are asked if they were late on any payment in the year before the survey.[12] Using their responses, we are able to identify the household characteristics in Table 1 that contribute to delinquency risk. Table 2 reports the change in the probability of delinquency associated with a small change in each characteristic, holding other characteristics constant.[13] A negative value indicates that increases in that variable are associated with decreases in delinquency risk. An asterisk next to a variable indicates that the measured impact is statistically significant and not due to a mere fluke in the sample.

What Determines Delinquency Risk?

A household's debt burden turns out to be a crucial determinant of delinquency risk. Households whose ratio of debt payments to income is 1 percentage point higher than average are about 10 percent more likely to have been delinquent. Large holdings of stocks and bonds reduce the risk of delinquency, but the impact is small and insignificant in the statistical sense. Holdings of liquid assets lower delinquency risk more dramatically, presumably because they are a better buffer against unexpected changes in income. The one curious result is the *positive* relationship observed between income and delinquency risk. Higher income households may simply have more types of debt, so they have more payments to make, or miss.[14]

Delinquency risk also depends on a household's personal characteristics. Younger households are riskier, as are less educated ones. Homeownership and longer residential tenure tend to reduce delinquency risk, although the impact of both variables is essentially zero in the statistical sense. Households with longer job tenure also have lower delinquency risk. The delinquency rate among married households is 2.4 percent lower than it is among single or divorced households.

Occupation also affects the probability of delinquency. Operators and laborers, who now account for a larger share of cardholders, have significantly higher delinquency rates than managers and professionals.[15] The higher delinquency rate of these occupations could reflect the fact that operators and laborers work in some of the most cyclical sectors of the economy, such as housing, so their income is likely to be very responsive to the business cycle. Indeed, we found that the difference between delinquency rates for executives and blue-collar workers is significantly larger in more indebted households, exactly what we would expect to find if the difference in delinquency rates reflected differences in income variability.[16]

Table 2
Which Household Characteristics Affect Delinquency Risk?

Variable	Change
Income, assets, and debt	
Debt payments as a percentage of income	9.93*
Total debt as a percentage of income	0.51
Stocks and bonds ($100,000 units)	-0.21
Liquid assets ($100,000 units)	-6.06*
Income (log units)	2.36*
Personal characteristics	
Age	-0.23*
Years of education	-0.61*
Homeowner	-0.78
Years at address	-0.01
Years at job	-0.27*
Self-employed	0.91
Married	-2.39*
Occupations (relative to executives/managers)	
Sales/administrative support	1.54
Service	-1.68
Precision production/repair	1.43
Operators/laborers	3.95*
Farmers	-1.21
Attitudes: belief that it is "all right" to borrow for	
Vacation	-1.41
Living expenses when income is cut	2.26*
Fur or jewelry purchase	-1.50
Car purchase	3.72*
Education	0.43

Source: Authors' calculations, based on data from the Board of Governors of the Federal Reserve System, Survey of Consumer Finances.

Notes: The table reports the percentage change in delinquency risk associated with a small change in each variable. The impact of each variable is estimated holding the other variables constant. The impact is derived from a probit regression estimated over all households in the Survey of Consumer Finances in 1989 and 1995 (7,314 observations). The dependent variable of the regression equation indicates whether a household was delinquent on any payment in the year before each survey. The regression also controls for the year of the survey (not reported). Debt burdens are rescaled between 0 and 1.

*Statistically significant at or below the 5 percent level.

Which Changes Matter Most?

Since the mix of individuals holding credit cards has changed along several lines, we want to know which changes matter most in explaining the higher risk of charge-offs. A "back-of-the-envelope" calculation is helpful here. By multiplying the change in each characteristic in Table 1 by the impact of that characteristic on delinquency risk from Table 2, we get the total impact of the change in that characteristic on delinquency risk. Although this calculation is too imprecise to gauge the absolute impact of each change, it does give us a sense of each change's *relative* importance.[17]

The higher debt burden among cardholders seems to be foremost in explaining the higher risk of charge-offs. The median debt-payments-to-income ratio among cardholders increased 5 percentage points between 1989 and 1995. Recall from Table 2 that a 1-percentage-point increase in that ratio raises delinquency risk by about 10 percent. Multiplying these figures suggests that the higher debt burden increased delinquency risk by .50 percentage point. The charge-off rate increased about 2.5 percentage points in recent years, implying that the higher debt burden could explain roughly 20 percent (.5/2.5) of the rise in charge-offs.

The occupational shift among cardholders also matters. Operators and laborers held 5.2 percent more credit cards in 1995, and they are about 4.0 percent more likely to be delinquent, implying that this factor could explain as much as 8.0 percent of the rise in charge-offs (.052 x 4/2.5). Although secondary to the higher debt burden, the occupational shift contributed materially to the increased riskiness of borrowers.

Changes in demographics and attitudes seem to be the least important factors in explaining higher risk. Married households are about 2.4 percent less likely to be delinquent, and their share of cardholders declined by 5.7 percent, so increased cardholding by single households could account for about 5.0 percent of the rise in charge-offs. A one-year decline in job tenure increases delinquency risk by only 0.3 percent, and job tenure among cardholders fell by about half a year, so changing job tenure could explain another 6.0 percent. Attitudes may affect charge-offs indirectly, but their direct impact here is small: about 4.0 percent more cardholders are willing to borrow to cover living expenses when income is cut, and households with this attitude are 2.3 percent more likely to be delinquent, so this change in attitude might account for only about 4.0 percent of the rise in charge-offs.

Conclusion

A comparison of the 1989 and 1995 versions of the Survey of Consumer Finances helps us understand the recent increase in credit card charge-offs. The new borrowers owe substantially more relative to income than did their counterparts in the late 1980s, making them vulnerable to even small drops in income and job growth. The strong link we found between debt burdens and delinquency rates suggests that this increase in debt burdens among cardholders is the most important factor behind the recent rise in bad debt.

Also important is the changing occupational mix of cardholders. The new borrowers are more likely to work in relatively unskilled blue-collar occupations, where delinquency rates are higher—perhaps because income in these occupations is more closely tied to the business cycle. Combined with higher debt burdens, increased cardholding by cyclical workers clarifies how a mild economic slowdown in 1995 could trigger a steep rise in bad debt.

Notes

1. Former Federal Reserve Governor Lindsey (1997) used the term "democratization" to describe the wider distribution of credit cards.

2. The Survey of Consumer Finances, conducted every three years by the Board of Governors of the Federal Reserve System, collects information on a cross-section of about 4,000 households representing the U.S. population as a whole. The survey focuses on household wealth and other financial characteristics.

3. This article does not examine whether the wider distribution of credit cards reflects an increased supply of cards, an increased demand for cards, or both. For more on that issue, see Morgan and Toll (1997).

4. The doubling of the federal bankruptcy exemption in 1994 may also have contributed to the rise in charge-offs. However, the change in the federal exemption would have had no effect on bankruptcy rates in states where the exemptions permitted by state law still exceeded the federal exemption.

5. A borrower is a household with at least one general purpose credit card, such as a Visa, MasterCard, Optima, or Discover. We exclude gas and store cards because they are limited-use credit cards. We also exclude American Express cards because they are charge cards, not credit cards. Using the survey sample of roughly 4,000, we "blow up" the statistics to the population equivalents using the weights provided in the survey. The survey includes five observations for each household as a means of imputing missing values. As is common, we use only the first implicate of the data. This will not bias the estimates, but their variance will be somewhat understated (Montalto and Sung 1996).

6. A rise in average risk implies that the marginal borrower has become riskier if we assume that the households that had cards all along have not become riskier.

7. The average and median of a distribution differ when the distribution is skewed. The average of {1,2,6} is 3; the median (midpoint) of this distribution is 2.

8. The mean balance reflects the amount owed after a cardholder's most recent payment. The much lower median balance (that is, the midpoint) reflects households that carry a zero balance.

9. Married households with two sources of income may be better diversified; homeowners may be more stable financially and less likely to move to flee creditors; workers with greater seniority may face a lower risk of layoff. Note that even if the changes in personal characteristics between 1989 and 1995 reflected changes in the population as a whole, we would still conclude that cardholders were becoming riskier.

10. "All right" means different things to different people, but those differences will tend to cancel out across categories.

11. Education loans do, however, produce *human* capital, income from which can be garnisheed.

12. Since the question is not about credit cards in particular, we cannot be completely precise. Nevertheless, characteristics associated with general delinquency should be correlated with credit card delinquency and, later on, with charge-offs.

13. We estimated the equation $delinquent_i = \alpha + \beta * profile_i + \varepsilon_i$, where $delinquent_i$ indicates if household *I* was delinquent on any payment in the year before the survey and $profile_i$ includes the full list of characteristics in Table 1, plus dummy variables indicating the year. We estimated the equation over all households in 1989 and 1995; by excluding noncardholders, we would have raised selection issues and wasted information about the link between risk and household characteristics. With the exception of a few characteristics that did not change much in the first place (age, marital status, and tenure at job and residence), the coefficients were stable across both years. Our equation predicts reasonably well: the actual delinquency rate averaged 16.5 percent in both years, and our equation, evaluated at the mean of each variable, predicted a 13.0 percent rate.

14. Consistent with that reasoning, we found that the positive income effect disappears when we estimate the regression for cardholders only.

15. Note that we are comparing people in different occupations who earned the same level of income, so the difference in delinquency rates probably reflects the fact that income in some occupations is more variable. Income in the services sector is relatively stable, for example, because services, unlike goods, cannot be stored; people continue to pay for haircuts, insurance, and other services during a downturn, but they can cut their purchases of goods by consuming their previous purchases more slowly.

16. We added interaction terms to our regression equation: occupation*debt payments/income. The coefficient on operators/laborers*debt payments/income was 13.2 percent and was significant below the 5 percent level. None of the other interaction terms was significant. Farber (1997) reports that the probability of job loss averaged 14.8 percent among blue-collar workers between 1989 and 1995, compared with only 8.9 percent for executives and managers.

17. Because all delinquencies do not wind up as charge-offs, this calculation gives the *maximum* potential impact on charge-offs.

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