
Consumer Literacy & Credit Worthiness

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Marsha J. Courchane, Principal, ERS Group
Peter M. Zorn, VP, Housing Analysis, Research & Policy, FMAC

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Task Force on Financial Literacy**

Overview of Purpose & Policy Objectives

Purpose:

We want to better understand consumer literacy and credit worthiness. (Determinants? Policy instruments?)

- Rely on unique data: survey information on finances, attitudes, experiences and behaviors & credit information from credit files --12,140 respondents aged 20 to 40, with household incomes under \$75,000

Policy Questions Addressed:

1. Does consumer literacy impact credit worthiness?
2. Does consumer literacy impact financial behavior? If so, can improved literacy improve behavior?
3. Do financial behaviors impact the likelihood of having impaired credit? If so, will interventions that change behavior change credit worthiness?

Why Consumer Literacy Matters

- Mortgage borrowers need to understand “best” lending practices.
 - Consumers need to be educated to understand what those practices might be and how best to benefit from them.
- Consumers should understand their use of credit and their credit ratings.
 - What practices affect credit ratings? (Credit card usage? Loans? Payments?)
 - What behaviors influence credit ratings? (Pay bills on time)
- Consumers should understand the mortgage process.
 - Consumers need to be familiar with the terms of the loan, including any effects on rates from loan characteristics.
- Consumers need to be able to determine when rates or fees might be excessive.
 - Relative to what?
 - How will credit profile affect rates and fees?
- Consumers should understand how homeownership can strengthen their overall financial health and contribute to credit outcomes.

Previous Research (Zorn and Hirad)

“A Little Knowledge Is a Good Thing Empirical Evidence of the Effectiveness of Pre-purchase Homeownership Counseling” in *Low-Income Homeownership: Examining the Unexamined Goal*, by Nicholas Retsinas and Eric Belskey (editors), Brookings institution Press, 2002, pp. 146-174

- Do borrowers getting pre-purchase homeownership counseling have lower 90-day delinquency rates?
 - Which types of counseling are associated with the greatest reductions in delinquency rates?
 - Which providers are associated with the greatest reductions in delinquency rates?
- Can observed reductions in borrower delinquency rates confidently be attributed to counseling itself?
 - Or instead are they attributable to the characteristics of borrowers who receive counseling or how they are allocated across the various counseling alternatives?

Zorn/Hirad Conclusions

- Borrowers receiving counseling have lower delinquency rates
 - Borrowers with counseling average a 19% reduction in delinquencies
- Delinquency rates vary across counseling types
 - 34% reduction with individual counseling
 - 26% reduction with classroom counseling
 - 21% reduction with home study counseling
 - No significant reduction with telephone counseling
- Counseling does affect borrower delinquency rates
 - The impact varies across counseling types and providers
 - The benefits of classroom counseling are identified
 - Cannot confirm specific impacts of either individual or home study counseling

Policy Questions Addressed

- Does consumer literacy impact credit worthiness?
 - Will training or counseling enhance consumer literacy?
 - Formal education
 - Seminars
 - Does use of credit improve literacy?
 - Early credit card usage
 - Homeownership
 - Do consumers learn from their mistakes?
- Does consumer literacy impact financial behavior? If so, can improved literacy improve behavior?
 - Does increased self-assessed or objective knowledge affect consumer financial behavior (shopping, budgeting, saving)?
 - Do psychological factors matter more or less than financial literacy?
 - Do familial influences matter (parents, spouse, children?)
 - Are there important differences across demographic categories?
- Do financial behaviors impact the likelihood of having impaired credit? If so, will interventions that change behavior change credit worthiness?

The Data

- Primary data source is from a survey conducted in 1999 for Freddie Mac
 - Purpose of survey was to better understand determinants of impaired credit
 - Survey data collected from individuals who responded to a 12-page consumer credit survey (CCS) questionnaire
 - The CCS was completed by Market Facts and NPD panel members, aged 20 to 40, with household incomes under \$75,000.
 - 12,140 respondents completed the survey
- Individual credit data was provided by Experian
 - Sample was selected on the basis of payment history in order to obtain an adequate number of respondents with “impaired” credit
 - Respondent data include FICO score and a subset of detailed credit variables

Data Specific to Wisconsin

ACTUAL CREDIT	PERCEIVED CREDIT				
	Very Bad	Bad	Average	Good	Very Good
Impaired	76.40	68.32	66.79	3.84	0
Good	23.60	31.68	33.21	96.16	100.00

Of those who perceive they have very bad credit, 23.6 % actually have good credit. Of those who think they have bad credit, 31.68% actually have good credit. The error is less important in the opposite direction. Those who think they have good or very good credit usually do.

Data Specific to Wisconsin

SELF-KNOW	OBJECTIVE KNOWLEDGE		
	Very little	Some	A fair amount
Very little	29.38	50.76	19.87
Some	14.13	69.40	16.47
A fair amount	3.16	55.18	41.66

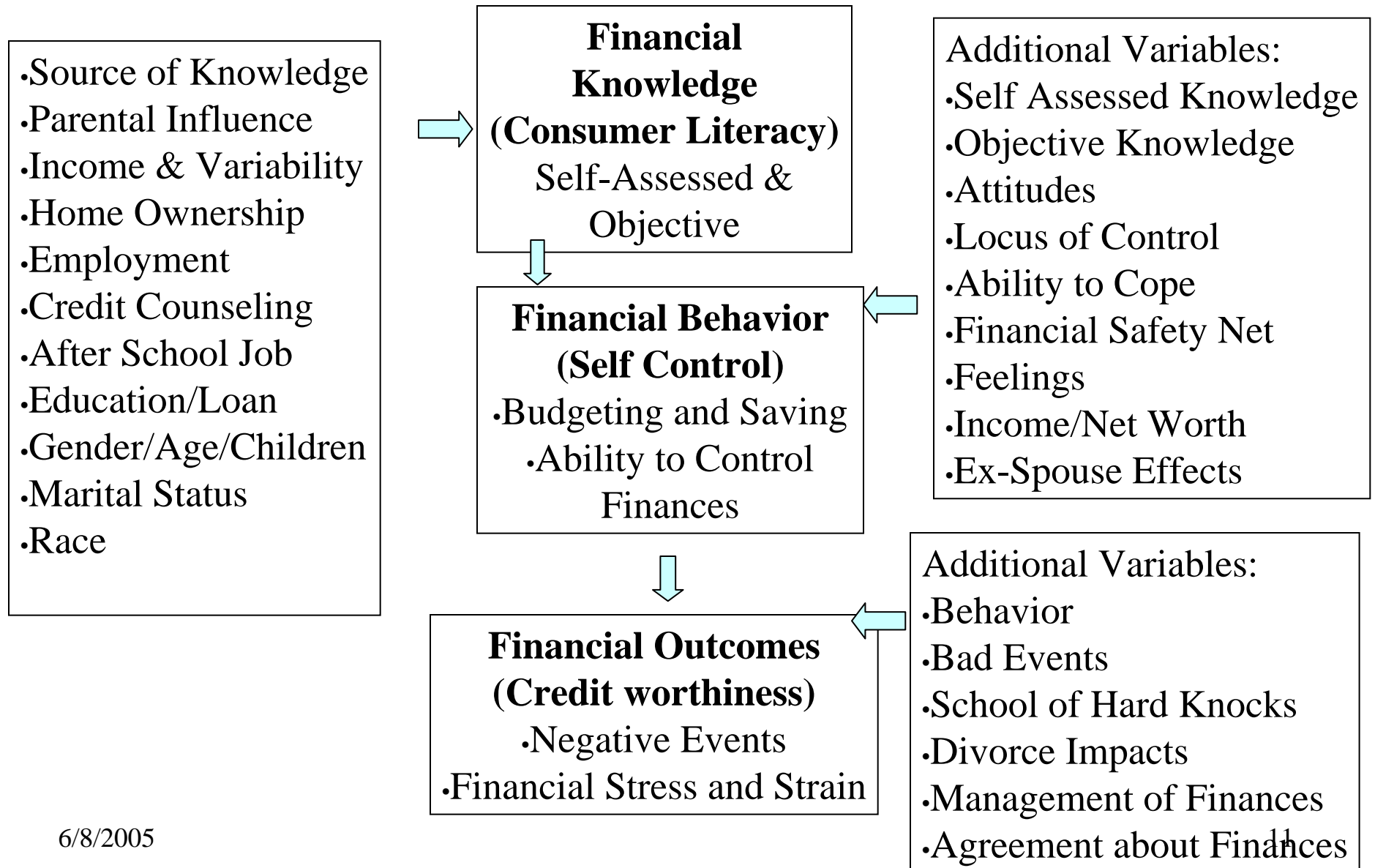
Of those who think they know a fair amount, nearly 60 % know very little or some while only 42% actually know a fair amount (as measured objectively). Of those who think they know very little, nearly 20 % know a fair amount.

Moral of these stories: people do not have full understanding of their credit, nor of the amount of financial knowledge they possess. For all those in Wisconsin, only 22% have “a fair amount” of objective knowledge while 11% have “very little”. However, 30% believe they have “a fair amount” of knowledge.

Data Specific to Wisconsin

- Other key variables:
- 4.5% never had a credit card; while 5% had a card before the age of 18.
- 5% pay the monthly minimum on their credit cards; and only 21% pay in full each month.
- 23% had at least one medical, tax, or theft related problem & 6% had gtr than one
- 72% had credit problems in the past
- 37% learned a lot from “bad times”
- about 5% have had credit counseling in the past
- 45% learned a lot from their parents
- 43% regularly saved as a child
- Only 35% think it likely they have a financial safety net
- 47% think they learned only a little from school (22% learned a lot)
- Only 11% learned some or a lot from seminars
- 55% have children
- 46% are homeowners
- 65% work full time

Model of Credit Worthiness



Marginal Impacts

Groups of Factors to Consider	
Credit cards and student loans	Card pay, card use, student loans (college)
External Events	Bad events, unemployment, divorce
Income & Wealth	Income, wealth, home (own/rent), income relative to parents, safety net
Income Change	Monthly variation, past and future variation
Psychological Measures	Locus of control, financial self-control
Attitudes	Risk taking, optimistic, count on God, worry about short run, go to church, gamble
School of "Hard Knocks"	Learned from bad times, bad credit outcomes, had counseling
Demographics	Gender, age, kids, race, marital status
Education	Formal education, school, seminars
Knowledge	Self-assessed or objective (credit, investment)
Parental Impact	Talk to parents, parents good managers, save or have job as kid, learn from parents
Stress variables	Stress, cope with stress

Key Results

- Overall, in our initial results, we find that the equations fit the model well.
 - The key explanatory variable for behavior is self-assessed knowledge.
 - The key predictor for credit outcomes is behavior.
- The vision that motivates intervention for credit counseling and educational programs will have value.
 - To the extent that more learning affects self-assessed knowledge and that knowledge impacts how persons behave with respect to saving, budgeting, and spending, we expect better behavior to result in better credit outcomes (lower impaired credit).
- Individual equation results have some interesting features, but the main finding is that there are important policy reasons to continue advocating improved financial awareness.

Key Results

- Consumer Financial Knowledge:
 - Learning experiences, formal education & counseling impact financial knowledge
 - Credit card usage/payment patterns, income & net worth & having a financial safety net also impact knowledge
- Financial Behavior
 - The key explanatory variable for behavior is financial knowledge.
 - Psychological factors have an expected large impact on financial behavior (a respondent behaves “better” if more optimistic, taking fewer risks, not worrying too much about money, and being able to cope)
 - Income relative to parents and the existence of a safety net are more important than actual income, net worth or home ownership
- Credit Outcomes
 - The key predictor for credit outcomes is financial behavior.
 - Also important: income (variability) measures, spousal behavior

Financial Knowledge Model

- Dependent variables
 - Self-assessed knowledge
 - Combined score from survey questions of self-assessed financial knowledge
 - Objectively-assessed knowledge
 - Combined score from financial knowledge “quiz”
 - Self-assessed and objectively-assessed knowledge are estimated separately
- Explanatory variables
 - Demographic variables
 - Education, age, gender, family status, race
 - Income and wealth related variables
 - Income, wealth, employment status, home ownership status, income relative to family of origin, and expected or past variation in income
 - Learning sources
 - Learning from parents, regular savings, after school jobs, student loans, credit counseling, presence of a safety net, money management courses

Financial Knowledge

Dependent Variable Construction: Self Assessed Knowledge

9. How much do you know about the following?
 - a. Interest rates, finance charges, and credit terms
 - b. Credit ratings and credit files
 - c. Managing finances
 - d. Investing money
 - e. What is on your credit report

Responses: Nothing, Very little, Some, A fair amount, A lot

Self-Assessed Knowledge

- Two forms: Continuous (selfknow) or bucketed (selfknow2)
- $\text{selfknow (or selfknow2)} = q9a + q9b + q9c + q9d + q9e;$

Buckets:

5-12='very little'

13-18='some'

19-25='a fair amount'

Objective Knowledge: Summary of Credit Knowledge

11. What will be the impact on the interest rate people pay on a loan if they...?
- a. always eventually pay off their debts, but are sometimes late on monthly bills
 - b. get someone else to co-sign the loan with them
 - c. have never borrowed money before
 - d. offer the lender some collateral for the loan

Responses: Rate would be higher, No impact, Rate would be lower, Don't know

Add 1 point each if answer to "a" or "c" is "rate would be higher"

Add 1 point each if answer to "b" or "d" is "rate would be lower"

Objective Knowledge: Summary of Credit Knowledge

12. What will be the impact on a person's credit rating if they...?
- a. charge lots of money on several credit cards, and make the minimum payments each month
 - b. have a good payment record and apply for many new credit cards
 - c. skip a student loan payment
 - d. never borrow money or use a credit card for anything
 - e. miss a couple of loan payments but make them up, plus interest, the next month
 - f. have a legal judgment over a disputed bill

Responses: Rating would be hurt, No impact, Rating would improve, Don't know

Add 1 point each if answer to a, b, c, d, e or f is "rating would be hurt"

Objective Knowledge: Summary of Investment Knowledge

66. Do you think that the following statements are generally correct, or not correct?
- a. People will be financially better off if the cost of living increases by more than income
 - b. It is financially worthwhile to borrow money for an investment if the interest rate on the loan is less than the expected return
 - c. The cheapest way to use a credit card is to pay off the bill in full each month
 - d. Over the long run, people can expect to earn more money by investing in stocks than by putting money into U.S. savings bonds
 - e. Investing \$1,000 a year for 10 years will earn the same amount of money as investing \$2,000 a year for 5 years if the interest rate is the same for both investments

Responses: Correct, Not correct, Don't know

Add 1 each if q66a or q66e = 2 (Not correct)

Add 1 each if q66b, q66c, q66d = 1 (Correct)

Results From Knowledge Estimation

- Providing learning opportunities can enhance financial knowledge.
 - “Learning experiences” including *learn from bad times* (school of hard knocks) have a large impact on consumer knowledge.
 - Learning from formal *education* has a significant impact (the more education, the higher the impact) as does taking financial training courses in school (*learn from school*) while seminars do not have a significant impact
 - Credit *counseling* can also impact knowledge, particularly if obtained more than two years ago.
 - May be endogeneity problems with bad outcomes and recent counseling experiences.

Results From Knowledge Estimation

- Higher incomes and higher net worth are associated with more knowledge as is having higher income levels compared to one's parents.
- Home ownership exerts a positive influence on SE knowledge.
- We see a large effect from previous credit card usage, with those having obtained a card at the youngest age having learned, marginally, the most.
 - This may not reflect positive credit outcomes, simply an increase in financial knowledge that comes from use of credit.

Financial Behavior Model

- Dependent variable
 - Combined score from survey questions on financial self-control
 - Whether the respondent follows a budget or saves or invests money from each paycheck, controls spending, pays bills on time, plans for financial future, provides for self and family, only buys things that are necessary and borrows only for things that are important
- Explanatory variables
 - Financial knowledge
 - Demographics variables
 - Psychological or physical health factors
 - Risk taking, optimism, the influence of religion and gambling
 - Stress related impacts
 - worry about money, spending, and the respondent's financial situation, smoking, stress symptoms (nightmares, migraines, insomnia, stomach or back pain, extreme tiredness or fatigue or feelings of inadequacy)
 - Internal or external locus of control
 - Spousal credit behaviors

Q1

Q1. How often do you do the following?

- a. Follow a budget
- b. Save or invest money out of each paycheck

Responses: Almost never, Seldom, Sometimes, Often, Almost always or NA/DK (1, 2, 3, 4, 5, -9)

Q2

- Q2. When you go shopping, how often do you do the following?
- a. Buy only the highest quality products
 - b. Buy things I can't afford
 - c. Buy brand-name products
 - d. Postpone a purchase when I don't have enough money
 - e. Buy products that will impress others

Responses: Almost never, Seldom, Sometimes, Often, Almost always or NA/DK (1, 2, 3, 4, 5, -9)

Q3

3. How do you grade yourself in the following areas?
 - a. Controlling my spending
 - b. Paying my bills on time
 - c. Planning for my financial future
 - d. Providing for myself and my family
 - e. Saving money

Responses: Poor, Fair, Okay, Good, Excellent

Q4

4. How well do the following statements describe you?
 - a. I take risks
 - b. I only buy things I really need
 - c. I am optimistic about the future
 - d. I worry about how I'm going to pay for things
 - e. I count on God to help me take care of financial matters
 - f. I borrow money only for things that are really important
 - g. I am more concerned with the next couple of months than with later in my life

Responses: Describes me___: Not at all, Slightly, Somewhat, Pretty well, Perfectly

Results From Financial Behavior Estimation

- By far the most important determinant of behavior/self control was self-assessed knowledge.
- The set of psychological factors also had an expected large impact on financial behavior.
 - A respondent behaves “better” if more optimistic, taking fewer risks, not worrying too much about money, and being able to cope
- Feeling in control (*locus of control*) has a significant but relatively small effect.
- The income related measures matter
 - Income relative to parents and the existence of a safety net are more important than actual income, net worth or home ownership

Financial Outcomes Model

- Dependent variable
 - Impaired credit
 - One 90-day late payment, plus at least one other 30-day or later payment in the last two years
- Explanatory variables
 - Financial behaviors
 - Demographics variables
 - Spousal impacts (from current or ex-spouse), divorce and the status of unpaid bills following divorce
 - Intra-household management and financial decision making
 - Learning from the “school of hard knocks”
 - Learning from bad financial events (eviction, NSF checks, utility cancellations, credit denials, creditor calls, repossession, late payments, collections, and bankruptcy)
 - “Bad external events” such as major medical expenses, theft or property destruction, or major legal or tax problems.

Results From Financial Outcomes Estimation

- Behavior is the second most important variable in explaining credit outcomes (with only race more important).
- We see some significant impacts from demographic variables (age, kids, gender) all with the expected signs.
- Race is the single most important factor in explaining impaired credit outcomes, somewhat surprising not in its impact, but in its magnitude. (Further research will look at correlations and interactions with race).
- We continue to observe the importance of relative income compared to the previous generation and the “safety net” (which may be provided by the previous generation).
- Also of note are the effects from those variables relating to income and employment uncertainty (*unemployment or income fall, net income change in past two years, or expected net income change*) all of which have significant impacts on credit outcomes.
- Marital accord leads to better outcomes than does marital discord (*agree on finances and spousal behavior*).

Credit Outcomes and Self-Assessed Credit African American Respondents

Self-Assessed Credit Compared to Actual Credit					
Self Assessed Credit	African American				
	Good	Indeterminate	Impaired	Non-Match	Total
	1.35	3.65	1.5	2.58	2.27
Very bad	2.95	8.56	16.62	9.9	10.17
Bad	6.4	20.67	38.01	23.96	23.73
Average	25.58	37.88	33.58	35.15	33.33
Good	31.37	19.42	8.02	16.93	17.91
Very good	32.35	9.81	2.26	11.48	12.6
Total	100	100	100	100	100

Only 64 percent of African-Americans with good (actual) credit perceive that they have good credit. Only 55 percent of those with impaired credit believe their credit is bad or very bad. In fact 10 percent with impaired credit believe they have good credit and nearly 10 percent with good credit think they have bad credit.

Credit Outcomes and Self-Assessed Credit Hispanic Respondents

Self-Assessed Credit Compared to Actual Credit					
Self Assessed Credit	Hispanic				
	Good	Indeterminate	Impaired	Non-Match	Total
	2.62	1.59	2.23	3.64	2.35
Very bad	1.6	4.89	19.49	7.84	8.38
Bad	4.81	20.9	37.5	17.65	20.48
Average	20.12	33.86	28.87	29.13	28
Good	26.09	24.74	8.63	21.01	20.19
Very good	44.75	14.02	3.27	20.73	20.6
Total	100	100	100	100	100

Nearly 73 percent of Hispanics with good (actual) credit perceive that they have good credit. However, still only 57 percent of those with impaired credit believe their credit is bad or very bad. Here we find that 12 percent with impaired credit believe they have good credit and only 6 percent with good credit think they have bad credit. The self-assessments are “better” here.

Credit Outcomes and Self-Assessed Credit White Respondents

Self-Assessed Credit Compared to Actual Credit					
Self Assessed Credit	White				
	Good	Indeterminate	Impaired	Non-Match	Total
	1.13	1.71	1.9	1.83	1.55
Very bad	1.19	5.87	16.18	8.55	6.7
Bad	5.43	23.55	39.68	22.81	20.23
Average	16.63	31.28	30.45	27.49	25.13
Good	26.02	22.29	8.09	16.29	19.87
Very good	49.6	15.3	3.71	23.01	26.52
Total	100	100	100	100	100

About 75 percent of Whites with good (actual) credit perceive that they have good credit. Like Hispanics, 57 percent of those with impaired credit believe their credit is bad or very bad. We again find that 12 percent with impaired credit believe they have good credit and only 7 percent with good credit think they have bad credit. The self-assessments for Whites, like those for Hispanics, are “better” than for African-Americans.

Conclusions

Using a very unique data set designed to help us understand the interactions between literacy and credit worthiness, we have been able to find support for the following:

- Consumer literacy matters!
- Behavior is not explained simply by rationale economic behavior – other influences seem to matter (psychological factors, locus of control, parental and spousal influences)
- Credit outcomes can change and increased knowledge (and awareness of that knowledge) can lead to better financial behavior and improved credit outcomes.