

Changes in Credit Attitudes among US Consumers: 1992-2004

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Abstract : Previous studies showed that traditional attitudes toward consumer credit and the accumulation of debt are declining, especially among younger life stage groups. The social stigma of high debt levels has largely gone. However, only a few researchers have studied and changes in consumers' attitudes toward credit and its determinants. This study investigates factors related to the probability of respondents having favorable or unfavorable attitudes using the 1992-2004 U.S. Surveys of Consumer Finances. A logistic analysis was used since the dependent variables were binary. All other things equal, respondents in 1995, 1998, 2001 and 2004 were significantly less likely to have favorable or unfavorable attitudes toward credit than otherwise similar respondents in 1992, but the patterns did not correspond well to the changes in the bankruptcy rate. Black and Hispanic respondents were more likely to have favorable attitudes and less likely to have unfavorable attitudes than were otherwise similar white respondents, but those in the Other group, mostly Asians, were not significantly different from whites. Respondents with college degrees were less likely to have a positive attitude and more likely to have a negative attitude than those without a college degree. Respondents who took risks with investments were more likely to have a positive attitude and less likely to have a negative attitude than those unwilling to take risks. Implications for understanding of credit use are discussed. This publication was made possible by a generous grant from the NASD Investor Education Foundation.

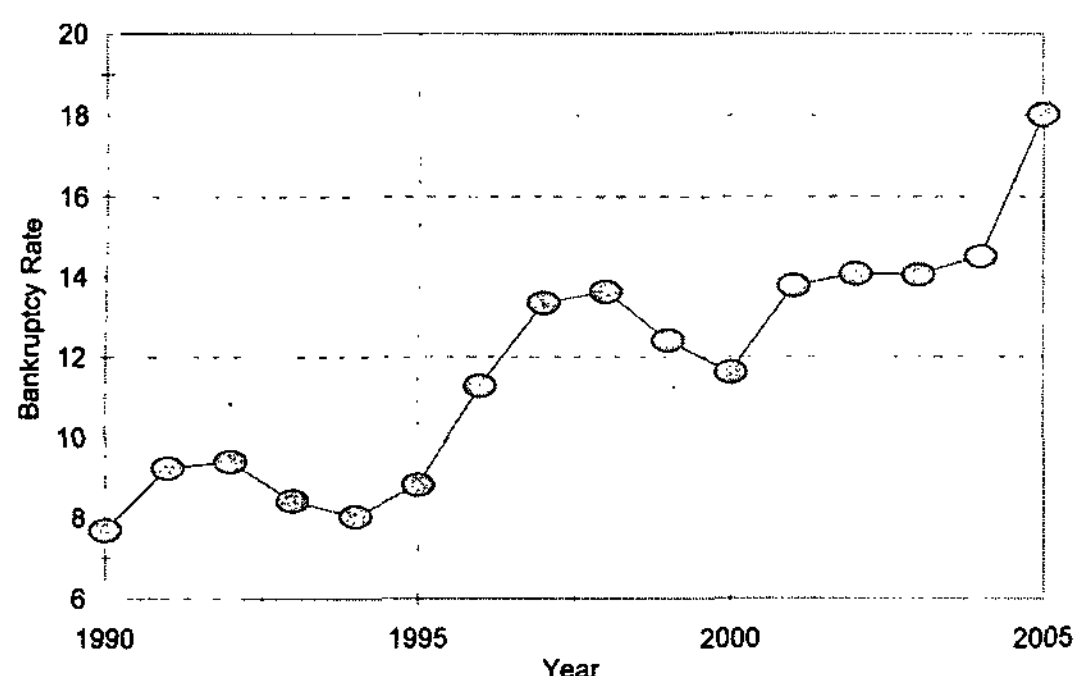
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I. Introduction

Credit tides people over emergencies, gives flexibility to money management, and offers safety and convenience to those who do not wish to carry cash at the individual level. The greatest danger of credit is that consumers will be tempted to enter into excessive commitments (Rachagan, 2004). Throughout the 1990s, the financial industry made many efforts to provide more affordable borrowing opportunities to respondents constrained by credit markets. As a result, respondents

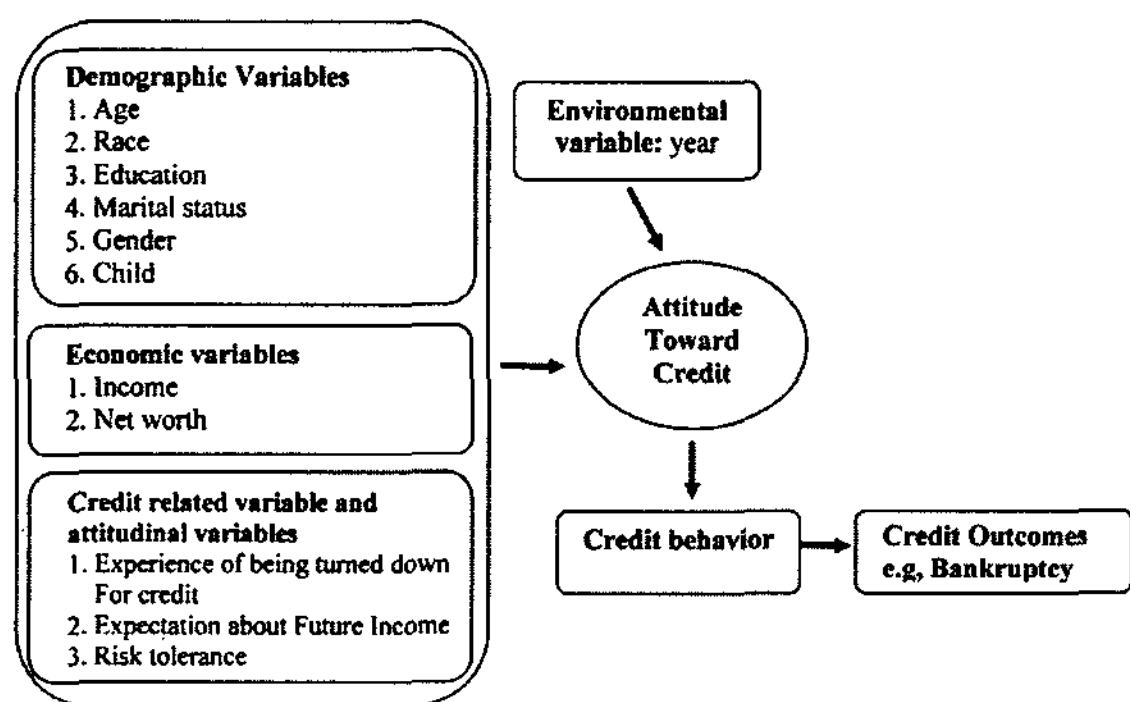
were offered lower interest rates, fees, and down payments, more flexible underwriting standards, and new financial instruments (Lyons, 2003). The number of non-business bankruptcy filings in the US increased substantially, from just over 700,000 in 1990 to over 2,000,000 in 2005 (U. S. Courts, 2007). As <Figure 1> shows, the number of filings per thousand households did not consistently increase, but the overall trend was increasing, and there was a large increase in 2005 as consumers tried to file before the new federal bankruptcy law was implemented (American Bankruptcy Institute,

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<Figure 1> Non-Business Bankruptcy Filings Per Thousand Household, 1990-2005.



<Figure 2> Conceptual Model.

2006). Also, there have been significant increases in bankruptcies in the Asian countries, made even more acute by the financial crisis of 1997.

Credit problems have recently received attention in South Korea, with \$181.2 billion spent using credit cards in 2005, according to Nielson Media Research, a global research firm. In its latest report on credit card spending patterns around the world, South Korea ranked first in transaction volume in the Asia-Pacific region in 2005. The country's credit card ownership rate currently is 68%, the highest in the Asia-Pacific region and the second highest in the world. The country's credit card ownership rate was higher than the 65% rate in the U.S (The Korean Times, 2007). The number of credit delinquents in Korea has been growing steadily since 1997 and had reached 3,700,000 by the end of 2003, which was about 8.4% of the Korean population. The

government initiated several support programs, but the number of credit delinquents has decreased very slowly (Oh, 2006).

Have changes in consumer attitudes toward credit led to the increases in credit use and consequent credit problems? Consumers' attitude toward credit might also be related to the demand side of the credit market. When we study this issue we need to consider an environmental aspect as well as variables at the individual level. Events shape our values and values shape our attitudes. Events have shaped the way we think about ourselves, what we buy, and how we buy it (Norton, 1993). Using a credit card or having an attitude toward credit could be a part of this. Alternatively, attitudes may affect behavior. Chien and DeVaney (2001) found that having a favorable general attitude toward using credit had a positive effect on the amount of installment loans, and a favorable specific attitude regarding the use of using credit had a positive effect on credit card balances.

Many observers have noted a substantial change in attitudes towards credit. Some observers have suggested that the attitudes have become more relaxed, as consumers are willing to borrow more, and to borrow for seemingly riskier purposes (Black & Morgan, 1999). People do not feel embarrassed about flashing five credit cards or paying for a meal with a credit card. What they in fact are doing is borrowing. They are having a meal with a promise to pay at a later date. People often feel embarrassed to borrow from moneylenders or pawn-brokers, but not when it comes to flashing credit cards (Rachagan, 2004).

The remainder of the paper is organized as follows. Section II describes background information and a theoretical framework, and reviews the determinants of attitude toward credit used in the current study. Section III describes our model regarding consumers' attitudes toward credit. In Section IV, we present the general attitudes toward credit between 1992 and 2004. Also, we present our results. Finally, Section V shows our conclusion and implication of this study.

II. Review of Literature

1. Economic perspective

The Life Cycle Savings model attempts to explain people's consumption and saving over the course of their lives. This theory focuses on the systematic variations in income and in "needs" that occur over the life cycle as a result of maturing and retiring, and of changes in family size. Because the retirement span follows the earning span, consumption smoothing leads to a humped-shaped age path of wealth holding (Modigliani, 1986). Therefore, consumers are expected to borrow against future earnings during early stages when income is low, save more during their most productive working years, and consume assets accumulated during retirement. Based on this theory, we can assume that consumers' willingness to borrow and use their credit card will change during their life time, with a more positive attitude toward credit earlier in life and a more negative attitude toward credit in their later life.

Fan, Chang, and Hanna (1993) demonstrated the importance of the consumer's expectation of income growth, as well as the probability of that income growth taking place, in determining optimal credit use. For a plausible level of risk aversion, a consumer who was at least 95% certain that real income would increase substantially would optimally use credit even at high real interest rates. Hanna and Rha (2000) presented an expected utility analysis of the effect of children on optimal credit use. All other things equal, a household with children would rationally use more credit in order to have higher consumption while children are at home, compared to the future periods when the children will have left home.

2. Social and psychological perspectives and influential events

Events shape our values and values shape our

attitudes. Diverse events have shaped the way we think about ourselves, what we buy, and how we buy it (Norton, 1993). Therefore, we can talk about attitudes toward credit in this context. Credit cards serve as a payment device for routine purchases as well as for many transactions that otherwise would be inconvenient, or perhaps impossible (Durkin, 2000).

Manning (2005) conducted a series of focus groups to assess basic financial literacy/education and investment/retirement planning issues, using 145 individuals distinguished in six life strata: college students, young singles, young families, mature families, empty families, and seniors. This study argued that traditional attitudes toward consumer credit and the accumulation of debt are declining, especially among younger life stage groups. The social stigma of high debt levels is largely gone. Many of the traditional social and cultural views of good debt vs. bad debt have been influenced by mass marketing to Baby Boomers and their children and grandchildren, many of whom expect or feel pressured to pursue immediate gratification over traditional values such as saving for a rainy day. However, the elderly might be an exception because they have a personal or family experience with the scarcity of the Great Depression and World War II, and this experience makes them more likely to maintain traditional notions of needs versus wants or desires (Manning, 2005). Therefore, we expect that younger consumers are more likely to have a favorable attitude toward credit, and older consumers are less likely to have a favorable attitude toward credit. In addition, we expect that consumers' favorable attitudes toward credit have increased over time.

Consumers are experiencing new economic aspects that we could not have imagined in the past. For example, young cohorts have to deal with rising costs of higher education, coupled with decreases in many families' liquid savings, and so these constraints might make them dependent on educational loans and other forms of borrowing (Manning, 2005). Also, increasingly easy access to consumer credit is possible. Credit card companies aggressively target college students because

they are expected to have higher than average earning power and are seen by the credit card companies as a desirable market (Warwick & Mansfield, 2000). In addition, Xiao, Noring, and Anderson (1995), using a Likert summated rating index composed of a series of statements relating to credit cards, showed that 82% of students had favorable affective attitudes toward credit. Therefore, we can expect that young consumers will have a positive attitude toward credit. Conversely, the attitudes and behaviors of seniors toward saving and consuming are profoundly shaped by their own personal experiences with economic scarcity and macro-economic fluctuations during the Great Depression and World War II. For seniors, prudent use of credit is emblematic of an honorable personal character (Manning, 2005).

Yao, Hanna, and Lindamood (2004) discussed how recent events might influence attitudes toward investment risk tolerance, and it is also plausible that macroeconomic trends as well as individual events might affect credit attitudes. During the 1990s, the U.S. economy experienced a long period of increasing prosperity and generally decreasing unemployment rates. Creditors made loans and credit cards increasingly easy to obtain (Lyons, 2003), but some consumers might have been turned down for credit, which might have led to more negative attitudes toward credit.

3. Empirical Studies

1) Studies with attitude as a dependent variable

Durkin (2000) used interviews from the monthly Surveys of Consumers and found that the percent of respondents with positive attitudes toward credit cards increased from 28% in 1970 to 39% in 1977, and then dropped to 33% in 2000, while the percent with negative attitudes went from 43% in 1970 to 27% in 1977, and then increased to 51% in 2000. Durkin concluded that overall opinions about credit cards were somewhat more negative and polarized in 2000 than they were a generation before. Chien and DeVaney (2001) showed

that respondents who was younger, unmarried, non-White, and in a professional or managerial occupation, were more likely to hold a favorable general attitude toward using credit.

Another study using credit attitude as a dependent variable in a multivariate analysis is Yieh (1996). The sample frame for analysis in Yieh's study was the 1989 Survey of Consumer Finances (SCF). The dependent variable was whether or not respondents had negative attitudes toward installment debt. Logit analysis revealed that the probability of having negative attitudes toward borrowing was significantly related to age, number of children, education, race, marital status, homeownership, attitudes toward expected real income, and attitudes toward risk taking, but was not related to net worth. Yieh concluded that respondents' inability to borrow did not significantly influence the probability of having a negative attitude toward installment debt.

2) Studies with attitude as an independent variable

Slocum and Mathews (1970) selected 4,316 card holders out of approximately 250,000 commercial bank credit holders in a large eastern metropolitan area on a random basis, and used 2,032 who returned responses. They showed that upper income consumers held more favorable attitudes toward credit cards than did lower income consumers. However, they concluded that social class is not the most useful market segmentation variable in the area of consumer credit card behavior.

Zhu and Meeks (1994) investigated consumer credit use of low income families selected from the 1983 and 1986 Survey of Consumer Finances datasets. The low-income families' ability and willingness to use credit, along with selected interaction variables, were tested in a hierarchical multiple regression models. Two indicators measured the attitude toward credit for a subject family: a general attitude variable, and a specific attitude variable. Their result showed that the interaction between a specific attitude toward credit and debt balances in 1983 had significantly affected on the amount of credit outstanding in 1986. Similarly, Chien

and DeVaney (2001) analyzed the relationship between credit use and attitudes toward credit using the 1995 Survey of Consumer Finances. They concluded that the higher the specific attitude index, the higher the outstanding credit card balances, while the more favorable the general attitude toward using credit, the higher the installment debt.

Lea, Webley, and Levine (1993) conducted a survey in a small town in England and found that debt levels (non-debtors, mild debtors, and serious debtors) were strongly associated with attitudinal factors. King and King (2005) estimated a probit model to examine the effects of key variables on the probability that a household uses a debit card, and developed a simple model of a consumer's choice between using credit and debit, using data from the 1998 Survey of Consumer Finances. They showed that beliefs about credit were important in determining whether or not a household would choose debit over credit.

Hayhoe, Leach, and Turner (1999) examined credit and money attitudes held by college students to determine how these attitudes influence the number of credit cards students hold, using survey results from five hundred students randomly selected in five universities. They showed that students with four or more credit cards scored higher on affective credit attitudes.

In summary, previous studies show that demographic, economic, and credit-related variables influence consumers' attitudes toward credit, and attitudes toward credit affect credit use. However, the existing literature leaves us with no clear answer as to why people have a favorable or unfavorable attitude toward credit use.

III. Methods

The sample frame for the analysis in this study comes from five Survey of Consumer Finances (SCF) datasets: 1992, 1995, 1998, 2001 and 2004. The SCF contains detailed information about household composition and balance sheet information (Bucks *et al.*, 2006). We

aggregate five datasets for the analysis.

1. Dependent variables

The dependent variable is based on the following question in the SCF: "In general, do you think it is a good idea or a bad idea for people to buy things on the installment plan?" The possible answers for this question are 1) good idea, 2) good in some way, bad in others, and 3) bad idea. The respondents who answered "good idea" are defined as respondents with favorable attitudes toward credit. The final sample contains 13,046 respondents. The models investigated in this study are :

1. Favorable attitudes toward credit (*good idea*) versus Neutral or unfavorable attitudes toward credit (*good in some ways and bad in others or bad idea*)
2. Unfavorable attitudes toward credit (*bad idea*) versus Favorable attitudes and Neutral attitudes toward credit (*good idea or good in some ways and bad in others*)

In Model 1, the dependent variable "Favorable attitudes" is coded as "1" if the respondent's answer is "It is a good idea," and as "0" if the respondent's answer is "It is good in some way, bad in others," or "It is a bad idea." In Model 2, the dependent variable "Unfavorable attitudes" is coded as "1" if the respondent's answer is "It is a bad idea," and as "0" if the respondent's answer is "It is good in some way, bad in others," or "it is a good idea."

2. Procedure

Based on previous studies we assume that the probability of being a respondent with favorable (or unfavorable) attitudes toward credit is a function of four types of independent variables: (1) demographic factors, (2) economic factors, (3) credit related factors, and (4) the year of the survey, through the reduced form of a logistic regression equation.

$$\ln\left(\frac{P}{1-P}\right) = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

X_1 = Demographic variables

X_2 = Economic variables

X_3 = Credit related variables

X_4 = The year of the survey

To really know what influences consumers' attitude toward credit are, it might seem reasonable to include variables relating to credit card use, in the research model such as the kind of credit card, experience about the credit card, or credit terms. For example, Durkin (2000) showed that consumers' opinion about credit cards vary depending on their use of and experience with cards. Less enthusiastic viewpoints are somewhat more common among those who use credit cards as a credit device rather than primarily as substitutes for cash or checks. Additionally, cards are viewed less positively by those who have three or more cards, or have an outstanding balance from them. However, because of possible endogeneity, significant correlations can exist due to unobserved factors contributing to both the endogenous independent variables and the dependent variable, which could result in biased estimators. Additionally, correlations among the independent variables can create significant multicollinearity. In this study, in order to overcome these potential problems, we omitted questionable variables in our model. The effects of the other variables in our multivariate analyses are approximately the same when we left out the credit related variables, so apparently endogeneity was not a serious problem.

In order to investigate respondents' attitude toward credit, multivariate analyses were run to estimate the probability of respondents' favorable or unfavorable attitudes. We tried an ordered logistic analysis, with the dependent variable ranging from 1 (good idea) to 2 (good in some way, bad in others), to 3 (bad idea). However, the score test result from the ordered logit showed that the proportional odds assumption of ordered logit was not appropriate. We instead employed two logistic regressions, with the first dependent variable as having a favorable attitude versus having a neutral or unfavorable attitude, and the second dependent variable

being having an unfavorable attitude versus having a neutral or favorable attitude. This is similar to the cumulative logistic analysis used by Yao *et al.* (2004).

We assume that the probability of being a respondent with a favorable or an unfavorable attitude toward credit is a function of four types of independent variables: (1) demographic factors, (2) economic factors, (3) credit related factors, and (4) the year of the survey. Following previous research on credit attitudes, demographic variables include age, gender, race, education, marital status and presence of children under 18 in the household. Economic variables include income and net worth.

The current study includes dummy variables for categories of income and net worth because the relationships among household attitudes toward installment credit use may be different between high income and low income groups. The relationship between ability to borrow and willingness to borrow also varies among different income groups (Yieh, 1996).

The conceptual model for this study is shown in <Figure 1>. We included some attitudinal variables: whether the household has been turned down for credit, risk tolerance, and income expectation. Additionally, the year of the survey includes 1992, 1995, 1998, 2001 and 2004 Survey of Consumer Finances dataset. More detailed information is shown in <Table 1>.

3. Hypotheses

Based on economic models and also on the possible impacts of recent macroeconomic and personal events, we expect:

H1 Younger respondents will be more likely to have favorable attitudes toward credit than older respondents, and are less likely to have unfavorable attitudes.

H2 Respondents with at least one child under 19, and female respondents, will be more likely to have favorable attitudes toward credit than respondents with no children under 18, or male respondents, and will be less likely to have unfavorable

<Table 1> Coding of Selected Independent Variables

Variables	Definition
<i>Demographic and Economic variables</i>	
Age	
Age 18-24	1 if respondents' age is between 18 and 24, 0 otherwise (reference)
Age 25-34	1 if respondents' age is between 25 and 34, 0 otherwise
Age 35-44	1 if respondents' age is between 35 and 44, 0 otherwise
Age 45-54	1 if respondents' age is between 45 and 54, 0 otherwise
Age 55-64	1 if respondents' age is between 55 and 64, 0 otherwise
Age 65 +	1 if respondents' age is over 65, 0 otherwise
Race	
White	1 if respondents describe themselves as white, 0 otherwise (reference)
Black	1 if respondents describe themselves as Black, 0 otherwise
Hispanic	1 if respondents describe themselves as Hispanic, 0 otherwise
Asian and others	1 if respondents describe themselves as Asian and others, 0 otherwise
Education	
Less than High	1 if respondents' highest level of school completed less than high school, 0 otherwise
High school	1 if respondents' highest level of school completed is high school, 0 otherwise (reference)
Some college	1 if respondents' highest level of school completed is some college, 0 otherwise
Bachelor's degree	1 if respondents' highest level of school completed is higher than college, 0 otherwise
Gender of respondent	
Female respondent	1 if respondents are female, 0 otherwise
Male respondent	1 if respondents are male, 0 otherwise (reference)
Marital status	
Married	1 if respondents are currently married, 0 otherwise (reference)
Partnered	1 if respondents are currently living with a partner, 0 otherwise
Single	1 if respondents are currently separately, divorced, widowed, or never married, 0 otherwise
Children	
No	1 if respondents have no children under age 18, 0 otherwise (reference)
Yes	1 if respondents have any children under age 18, 0 otherwise
Income	
Income < \$10,000	1 If respondents' income is less than \$10,000, 0 otherwise
\$10,000 ≤ Income < \$25,000	1 If respondents' income is between \$10,000 and \$24,999, 0 otherwise
\$25,000 ≤ Income < \$50,000	1 If respondents' income is between \$25,000 and \$49,999, 0 otherwise (reference)
\$50,000 ≤ Income < \$100,000	1 If respondents' income is between \$50,000 and \$99,999, 0 otherwise
\$100,000 ≤ Income	1 If respondents' income is between \$100,000 and over, 0 otherwise
Net worth	
Net worth < 30,000	1 If respondents' net worth is less than \$30,000, 0 otherwise (reference)
30,000 ≤ NW < 200,000	1 If respondents' net worth is between \$30,000 and \$200,000, 0 otherwise
200,000 ≤ NW < 500,000	1 If respondents' net worth is between \$200,000 and \$500,000, 0 otherwise
500,000 ≤ NW	1 If respondents' net worth is between \$500,000 and over, 0 otherwise
<i>Credit related variables and others</i>	
Being turned down for credit in past 5 years	
Turned down	1 if have been turned down for credit, 0 otherwise (reference)
Not as much credit	1 if have not obtained as much credit as applied for, 0 otherwise
No	1 obtained as much credit as applied for, or have not applied for credit, 0 otherwise

<Table 1> continued

Variables	Definition
Risk tolerance	
No risk	1 if respondents are not willing to take any financial risk, 0 otherwise (reference)
Average risk	1 if respondents are not willing to take average financial risks, 0 otherwise
Above risk	1 if respondents are not willing to take above average financial risks, 0 otherwise
Substantial risk	1 if respondents are not willing to take substantial financial risks, 0 otherwise
Expectation about income growth	
Sure grow	1 if respondent is sure that household income will grow more than prices, 0 otherwise
Sure less	1 if the respondent is sure that household income will grow less than prices, 0 otherwise
Sure same	1 if the respondent is sure that household income will grow the same as prices, 0 otherwise (reference)
Not sure	1 if the respondent is unsure which way, 0 otherwise
<i>Environmental variable</i>	
The year of survey	
Year 1992	1 If year = 1992, 0 otherwise (reference)
Year 1995	1 If year = 1995, 0 otherwise
Year 1998	1 If year = 1998, 0 otherwise
Year 2001	1 If year = 2001, 0 otherwise
Year 2004	1 If year = 2004, 0 otherwise

attitudes.

H3 Respondents in the survey years after 1992 will be more likely to have favorable attitudes toward credit than respondents in year 1992, and will be less likely to have unfavorable attitudes.

H4 Respondents who have been turned down for credit will be less likely to have favorable attitudes toward credit than respondents who have not been turned down.

H5 Respondents who are sure that income will grow less than prices will be less likely to have favorable attitudes than respondents who are sure that income will grow more than prices.

H6 Respondents who have higher risk tolerance will be more likely to have favorable attitudes than respondents who have lower risk tolerance, and less likely to have unfavorable attitudes.

In addition to hypotheses with some theoretical justifications, we were also interested in racial/ethnic differences in credit attitude, because Yieh (1996) found that race had an effect on having a negative attitude toward credit, and because Blacks have been more likely to be credit constrained than Whites (Lyons, 2004).

IV. Results

1. Descriptive results

<Table 2> shows frequencies, means and medians of selected variables by the respondents' attitudes toward credit. About 31% of respondents in 1992 had favorable attitudes toward credit and about 33% had unfavorable attitudes. Respondents aged between 18 and 24 had the highest favorable attitude rate and those over 65 had the lowest rate. Similarly, respondents aged over 65 had the unfavorable attitude rate, and those aged between 18-24 had the lowest attitude rate. Black and Hispanic respondents had higher favorable attitude rates while Asian/others had the lowest unfavorable attitude rate. Respondents with the lowest household income level had the highest favorable attitude rate, while respondents with the highest income level had the highest unfavorable attitude rate. Respondents who were willing to take substantial financial risks had the highest favorable attitude rate, and those who were not willing to take any financial risks had the highest unfavorable attitude rate.

<Table 2> Descriptive results, Percent with Each Attitude, and Mean and Median Net Worth and Credit Card Debt

Variables	Favorable Attitude	Unfavorable Attitude	Neutral Attitude
Overall Sample	31.27	32.58	36.14
Year			
Year 1992	34.53	36.92	28.55
Year 1995	33.53	30.87	35.60
Year 1998	28.93	33.55	37.52
Year 2001	28.50	30.35	41.15
Year 2004	31.28	31.74	36.98
Age			
Age 18-24	40.43	25.55	34.02
Age 25-34	36.50	29.82	33.68
Age 35-44	32.52	33.95	33.53
Age 45-54	31.25	32.77	35.98
Age 55-64	29.53	31.01	39.46
Age 65 +	23.50	36.54	39.96
Race			
White	29.44	33.63	36.93
Black	37.59	26.78	35.63
Hispanic	38.01	31.32	30.68
Asian and others	33.50	33.80	32.70
Education			
Less than High school	30.04	35.40	34.56
High school	32.73	30.58	36.69
Some college	32.69	29.40	37.90
Bachelor's degree	29.76	34.78	35.46
Gender			
Male respondent	32.26	32.48	35.26
Female respondent	30.48	32.67	36.86
Marital Status			
Married	30.58	31.89	37.53
Partnered	35.29	31.73	32.98
Single	31.51	33.59	34.90
Children under 18 in the household			
No	29.76	32.76	37.48
Yes	33.81	32.28	33.90
Income			
Income < \$10,000	32.45	33.74	33.81
\$10,000 ≤ Income < \$25,000	31.57	34.13	34.29
\$25,000 ≤ income < \$50,000	30.87	30.20	38.93
\$50,000 ≤ Income < \$100,000	31.39	32.25	36.36
\$100,000 ≤ Income	30.41	34.90	34.70

<Table 2> continued

Variables	Favorable Attitude	Unfavorable Attitude	Neutral Attitude
Net worth			
Net worth < 30,000	35.60	34.15	30.26
30,000 ≤ Net worth < 200,000	30.20	36.77	33.03
200,000 ≤ Net worth < 500,000	27.91	38.69	33.49
500,000 ≤ Net worth	27.23	36.36	36.41
Mean credit card debt	2,240	1,608	1,917
Being turned down for credit in past 5 years, or not given as much credit as applied for?			
Turned down for credit	36.27	29.06	34.66
Not as much credit	34.61	29.08	36.31
Not turned down or no credit application	30.00	33.52	36.48
Risk tolerance			
No risk	29.56	34.56	35.88
Average risk	32.20	30.24	37.56
Above risk	31.76	33.14	35.10
Substantial risk	39.32	31.14	29.54
Expectation about household income growth relative to prices			
Sure grow more than prices	32.41	32.90	34.70
Sure grow less than prices	27.52	32.93	39.54
Sure same as prices	30.25	30.96	38.78
Not sure	33.05	33.35	33.59

Created by authors based on weighted analyses of the 1992, 1995, 1998, 2001, and 2004 SCFs. All dollar amounts are in 2004 prices.

2. Logistic analysis results

<Table 3> presents the result of the logistic analysis of the probability of having favorable or unfavorable attitudes toward an installment debt.

1) The year of survey and respondents' expectations

Respondents in 1998, 2001 and 2004 were significantly less likely to have favorable attitudes toward credit than otherwise similar respondents in 1992. Respondents in the survey years after 1992 were less likely to have negative attitudes than respondents in the 1992 survey. The overall pattern reflects an increase

<Table 3> Logistic analysis results

Variables	Favorable Attitude			Unfavorable Attitude		
	Coefficient	P-value	Odds ratio	Coefficient	P-value	Odds ratio
Survey Year: 1992 (reference)						
Year 1995	-0.0699	0.1886	0.933	-0.2610	<.0001	0.772
Year 1998	-0.1915	0.0004	0.826	-0.1841	0.0005	0.832
Year 2001	-0.2637	<.0001	0.769	-0.3469	<.0001	0.708
Year 2004	-0.1543	0.0037	0.857	-0.2433	<.0001	0.784
Age: Age 18-24 (reference)						
Age 25-34	-0.1122	0.1391	0.766	0.2058	0.0139	1.044
Age 35-44	-0.2463	0.0013	0.778	0.3511	<.0001	1.422
Age 45-54	-0.2453	0.0016	0.779	0.2543	0.0025	1.290
Age 55-64	-0.2590	0.0017	0.769	0.1051	0.2352	1.111
Age 65 +	-0.4474	<.0001	0.638	0.2626	0.0029	1.302
Race of respondent: White (reference)						
Black	0.3136	<.0001	1.371	-0.3128	<.0001	0.731
Hispanic	0.3645	<.0001	1.441	-0.1765	0.0092	0.839
Asian and others	0.1877	0.0154	1.207	-0.0834	0.2845	0.920
Education of head: High school (reference)						
Less than High school	-0.0622	0.3158	0.853	0.2227	0.0002	1.280
Some college	0.1014	0.0274	0.902	-0.0264	0.5740	1.026
Bachelor's degree	-0.1326	0.0023	0.790	0.1856	<.0001	1.234
No related child under age 18 (reference)						
Yes	0.00256	0.9458	1.003	0.0607	0.1051	1.062
Gender of respondent: Male respondent (reference)						
Female respondent	-0.1404	<.0001	0.870	0.0461	0.1418	1.047
Household type: Married (reference)						
Partnered	0.0420	0.5285	1.043	0.1275	0.0588	1.137
Single head	0.0601	0.1262	1.068	0.1023	0.0078	1.108
Household income: \$25,000 ≤ Income < \$50,000 (reference)						
Income < \$10,000	-0.0108	0.8669	0.994	0.0643	0.9207	0.992
\$10,000 ≤ Income < \$25,000	-0.0389	0.5581	0.984	-0.1330	0.0461	0.862
\$50,000 ≤ Income < \$100,000	0.0478	0.5146	1.077	-0.0749	0.3049	0.917
\$100,000 ≤ Income	0.1346	0.1002	1.171	-0.0290	0.7189	0.970
Net worth : NW < 30,000 (reference)						
30,000 ≤ NW < 200,000	-0.1252	0.0069	0.877	0.1069	0.0223	1.114
200,000 ≤ NW < 500,000	-0.1914	0.0018	0.820	0.1561	0.0097	1.168
500,000 ≤ NW	-0.1933	0.0032	0.819	0.3188	<.0001	1.365
Being turned down for credit in past 5 years: Not turned down, or did not apply (reference)						
Turned down	0.0551	0.5744	1.137	0.0111	0.9133	0.874
Did not get as much credit	-0.0744	0.4254	1.075	0.1477	0.127	0.863
Risk tolerance: No risk (reference)						
Average risk	0.1717	<.0001	1.137	-0.2038	<.0001	0.815
Above risk	0.1649	0.0007	1.075	-0.1733	0.0003	0.840
Substantial risk	0.3197	<.0001	1.376	-0.2974	<.0001	0.742

<Table 3> continued

Variables	Favorable Attitude			Unfavorable Attitude		
	Coefficient	P-value	Odds ratio	Coefficient	P-value	Odds ratio
Expectation about whether income will grow faster than prices: Sure will grow about the same as prices (reference)						
Sure will grow faster	-0.0486	0.3334	0.953	0.0871	0.0767	1.091
Sure will grow less	-0.1297	0.0086	0.879	0.1083	0.022	1.115
Not sure	-0.0291	0.4888	0.973	0.0178	0.6695	1.018
Intercept	-0.3390	0.0181		-0.9893	<.0001	

Created by authors based on unweighted analyses of the 1992, 1995, 1998, 2001, and 2004 SCFs. All dollar amounts are in 2004 prices. The repeated-imputation inference method is used to combine all five implicates in each survey year.

in the proportion of respondents with neutral attitudes toward credit. However, we can not tell directly from the logistic regression analysis whether 1998, 2001 and 2004 result are significantly different from other reference years, since the p-value only applies to comparisons to each reference category. After trying means tests and rerunning the logistic regression with different reference categories, we find that respondents in 1998 were statistically less likely to have favorable attitudes than respondents in 1995. Respondents in 2001 had attitudes similar to respondents in 1998, but respondents in 2004 were significantly more likely than respondents in 2001 to have favorable attitudes. Respondents in 2004 were significantly more likely than those in 2001 to have unfavorable attitudes.

Respondents who were sure that household income would grow less than prices were less likely to have favorable attitudes than respondents who were sure that household income would grow about the same as prices. Respondents who were sure that household income would grow less than prices were more likely to have negative attitudes than the respondents who were sure that household income would grow the same as price. The odds that respondents who were sure that their income would grow less than prices would have a favorable attitude toward credit were about 12% when compared with respondents who were sure that their income will grow about the same as prices.

2) Demographic variables

Respondents older than 25 are less likely to have

favorable attitudes than those who are between 18 and 24. Similarly, these groups are more likely to have negative attitudes. Our study shows that the respondents' highest level of education is a significant determinant of the likelihood of having favorable and negative attitudes. Respondents who have more education than high school are less likely to have favorable attitudes than those who have completed high school. In addition, respondents at higher levels of education are more likely to have negative attitudes. Similarly, respondents with higher levels of education are less likely to have favorable attitudes. The odds ratio that those who are older than age 65 would have favorable attitudes toward credit decreased by about 36% when compared to those who are between 18 and 24. When controlling for other variables, Hispanic, Black respondents, and Asian and other respondents are significantly more likely to have favorable attitudes than White respondents, and Black and Hispanic respondents are less likely to have negative attitudes than White respondents.

The results also show the importance of marital status of respondents as a predictor of respondent's attitudes. Compared to married respondents, single respondents are more likely to have favorable attitudes. Female respondents have more favorable attitudes toward credit than otherwise similar male respondents. However, having at least one child under 18 was not significantly related to the chance of having favorable or negative attitudes.

3) Economic variables

There are no statistically significant patterns for income, except that respondents in the \$10,000 to \$24,999 income category are somewhat less likely to have an unfavorable attitude than respondents in the reference category of \$25,000 to \$50,000. Respondents with net worth above \$30,000 are less likely to have a favorable attitude, and are more likely to have an unfavorable attitude, than respondents with net worth under \$30,000. The odds ratio that households with net worth above \$30,000 would have favorable attitudes toward credit decreased by about 18% when compared to households with net worth under \$30,000.

4) Credit related variables and other variables

Whether people had been turned down for credit did not have a statistically significant impact on credit attitudes. Risk tolerant respondents were more likely to have a favorable attitude and less likely to have an unfavorable attitude, than those who are not willing to take any financial risk. The odds ratio that respondents with substantial risk would have favorable attitudes toward credit increased by about 37% when compared to the respondents with not risk.

V. Conclusions and Discussion

This study has attempted to identify factors that determine respondents' attitudes toward credit. An attitude is not fleeting, and may persist over time. An attitude is general in that it summarizes consumers' evaluations over a wide range of situations. Also, attitudes help consumers to make many kinds of choices (Arnould *et al.*, 2002). In this sense, we can assume that consumers' attitudes toward credit cards lasts over time and helps them to make many kinds of financial choices.

1. Hypothesis Tests

H1 Younger respondents will be more likely to have

favorable attitudes toward credit than older respondents, and less likely to have unfavorable attitudes.

Generally accepted. In particular, respondents 65 and over were much less likely to have a favorable attitude, and more likely to have an unfavorable attitude, than those under 25.

H2 Respondents with at least one child under 19, and female respondents, will be more likely to have favorable attitudes toward credit than respondents with no children under 19, or male respondents, and less likely to have unfavorable attitudes.

The hypotheses related to having a child were rejected. The hypothesis for females was rejected, as females were less likely to have a favorable attitude than males, and are slightly more likely to have a negative attitude than males.

H3 Respondents in the survey years after 1992 will be more likely to have favorable attitudes toward credit than respondents in 1992, and are less likely to have unfavorable attitudes.

The hypothesis for being more likely to have a favorable attitude is rejected, but the hypothesis for being less likely to have unfavorable attitudes is accepted.

H4 Respondents who have been turned down for credit will be less likely to have favorable attitudes toward credit than respondents who have not been turned down, and more likely to have unfavorable attitudes.

Both hypotheses are rejected.

H5 Respondents who are sure that income will grow less than prices will be less likely to have favorable attitudes than respondents who are sure that income will grow more than prices, and more likely to have unfavorable attitudes.

Both hypotheses are partly accepted, as those who are sure income will grow less than prices are less likely to have a favorable attitude, and are more likely to have an unfavorable attitude, than those who think income will grow about the same as

prices. However, those who are sure that income will grow faster than prices do not differ significantly from those who think it will grow the same as prices.

H6 Respondents who have higher risk tolerance will be more likely to have favorable attitudes than respondents who have lower risk tolerance, and less likely to have unfavorable attitudes.

Both hypotheses are accepted in terms of the effect of having some risk tolerance compared to no risk (being unwilling to take any risk.) However, there are no monotonic patterns related to the level of risk tolerance.

The racial/ethnic patterns are of interest in that *minority respondents are more likely to have a favorable attitude toward credit than white respondents, and Black and Hispanic respondents are less likely to have an unfavorable attitude than white respondents.* These patterns could lead to greater credit problems in the future.

2. Implications

To what extent are consumers' characteristics related to their attitudes toward credit cards? This is the central question examined in this paper. Surprisingly, little research exists examining consumers' attitude toward credit cards as a dependent variable. This study is the first research to analyze both favorable and unfavorable attitudes toward credit. This study is also the first to include the survey year in the research model, in order to identify whether consumer attitudes have changed over time. The year of the survey is included as an environmental variable, and it is a significant factor to explain respondents' attitudes. Respondents in 1998, 2001 and 2004 were significantly less likely to have favorable attitudes toward credit than otherwise similar respondents in 1992. Respondents in 1998 and 2001 were significantly less likely to have favorable attitudes toward credit than respondents in 1992, 1995, and 2004.

Interestingly, 1997 was the beginning of the "modern" era of consistently high non-business bankruptcy filings, as it was the first year of more than a million non-business bankruptcy filings, up over 25% from the prior year's previous high of 989,172 (Tabb, 2006).

The sample size, obtained by combining five survey years (1992, 1995, 1998, 2001, and 2004), allowed for more robust estimates from small effects. The most important determinants were survey years, demographic variables such as age, race, and education, economic variables such as household income, and credit-related variables such as risk tolerance and future income expectation.

Respondents under 35 were more likely to have favorable attitudes toward credit than older respondents, and those 35 to 64 were similar in having a favorable attitude. Respondents 65 and over were much less likely to have favorable attitudes than younger respondents. The relationship between age and having unfavorable attitudes was more complicated, even though the effects for all but one of the older age groups were significantly different from the under 25 reference category. It is possible that unfavorable attitudes develop partly in reaction to having credit problems, but that this effect lessens as credit problems decrease with age. The relationships between level of education and having favorable or unfavorable attitudes toward credit were complicated, perhaps because the category of "some college" includes people who are in transition. The effect of having a college degree on credit attitude was consistent.

We can conclude that racial/ethnic background was significantly related to respondents' attitudes toward credit. This finding partially supports that of Chien and DeVaney (2001), who found that non-white respondents generally had favorable attitudes toward using credit. Additional logistic regressions were conducted to test whether Asian/other respondents were different from the other racial/ethnic groups. Although Asian/other respondents were not significantly different from minority respondents in having favorable attitudes, they were

significantly less likely than otherwise similar white respondents to have favorable attitudes toward credit. Black respondents were less likely than Asian/other respondents to have an unfavorable attitude toward credit.

Further exploration of the attitudes toward credit cards of various ethnic groups should provide more insight into a better understanding of attitudes toward credits and the use of credit card. In 2001, about 60% of Black respondents and 53% of Hispanic respondents had credit cards whereas 82% of White respondents had credit cards. These disparities may reflect the lack of access to mainstream financial services in urban and poor communities as well as the heavy concentration of higher-cost credit services, including payday lenders and pawnshops (Draut & Silva, 2003). The higher reliance on credit cards among Black and Hispanic respondents may reflect the lower-than-average incomes, savings, and wealth within these groups. Further research on this issue is needed to better understand consumers' attitude.

Favorable attitudes toward credit decreased in 1995 and 1998, but increased in 2001 and 2004. Unfavorable attitudes toward credit increased during 2001 and 2004, but the attitude in 1998 was not significantly different from the attitude in 1995. The bankruptcy rate increased sharply in 1998 and 2004 <Figure 1>. Therefore, the relationship between consumer bankruptcy and consumers' attitude toward credit is unclear. Respondents who were sure that income will grow less than prices were less likely to have favorable attitudes than respondents who were sure that income will grow the same as prices, and more likely to have unfavorable attitudes. Finally, respondents who were not willing to take on any risk in investing were less likely to have negative attitudes toward installment debt than respondents willing to take risk. The signs of the coefficients of risk tolerance are consistent with expectations.

There is no consensus on the relationship between consumers' credit usage and their attitude toward credit. The causality between attitude and behavior is uncertain. It is possible that behavior may predict attitude under

some circumstances. For instance, although a more favorable attitude toward using credit can cause a higher likelihood of using credit, a higher likelihood of using credit may lead to a more favorable attitude toward credit. However, previous research (Chien & DeVaney, 2001; Zhu & Meeks, 1994; Hayhoe *et al.*, 1999) provided enough evidence that attitudes toward credit were significant predictors of holding more credit cards or having outstanding balance.

Therefore, the results of this study should help financial educators and counselors better understand the role of attitude toward using credit. This leads to a possible intervening counseling and education strategy for use by financial educators and financial counselors in the United States. Specifically, those individuals who have excessive favorable attitudes should become special target groups for counseling and education. Their favorable attitudes might be caused by their socialization or lack of education about personal finance. Consumers should be presented with the necessary knowledge and information to be more responsible for their behaviors concerning credit card usage.

It would be desirable for future research to examine cohort changes by age, especially after the release of the 2007 SCF dataset in the year 2009. The 2007 survey will be the first with large numbers of Baby Boomers over the age of 55. It will be useful to find whether the age effects observed continue to be as strong for the Baby Boom generation born, from 1946 to 1962, as they were for the generation born before 1946.

This study has implications for research using survey data from South Korea. It would be interesting to determine whether future research can compare the results between U.S. consumers and South Korean consumers to examine what their attitudes are like and how they may have changed. As mentioned, South Korea is the most active users of credit card for payments, and their transaction volume were top-ranked, with the highest credit card ownership rate in the Asia Pacific region. For future research, it will be useful to have benchmark studies on consumer attitudes using

Korean samples. It would also be desirable to have credit attitude questions in Korean surveys that are similar to the credit attitude questions used in the U.S. Survey of Consumer Finances.

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