

Are All Debts Created Equally?

This study investigates the composition of newlywed couples' debt portfolios as it affects their debt difficulty, measured via three different financial ratios--a solvency ratio, a liquidity ratio, and a debt repayment ratio. The newlywed couples, all at the same family life cycle stage, had quite variable debt portfolios. Having charge account balances due, automobile loans outstanding, and other debt (including medical and educational debt and debts owed to family and friends) most consistently discriminated newlywed couples at risk for debt difficulty from other couples.

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Recent studies of household debt have increasingly used financial ratios to measure or predict financial problems (Griffith, 1985; Johnson & Widdows, 1985; Lytton, Garman & Porter, 1991; Prather, 1990). DeVaney (1993), using the 1983-86 Survey of Consumer Finances panel, demonstrated the use of solvency, liquidity, and debt repayment ratios in predicting families' insolvency. Although research on debt ratios has recently increased, few analyses have focused on predictors of debt difficulty. Almost all the studies have focused on the role of income or demographic predictors of debt trouble (e.g., Canner & Lockett, 1990; DeVaney, 1993; Sullivan & Fisher, 1988). Although families' debt portfolios have changed markedly (Avery, Elliehausen, & Kennickell, 1987; Kennickell & Shack-Marquez, 1992), no research has investigated the type of debt as it influences debt difficulties.

All types of debt are not created equally, either in terms of availability, costs, flexibility of payments, risk, length of term, or tax status. New types of credit, such as variable rate and secured credit cards and equity credit lines, have increased consumers' choices in the credit market. A reading of the popular media would suggest that the increased availability of credit cards is responsible for the increase in overindebtedness. Available research does not address such a speculation, nor does it provide any insights into the role of other types of debt in family debt difficulty. The purpose of this study is to investigate newlywed couples' debt difficulty as a function of the type of debt they hold, including outstanding bills, credit cards, charge accounts, installment debt, automobile debt, and other debt.

Predictors of Debt Difficulty

Researchers have investigated the predictors of debt delinquency and default (Canner & Lockett, 1990; Moses & Liao, 1987; Peterson & Peterson, 1981;

Sullivan & Fisher, 1988). Many older studies tested lenders' credit scoring systems, used to predict timely debt repayment. In a critique of these scoring systems, Capon (1982) dismissed many of these techniques because of their atheoretical nature, bias, multicollinearity among the predictors, small samples, and misuse in their application.

Recent studies (e.g., Canner & Lockett, 1990; DeVaney, 1993; Sullivan & Fisher, 1988) have overcome these difficulties by using nationally representative data sets and better procedures. For example, DeVaney (1993) tested the usefulness of various financial ratios in predicting future financial insolvency of families (having a net worth of less than one month's income). Using data from 1,934 families in the 1983 and 1986 Survey of Consumer Finance, she found three ratios to be significantly related to propensity for insolvency. The most important was the families' liquidity ratio, a debt payment ratio and a solvency ratio (total assets/total liabilities). These ratios were more strongly related to families' financial difficulties than the demographic characteristics she examined.

Studies have included the composition of family debt portfolios among the predictors of family debt difficulty. The basic question is, separate from the risk represented by certain families obtaining certain types of debt (because of their relative "credit worthiness", are there components of the debt portfolio that are particularly likely to result in debt difficulty? This question will be examined with a sample of newlywed couples who are homogeneous with respect to their stage in the family life cycle, so that life cycle factors that affect families' demand for credit are controlled through sampling.

Methods

Sample and Data Collection

Newlywed spouses were selected through a two-stage random sampling process of Georgia marriage license applications in 1991. In May, 1992 questionnaires were mailed to 800 couples. A follow-up postcard and another questionnaire were sent approximately two and four weeks later, respectively. Because of undeliverable questionnaires, ineligible couples and nonreturns ($n=108$), the data for this analysis are from 256 newlywed couples; this represented an eligible return rate of 40%, a reasonable rate given the length of the questionnaire. Still, the results can only be generalized to Georgia newlywed couples. The trade-off of lower external validity is made in order to obtain the greater homogeneity in the sample regarding family life cycle for internal validity purposes.

Measurement of Variables

Respondents were asked to report in an open-ended format the current market value of their various assets and the outstanding balance due on the various debts they owed on December 31, 1991. Subjects were asked about account balances for 18 types of paper assets: cash, checking accounts, savings accounts, money market accounts, stocks, bonds, mutual funds, IRAs and Keogh accounts, cash value of life insurance and other paper assets. Additionally, they were asked to report on the fair market value of 11 types of tangible assets. Respondents also reported on 19 debts: outstanding bills, credit card balances, charge account debt, installment loans, automobile loans, mortgage loans, home equity debt, personal loans, and other debt. A final measure of family debt was taken by asking "Out of your current monthly income, about how much do you use to repay debt that you obtained in the past, excluding mortgage payments?" Fourteen closed-ended responses were available.

Measures of debt difficulty. Measures of debt difficulty were comparable, though not identical, to those found by DeVaney (1993) to be significant predictors of future family insolvency. The first was a solvency ratio that captures the degree to which families' debts could be paid off by liquidating their portfolio of assets. It is the debt/asset ratio, calculated by dividing the total liabilities of the family by their total assets. For purposes of the final analyses, the debt/asset risk variable was recoded to a dichotomous variable; families with a debt/asset ratio of less than .70 were assigned a zero (no risk) and families with a debt/asset ratio of greater than or equal to .70 were assigned a one (insolvency risk) (Gitman and Joehnk 1990).

The second ratio was a liquidity ratio, which measures the ability of the family to cover current debts with their available liquid assets. This is commonly used as a measure of emergency preparedness capturing how well families can continue to pay their debt in the face of decreasing income. The liquidity ratio was calculated as the liquid assets of the family divided by the "current" debts of the family. Current debts were defined (Gitman, & Joehnk, 1990) as any debts that are due and payable within one year; included here are outstanding bills, credit card debt, charge account balances, and installment loans of 12 months term or less. For the analysis of liquidity risk, this continuous variable was dichotomized; families with a liquidity ratio of ≥ 1.0 were assigned a zero (no liquidity risk) and families with liquidity ratios of < 1.0 were assigned a one (risk of illiquidity), based on Gitman and Joehnk (1990).

The final ratio was a measure of families' debt repayment burden, monthly debt repayment on all consumer debts divided by the monthly net income. For the measure of debt repayment risk, this variable was dichotomized; families with a debt repayment income ratio of $< .20$ were assigned a zero (no debt repayment risk) and families with a debt repayment/income ratio of $\geq .20$ were assigned a value of one (risk of debt repayment burden). The "risky" debt repayment level of .20 was chosen because this ratio is a commonly cited (e.g., Gitman & Joehnk, 1990) indication of the level of debt repayment that poses a burden to the families.

Measures of type of debt. Newlywed couples' debt was analyzed according to eight different types of debt: mortgage debt, home equity loans or credit lines, outstanding bills, credit card debt, charge account debt, installment loans, automobile loans, other debt (including educational debt, medical debt, and debt to family and friends). For descriptive purposes, these variables were measured continuously as the sum of the various individual items (for example, credit card debt was the sum of the debt on all credit cards listed). For later analyses of the debt risk of families, each of the variables was dichotomized.

Measures of correlates of debt. Four indicators of families' need for borrowing were measured, including whether the family had a child the number of changes in the family (e.g. employment and health problems), income adequacy and income certainty. Each of these variables captures some aspect of a newlywed couples' need for extra resources that may be met by borrowing money.

The indicators of ability to obtain credit included eight variables that are traditionally used by lenders as indicators of credit worthiness or indicate a couples' financial stability or knowledge of the credit

marketplace. These were age, education, total family income employment of wives, the number of sources of income, occupational status, and husbands' and wives' family finance training. Each of these variables captures some aspect of the couples' credit worthiness or their ability to understand and complete the financial transactions involved in obtaining credit.

Five variables were measured that captured some aspect of families' willingness to borrow money. One indicator of willingness to borrow was an attitudes toward credit scale from the Survey of Consumer Finances. Three other attitudinal variables were derived from a factor analysis of a set of 20 items that had been adapted from previous instruments in a pilot study—feeling more in control, positive attitudes toward planning, and a future-oriented time horizon. A final indicator of couples' willingness to borrow is their attitude toward risk. Respondents were asked to indicate

which of five statements came closest to describing the amount of financial risk they are willing to take. Responses included from "take substantial financial risks" (coded 5) "take above average risks" (4), "take average financial risks" (3), "take below average risk" (2) and "not willing to take any financial risks" (1).

Data analysis

Multiple discriminant analysis was used to assess the efficacy of the predictor variables in discriminating between the couples at risk for debt difficulty and those not at risk. First, all of the variables representing need for borrowing, ability to obtain credit, and willingness to incur debt, as well as the dichotomous variables representing the seven types of debt (omitting home equity debt because of its low variability) were entered into each of three discriminant analyses. Then, a reduced

Table 1
Newlywed couples' debt portfolios

Type of debt	this type of debt	Couples with (n=256)		Total sample this type of debt		Couples with	
		n	%	Mean (std. dev.)	Median	Mean (std. dev.)	Median
<u>Mortgage debt</u>							
Mortgage debt		64	25.0	\$ 18,988 (43,174)	\$ 0	\$ 71,797 (57,260)	\$ 61,750
Home equity debt		6	2.3	380 (3,856)	0	15,321 (21,022)	7,500
<u>Consumer debt</u>							
Outstanding bills		70	27.3	369 (1,242)	0	1,274 (2,054)	508
Credit card debt		152	59.4	1,341 (2,277)	400	2,134 (2,563)	1,250
Charge account debt		48	18.8	112 (430)	0	565 (829)	247
Installment debt		50	19.5	906 (3,124)	0	4,384 (5,696)	2,000
Automobile debt		131	51.2	4,682 (7,005)	600	8,648 (7,511)	7,000
Other debt*		81	31.6	3,462 (19,463)	0	10,343 (32,696)	2,500

* Other debt includes educational debt, medical debt, and debt to family and friends.

model was derived for each measure of debt risk, including those variables that were significant at $p < .10$ or better (because of a wish to reduce Type II errors). The results presented include only those predictor variables.

Results

Newlywed couples varied substantially in their debt portfolios (Table 1). The types of debt held by the largest proportions of newlywed couples were credit card debt and automobile debt, each of which was held by a majority of the couples. About one-third of couples had some amount of other debt and about one quarter of couples had some outstanding bills and held a mortgage.

Fewer than one-fifth had charge account debt outstanding and any installment debt. Very few couples had home equity debt. For each type of debt, there were some families who had very large amounts of debt

outstanding, resulting in mean values that were higher than the medians in each case except home equity debt. Among the types of consumer debt, the highest levels of debt were reported for automobile debt, other debt, and installment debt. Although the highest percentage of families reported that they had credit card debt, the median outstanding balance due on their cards was \$1250.

Table 2 shows the continuous versions of the debt risk variables. The debt/asset ratio shows that about 10% of the couples had no debt at all and approximately another 20% had very little debt relative to their assets (a solvency ratio of $< .10$). At the other extreme, 57 couples or 23.5% of the sample had a debt/asset ratio of .70 or greater. The median of .35 indicates that the typical newlywed couple was in average shape in terms of their debt/asset ratio. Data on couples' liquidity ratio reveals that over one-fourth of newlywed couples had less than

Table 2
Ratio measures of newlywed couples' debt

Characteristic	f	% ^a
Debt/asset ratio (n=241)		
0	24	9.5
.001 - .09	44	19.0
.10 - .29	38	15.7
.30 - .49	41	16.9
.50 - .69	37	15.3
.70 - .99	32	13.2
1.00+	25	10.3
Mean = .48	S.D. = .57	Min. = 0
25th percentile = .07	Median = .35	Max. = 4.71
		75th percentile = .67
Liquidity ratio (n=242)		
0	6	2.5
.01 - .49	60	24.8
.50 - .99	21	8.7
1.00 - 1.99	78	32.2
2.00 - 3.99	23	9.5
4.00 +	54	22.3
Mean = 3.48	S.D. = 5.56	Min. = 0.0
25th percentile = .42	Median = 1.00	Max. = 20.0
		75th percentile = 3.40
Debt repayment ratio (n=242)		
0	28	11.8
.01 - .09	60	25.3
.10 - .19	66	27.9
.20 - .39	58	24.5
.40 - .59	14	5.9
.60 +	11	4.6
Mean = .19	S.D. = .24	Min. = 0.0
25th percentile = .06	Median = .14	Max = 2.16
		75th percentile = .23

^a Percentages may not add to 100.0 because of rounding

six months' worth of current debt coverage available in liquid assets (a ratio of $< .50$). Another 8.7% had average liquidity ratios of between six months' and one year's worth of debt coverage. The couples (about 64%) had good liquidity. About one-fourth of couples had a debt repayment ratio between .20 and .39, a dangerous level of debt repayment. About another one-tenth of the couples had very high levels of debt repayment. The median debt repayment ratio of .14 indicates that the typical newlywed couple used about 14% of their net income to repay old debt.

Table 3 shows the discriminant analysis for risk of insolvency. Three types of debts—charge account debt, automobile debt, and other debt—discriminated between those at risk and those not at risk. Having other debt was particularly important in distinguishing between the risk groups. Twice as many couples in the at risk group had some amount of other debt as did couples not at risk. Two measures of need to borrow also were significant in the final analysis—income adequacy and income certainty. Couples at risk for insolvency reported

that their incomes were less adequate and less certain than did other couples. Two attitudinal measures also differentiated between the groups. Couples at risk had attitudes less accepting of the need for future planning and felt less in control of their lives than did couples not at risk. The percentage of couples correctly classified by the discriminant analysis was 72.4%, substantially better than classification by chance.

The results of the discriminant analysis for the liquidity risk were different (not shown here because of space). Five types of debt—bills, credit card debt, charge account debt, installment and mortgage debt, differentiate between those at risk of illiquidity from those not at risk. Particularly large are the differences in the proportion of couples who have bills outstanding (44% of at risk couples vs. only 21% of couples not at risk) and those with installment debt (39% in the at risk group vs. 10% of other couples). Again, spouses' subjective income adequacy also differentiated the at risk group from their peers. Two measures of ability to obtain credit, gross income and number of sources of income,

Table 3

Discriminant analysis of debt/asset risk of newlywed couples

	At risk (n=52)	Not at risk (n=162)	F-value
<u>Need</u>			
Income adequacy	3.21	3.62	7.92 **
Income certainty	3.85	4.13	2.83 *
<u>Willingness</u>			
Attitudes toward planning	12.58	13.02	2.61 *
Feelings of control	11.00	10.14	3.72 *
<u>Debt portfolio</u>			
Has charge account debt(s)	.33	.17	6.31 **
Has auto debt(s)	.73	.49	9.73 **
Has other debt(s)	.54	.26	14.77 ***
Wilks' lambda = .74			
F-value = 2.53 ***			
Percent classified by discriminant function as:			
At risk -- number	37	44	
Percent	71.1	27.2	
Not at risk -- number	15	118	
Percent	28.9	72.8	
Overall hit ratio = 72.4%			

* $p < .05$ ** $p < .01$ *** $p < .001$ * $p < .10$

also were significant. Couples at risk for illiquidity had lower average incomes by almost \$7000 and had fewer sources of income, as compared to couples with good liquidity. Attitudes toward credit and feelings of control also significantly distinguished between the groups. Couples at risk had more liberal attitudes about using credit and felt less in control of their lives than their peers with better liquidity. The hit ratio of 78.1% is the best classification success of any of the three analyses.

The analysis for the newlyweds' debt repayment risk revealed different results (not shown here because of space). Two types of debt—automobile and other debt—were significantly related to membership in the at risk group. Other debt includes medical debt, educational debt, and debt owed to family and friends. Twice as many couples in the at risk group (54%) have this type of debt as in the group not at risk (26%). Only the traditional measures of credit worthiness were among the significant covariates in this analysis. Newlywed couples whose debt repayment risk was high were younger with lower incomes, had fewer sources of income and included husbands who were less likely to have had any financial management training. This analysis correctly classified 68.2% of couples into their risk group.

Summary

The typical newlywed couple in this sample did not begin their married life with a clean debt slate. Around 90% of newlywed couples had at least one type of debt: fewer than one in ten couples was completely debt-free. Nor are newlyweds, while homogeneous in terms of stage in the family life cycle, homogeneous with respect to their debt portfolios. While almost three-fifths had some credit card debt (the most prevalent type of debt), fewer than 3% had home equity debt and fewer than one-fifth had charge account debt and installment debt.

Three debt ratios—a solvency ratio, a liquidity ratio, and a debt repayment burden ratio—measured the debt risk of newlywed couples. While the typical newlywed couple is in a relatively safe position, there is a group of newlywed couples who are clearly at risk for debt trouble. Depending on the measure of debt risk used, either 23.5% (solvency ratio), 35% (debt repayment ratio), or 36% (liquidity ratio) of newlywed couples probably experience debt difficulty.

The types of debt differentiate between couples grouped according to risk of debt difficulty, particularly charge account debt, auto debt, and other debt (including medical and education debt and money

owed to family and friends). With other factors controlled, each of these types of debt significantly discriminate between at risk couples and other couples on two of the measures of debt risk. Having credit card debt predicts only liquidity risk. Some of the popular indictment of credit cards as a significant contributor to debt difficulty of families may be overstated, at least insofar as Georgia newlywed couples are concerned.

Traditional measures of ability to acquire credit, such as age and income, were significantly related only to liquidity risk and debt repayment risk. Younger and lower income couples with fewer sources of income were at greater risk for debt difficulty than their newlywed counterparts. Indicators of willingness to acquire credit, such as attitudes toward credit, attitudes toward planning, and feelings of control, were significantly related only to solvency and liquidity risk. Couples at risk for illiquidity had more liberal attitudes toward credit and felt less in control of their lives than their counterparts. Couples at risk for insolvency felt that planning for the future was less needed and effective and felt less in control of their lives than their counterparts with low debt/asset ratios.

Knowing more about the types of debt that could lead to debt difficulties of families is important for both consumers and credit grantors. In a study of the causes of bankruptcy, Sullivan, Warren & Westbrook (1989) suggested that one of the root causes of consumer bankruptcies was "the irresponsibility of particular debtor-creditor dyads" in obtaining, on the one hand, and being willing to grant, on the other, too much debt of certain types (p. 332). If more research on this issue replicates and extends the findings of this study, and if such findings can be disseminated both to consumers and to creditors, perhaps both parts of the dyad can become more responsible.

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Endnote

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