Are you Able and Willing to Borrow?

Approximately 19% of American households are not able to borrow. Seventy percent of American households are willing to borrow. Only 55% of all households behave as households who are able and willing to borrow. About 26% of all households are able but not willing to borrow. 15% are willing but not able to borrow, and 4% are not able and not willing to borrow. The findings are important for policy makers, educators, economists, and lenders.

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Introduction

After economists explored the effect of liquidity constraints on household consumption, the relationship between liquidity constraints and household debt became a concern. Early findings suggested that the effect of liquidity constraints on households debt is much larger than on household consumption. Households will incur much more debt if borrowing constraints are removed (Cox and Jappelli, 1993; Duca and Rosenthal, 1993).

Liquidity constraints affect the supply side of consumer debt. It is inappropriate to assume that the credit market is in an equilibrium condition where credit supply equals credit demand given a fixed interest rate if liquidity constraints exist. In other words, for those households who are credit constrained, credit supply has an upper bound (Avery, 1981).

Since credit market equilibrium is determined by demand and supply of credit, borrowing behavior is the product of distinct decisions systematically made by both borrowers and lenders. The existence of liquidity constraints creates disequilibrium in the supply side of the credit market. By the same token, households may choose not to incur as much credit as they would be allowed. That is, a household's willingness to borrow affects its demand for credit. Neglecting households' ability to borrow or willingness to borrow will lead to biased estimations of a household's borrowing behavior. It is necessary to integrate a household's ability to borrow with their willingness to borrow to have a clear and complete picture of household borrowing behavior.

Accordingly, it is argued here that due to credit market imperfection and preference differences, researchers should segment households to study their borrowing behaviors based on their ability to borrow and willingness to borrow. Since this essentially empirical issue has not yet been addressed, it is important to begin at a descriptive level. The purpose of this study is to investigate characteristics of households based on their borrowing behavior. Descriptive statistics will be used to compare the economic and socio-demographic characteristics of households by ability to borrow, by willingness to borrow, and by the two-way split on willingness and ability to borrow. The four possible subsets include households who are able and willing to borrow, households who are able but not willing to borrow, households who are not able but willing to borrow, and households who are not able and not willing to borrow.

Review of Literature

Approximately 20% of the U.S. population is credit constrained (Hayashi, 1985; Jappelli, 1990; Jappelli & Pagano, 1989; Mariger, 1987). Only 80% of household consumption is consistent with the pure life-cycle permanent income hypothesis (Hall & Mishkin, 1982). The existence of liquidity constraints reduces household consumption to about 5.5% below the desired level (Hayashi, 1985).

Using the 1983 Survey of Consumer Finances (SCF), Cox and Jappelli (1993) estimated levels of a household's total desired debt conditional on holding debt and not being credit constrained. They found the desired debt level of liquidity-constrained households was 75% higher than their observed debt. They found that aggregate household debt holdings would be raised 9% if liquidity constraints were relaxed.

Duca and Rosenthal (1993) explored the effect of borrowing constraints on consumer debt. Using the same data as Cox and Jappelli (1993) but focusing on households with heads under age 35, their findings were generally consistent. These data suggest that many young households are credit constrained, and that nonwhite households account for a disproportionate share of such families (Duca & Rosenthal, 1993, p.87).

The literature on consumer willingness to borrow is still in its infancy. However, several studies have incorporated consumers' attitudes toward credit use as an indicator of their willingness to borrow. More specific measures of attitudes toward installment debt has been used successfully to indicate household attitudes toward borrowing (Hendricks et al., 1973). Ajzen and Fishbein (1980) emphasized that general attitudes toward behavior were not enough to predict actual behavior. More specific attitudes were needed in order to predict behavior.

Using a more general measurement of attitudes toward installment debt found in the 1989 Survey of Consumer Finances, Yieh (1996) found that approximately 35% of the U.S. population had a negative attitude toward incurring installment debt. Households' attitude toward borrowing was as important as households' inability to borrow in explaining disequilibrium in the credit market.

Methods

The sample for this study was from the 1989 Survey of Consumer Finances (SCF). The final sample contains 3,107 out of the original 3,143 observations of the 1989 SCF.

Identifying Which Households are Able to Borrow and Which are Not

Jappelli's (1990) method is used in this study to identify households who are able to borrow and households who are not. A household who answered "yes" to either of the following questions is defined to be not able to borrow: In the past five years, has a particular lender or creditor turned down any request you (or your husband/wife) made for credit, or not given you as much credit as you applied for?" or as there any time in the past few years that you (or your husband/wife) thought of applying for credit at a particular place but changed your mind because you thought you might be turned down?" A household who answered "no" to both questions is defined as being able to borrow, and therefore not credit constrained.

Identifying Which Households are Willing to Borrow and Which are Not

Two major questions are used by the SCF to ascertain consumers' attitude toward credit. The first question is in general. The second question which is more specific. The specific question used by Hendricks et al. (1973) is applied in this study to define household willingness to borrow. The question was:

People have many different reasons for borrowing money which they pay back over a period of time. For each of the reasons I read, please tell me whether you feel it is all right for someone like yourself to borrow money ...
first, to cover the expenses of a vacation trip?
next, to cover living expenses when income is cut?
(next,) to finance the purchase of a fur coat or jewelry?
(next,) to finance the purchase of a car?
finally, to finance educational expenses?"

Respondents could answer either "yes" or "no" to each question.

It is believed that households that borrow money to finance the purchase of a fur coat or jewelry and households that borrow money to finance educational expenses would have different levels of willingness to borrow (Duca & Rosenthal, 1993). Principle component analysis is used in this study to provide a weight for each question.

The willingness index of individuals is between -1.70351 to 2.495696. The mean of the index is zero and the median is 0.059663. As principle components is a multivariate technique for detecting linear relationship among variables (SAS Institute Inc., 1989), the negative index of willingness means there is an overall negative loading on these five questions. Hence, households who have a negative willingness index are defined as households who are not willing to borrow and households with a positive willingness index are defined as households who are willing to borrow.

Results

Table 1 shows the analysis of selected variables on the dichotomization of the sample into 1) households who are able to borrow, households who are not able to borrow; and 2) households who are willing to borrow, and households who are not willing to borrow.

Consistent with previous studies (Hayashi, 1985; Jappelli, 1990; Jappelli & Pagano, 1989; Mariger, 1987), about 19 percent of all households are credit constrained. Households who are able to borrow are much older than households who are not able. Compared to credit constrained households, households who are able to borrow have

fewer children and have worked more years for their current employer. They also have higher levels of current income, net worth, and total debt than constrained households. However, they have lower estimated permanent

Table 1

Analysis for Able-to-Borrow Households Versus Not-Able-to Borrow Households; Willing-to-Borrow Households Versus Not-Willing-to-Borrow Households

Variables	Able to Borrow	Not Able to Borrow	Willing to Borrow	Not Willing to Borrow
Sample Size	2,519	588	2,169	938
Age	50.9	38.3	44.4	56.9
Children	0.8	1.2	1.0	0.7
Workyear	6.8	4.8	-	-
Income ($)	40,349	32,000	41,038	31,494
Permanent Income($)	40,709	48,229	50,281	22,461
Net Worth ($)	1,055,202	198,903	896,912	735,896
Total Debt ($)	32,120	30,143	36,056	20,315
Gender of Head				
Male	72.1%	70.0%	74.2%	64.7%
Female	27.9%	30.0%	25.8%	35.3%
Race				
Black	10.5%	20.9%	11.5%	16.7%
Non-black	89.5%	79.1%	88.5%	83.3%
Marital Status				
Married	56.3%	50.4%	57.5%	48.1%
Non-married	43.7%	49.6%	42.5%	51.9%
Employment				
Unemployed	35.2%	21.0%	21.8%	57.4%
Employed	64.8%	79.0%	78.2%	42.6%
Education				
Less	25.1%	21.9%	17.6%	41.5%
High School	31.2%	35.0%	34.4%	26.3%
More	43.7%	43.1%	48.0%	32.1%
Homeownership				
Yes	62.8%	37.6%	-	-
No	37.2%	62.4%		
Bad Credit History				
Yes	2.6%	13.1%	-	-
No	97.4%	86.9%		
Interest Rate				
Lower			9.4%	14.7%
Same	-	-	31.0%	31.8%
Higher			59.5%	53.5%
Not Risk Taking				
Yes	-	-	43.7%	65.8%
No			56.3%	34.2%

income[2] than their counterparts. About 11% of able-to-borrow households are black while 21% of credit constrained households are black. Sixty-three percent of able-to-borrow households own a house but only 38% of constrained households are homeowners. The percentage of constrained households having a bad credit history is five times greater than for unconstrained households.

Approximately 70% of all households are willing to borrow; 30% are not. Households who are willing to borrow are younger and have higher levels of current income, permanent income, net worth, and total debt. About 74% of willing-to-borrow household heads are male and 58% are married. These percentages are somewhat higher than those of households who are not willing to borrow.

More of the willing-to-borrow households have higher education levels than households who are not willing to borrow. About 44% of willing-to-borrow households are not willing to take any financial risk, while 66% of not-willing-to-borrow households are also not willing to take any financial risks.

Table 2 presents the means and distributions of selected variables for the four possible groups under a two-way split of the population on the dimensions of ability and willingness to borrow. Only 55% of all households will behave as households who are able and willing to borrow. About 26% of all households are able but not willing to borrow, 15% are willing but not able to borrow, and 4% are not able and not willing to borrow.

Table 2

Means and Distributions of Selected Variables for Four Possible Subgroups of Households Under a Two-way Split on the Ability and Willingness to Borrow Dimensions

Variables	Able and Willing to Borrow	Able but not Willing to Borrow	Willing but not Able to Borrow	Not Able and not Willing to Borrow
Sample Size	1,700	819	469	119
Age	47.0	59.8	37.0	43.4
Children	0.9	0.6	1.2	1.1
Workyear	7.9	4.3	4.6	5.7
Income ($)	43,718	32,616	33,505	26,140
Permanent Income ($)	50,000	19,378	51,071	37,161
Net Worth ($)	1,150,290	836,901	184,688	254,264
Total Debt ($)	37,775	19,137	31,224	25,932
Gender of Head				
Male	74.9%	65.5%	72.3%	61.0%
Female	25.1%	34.5%	27.7%	39.0%
Race				
Black	8.9%	14.2%	18.9%	28.6%
Non-black	91.1%	85.8%	81.1%	71.4%
Marital Status				
Married	59.8%	48.2%	51.1%	47.6%
Non-married	40.2%	51.8%	48.9%	52.4%
Employment				
Unemployed	23.3%	62.5%	17.8%	33.4%
Non-unemployed	76.7%	37.5%	82.2%	66.6%
Education				
Less	17.0%	43.6%	19.4%	31.5%
High School	34.0%	24.8%	35.4%	33.6%
More	49.0%	31.6%	45.2%	34.9%
Homeownership				
Yes	64.6%	58.5%	37.0%	39.8%
No	35.4%	41.5%	63.0%	60.2%
Interest Rate				
Lower	10.4%	14.3%	6.9%	16.9%
Same	33.8%	32.8%	23.3%	26.9%
Higher	55.8%	52.9%	69.8%	56.2%
Not Risk Taking				
Yes	42.6%	66.0%	46.6%	64.5%
No	57.4%	34.0%	53.4%	35.5%
Bad Credit History				
Yes	2.6%	2.6%	12.6%	15.1%
No	97.4%	97.4%	87.4%	84.9%

Households who are able and willing to borrow have the longest number of years working in their current employment, current income, net worth, and total debt. Seventy-five percent of household heads who are able and

willing to borrow are male-headed, 60% are married, 49% have more than a high school diploma, and 65% are homeowners. These percentages are higher than those for the other three groups.

Households who are able but not willing to borrow are the oldest group. They have the fewest number of children living at home, years with current employer, and lowest permanent incomes. Households who are able but not willing to borrow have the highest level of unemployment. Sixty-six percentage of these households are not willing to take any financial risks. This percentage is much higher than the other three types of households.

Households who are willing but not able to borrow are the youngest. They have more children and higher permanent incomes than the other three groups. Their net worth is much less than their counterparts. Households who are willing but not able to borrow have the lowest levels of unemployment and homeownership.

Households who are not able and not willing to borrow have the lowest levels of current income. Noticeably, they are not the households who have the lowest levels of total debt. Households who have the lowest level of total debt are households who are able but not willing to borrow. Twenty-nine percent of households who are not able and not willing to borrow are black and 15 percent of them have a bad credit record. These percentages are much higher than those of the other categories of households.

Conclusions and Implications

Households who are able to borrow have more total debt than households who are not able to borrow. The total debt of households who are willing to borrow is more than that of households who are not willing to borrow.

Notably, households who are not able and not willing to borrow have the lowest levels of current income but highest records of bad credit. This group includes more female-headed households, more black households, and more single households than the other three groups. They also have more children (although not as many as the households who are willing but not able to borrow). Putting all these characteristics together, households who are not able and not willing to borrow are more likely to be those households who are black single-mother households, have low incomes, and have problems repaying their existing debts. Households who are not able and not willing to borrow may be the most vulnerable of the group in terms of financial status.

The findings from this study imply that about 15% of U.S. households are potential customers of pawnbrokers and loan sharks. Pawnshops and loan sharks fill the void left by the absence of legitimate lenders as long as these households exist. How to reduce the number of households who belong to this group? How to regulate pawnshops (Caskey, 1991)? How to meet households' desired debt levels and reduce the profitability of loan sharking (Durkin, 1977; Seidl, 1970)? These are important questions for policy makers and economists.

Properly used credit can generate benefits to raise household standards of living (Chandler & Ewert, 1976). These findings suggest households who are not able and not willing to borrow are the most vulnerable group in U.S. society. Credit constraints reduce their potential for using debt as does their unwillingness to borrow. How to improve their ability to borrow and change their attitudes toward borrowing? Policy makers, educators, lenders, and householders need to work on a solution together. However, before households borrow up to their desired debt levels, an urgent concern may be how to maintain the economic well-being of households who are not able and not willing to borrow.

Finally, this study sheds light only on our understanding about the differences of economic and socio-demographic characteristics between households who have different types of borrowing behavior. The importance of incorporating a household's ability and willingness to borrow in a model to investigate household borrowing behavior must be emphasized in future studies. The combined effect of ability and willingness to borrow on household debt should be examined in order to enhance our understanding of household borrowing behavior.

Acknowledgments

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Endnotes

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2.   The construction of permanent income follows the methods of King and Dicks-Mireaux (1981) and Cox and Jappelli (1993). The estimation of the permanent income is available upon request.