Financial Knowledge and High Cost Borrowing

MARTIN SEAY, PH.D.
CLIFF ROBB, PH.D.

KANSAS STATE UNIVERSITY

Overview

- This research explored the relationship between financial knowledge and the use of high cost debt instruments.
  - Objective financial knowledge
  - Subjective financial knowledge
- Four high cost borrowing methods investigated:
  - Pay-day loans
  - Tax refund anticipation loans
  - Pawn shop
  - Rent-to-own store

Background

- Theory suggests that financial knowledge will make individuals more effective borrowers (Liebermann & Flint-Goor, 1996).

- Developed financial skills have been found to be necessary for effective financial decisions. (Carswell, 2009; Collins, 2007; Haynes-Bordas, Kiss, & Yilmazer, 2009; Scott, 2010).

Background

- However, many previous studies rely on intention to perform a behavior as opposed to actual financial behavior.
- Additionally, many studies are limited by their focus on college students. (Chen & Volpe, 1998; Jones, 2005; Robb & Sharpe, 2009; Xiao, Tang, Serido, & Shim, 2011)

General Population

- Hilgert, Hogarth, and Beverly (2003) noted significant correlations between credit management scores and financial knowledge.

- Lusardi and Mitchell (2006) found that high knowledge was associated with both planning for and achieving retirement savings success.

What About Subjective Knowledge?

- Research has found that objective and subjective financial knowledge is often different (Courchane, 2005).

- Only recently has literature begun including subjective measures of financial knowledge in these analyses (Robb & Woodyard, 2011; Xiao, Tang, Serido, & Shim, 2011).

What About Subjective Knowledge?

- Robb and Woodyard (2011) found them to be separate constructs.
- Both subjective and objective knowledge measures were found to be associated with positive financial behavior.
- Interestingly, the magnitude of the relationship was higher for subjective knowledge.

What About Numeracy?

- There is some concern as to whether financial knowledge is predicated on math skills.
- This might suggest that math skills must be addressed FIRST, then financial topics second.
- Lusardi (2012) indicates that the key to increasing financial literacy is through improving numeracy skills.

The Current Study

- Is there a relationship between financial knowledge and the use of high cost debt instruments?
- Data are utilized from the Financial Industry Regulatory Authority's (FINRA) 2009 National Financial Capability Study .
- Online Survey of 28,146 respondents (roughly 500 per state plus D.C) conducted June-October 2009.

Four High Cost Borrowing Methods

- Pay-day loans (10.06%).
  - Receiving a “cash advance” on a paycheck.
- Tax refund anticipation loans (5.38%).
  - Receiving an advance of an income tax return
- Pawn shop (11.28%).
  - Receiving a loan based on the value of some collateral.
- Rent-to-own store (6.24%).
  - Purchase items based on a rental payments.

Methods

- A series of logistic regression models were estimated to determine the correlates of using each of the high cost debt instruments.
- Slight variation in sample sizes between models from 24,705 to 24,763 respondents for:
  - Tax refund anticipation loans
  - Pawn shop
  - Rent-to-own store
- Sample size of 14,397 for Payday loans (limited to employed).

Two Measures of Financial Knowledge

- Objective Knowledge Scale based on responses to 5 knowledge questions (Cronbach's alpha = .68):
  - Compound Interest: Suppose you had $100 in a savings account and the interest rate was 2% per year. After 5 years, how much do you think you would have in the account if you left the money to grow?
  - Inflation: Imagine that the interest rate on your savings account was 1% per year, and inflation was 2% per year. After 1 year, how much would you be able to buy with the money in this account?
  - Bond Pricing: If interest rates rise, what will typically happen to bond prices?
  - Mortgages: A 15-year mortgage typically requires higher monthly payments than a 30-year mortgage, but the total interest paid over the life of the loan will be less.
  - Diversification: Buying a single company's stock usually provides a safer return than a stock mutual fund.

Two Measures of Financial Knowledge

- Subjective Knowledge Scale responses based on average of 4 self-assessment Likert-type questions:
  - "I regularly keep up with economic and financial news."
  - "On a scale from 1 to 7, where 1 means very low and 7 means very high, how would you assess your overall financial knowledge?"
  - "I am good at dealing with day-to-day financial matters such as checking accounts, credit and debit cards, and tracking expenses."
- Numeracy skills incorporated with 4th question:
  - "I am pretty good at math."
- Cronbach's alpha of .75

Control Variables

- Socio-Economic Characteristics
  - Age
  - Gender
  - Race
  - Marital Status
  - # of Children
  - Education
  - Income
  - Employment Status
- Income Shock
  - Significant decrease in income in last 12 months
- Risk Tolerance
  - As measured by a single 10 point Likert-type question
- Financial Satisfaction
  - As measured by a single 10 point Likert-type question

Primary Results

- Objective financial knowledge was negatively associated with use:
  - Individuals with lower knowledge scores were more likely, holding all else equal, to utilize these high cost debt instruments.
- Subjective financial knowledge was negatively associated with usage of pay-day loans and pawn shops:
  - No relationship noted for refund anticipation loans and rent-to-own usage.

Additional Results

- Lower financial satisfaction scores associated with increased likelihood of use:
  - Directionality concerns noted.
- Either consistent or increased likelihood of use through the middle ages, then decreased likelihood of use for older ages (as compared to those 18-24).
- Education and Income negatively associated.
- Those who experienced a financial shock in the last 12 months were more likely to use high cost debt instrument.
- Risk Tolerance positively associated.

Implications

- A strong associated was revealed between objective and subjective financial knowledge and the use of high cost instruments.
- Raises concerns of the ability of users to evaluate the cost associated with the debt.
- Does indicate that those with higher financial knowledge are less likely to use high cost instruments, adding validation to the goal of increasing financial literacy and knowledge.

Question to Ponder

- Is the content measured by objective and subjective financial knowledge the same?
  - Is objective financial broader base as defined by researchers, while subjective knowledge is informed by popular press?

Implications

- The strong associations revealed between income and income shock raises questions of accessibility to alternative lending options.

- The positive risk tolerance measure could insinuate that borrowers may understand the high cost and be willing to accept it.

- Need to further investigate the relationship between use and financial satisfaction to better determine the direction of the relationship.

Questions?

References

- Carswell, A. T. (2009). Does housing counseling change consumer financial behaviors? Evidence from Philadelphia. *Journal of Family and Economic Issues, 30*(4), 339-356.
- Chen, H., & Volpe, R. P. (1998). An analysis of personal financial literacy among college students. *Financial Services Review, 7*(2), 107-128.
- Collins, J. M. (2007). Exploring the design of financial counseling for mortgage borrowers in default. *Journal of Family and Economic Issues, 28*(2), 207-226.
- Courchane, M. (2005). Consumer literacy and creditworthiness. *Proceedings*, Federal Reserve Bank of Chicago.
- Haynes-Bordas, R., Kiss, D. E., & Yilmazer, T. (2008). Effectiveness of financial education on financial management behavior and account usage: Evidence from a "second chance" program. *Journal of Family and Economic Issues, 29*(3), 362-390.
- Hilgert, M. A., Hogarth, J. M., & Beverly, S. G. (2003). Household financial management: The connection between knowledge and behavior. *Federal Reserve Bulletin*, 309-322.
- Jones, J. E. (2005). College students' knowledge and use of credit. *Journal of Financial Counseling and Planning, 16*(2), 9-16.
- Liebermann, Y., & Flint-Goor, A. (1996). Message strategy by product-class type: A matching model. *International Journal of Research in Marketing, 13*, 237-249.
- Lusardi, A., & Mitchell, O. S. (2006). *Financial literacy and planning: Implications for retirement well-being*. Working Paper No. 1, Pension Research Council, Wharton School, University of Pennsylvania.
- Lusardi, A. (2012). Numeracy, financial literacy, and financial decision-making," *Numeracy, 5(1)*, 2. DOI: http://dx.doi.org/10.5038/1936-4660.5.1.2
- Robb, C. A., & Sharpe, D. L. (2009). Effect of personal financial knowledge on college students' credit card behavior. *Journal of Financial Counseling and Planning, 20*(1), 25-40.
- Robb, C. A., & Woodyard, A. S. (2011). Financial knowledge and 'best practice' behavior. *Journal of Financial Counseling and Planning, 22*(1), 36-46.
- Scott, R. H., III. (2010). Credit card ownership among American high school seniors: 1997-2008. *Journal of Family and Economic Issues, 31*(2), 151-160.
- Xiao, J. J., Tang, C., Serido, J., Shim, S. (2011). Antecedents and Consequences of Risky Credit Behavior Among College Students: Application and Extension of the Theory of Planned Behavior. *Journal of Public Policy and Marketing,* 30(2), 239-245.