

MONEY MANAGERS – THE GOOD, THE BAD, AND THE LOST

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Using the University of Michigan's 2001 Surveys of Consumers, a profile of four different types of money managers based on their financial product ownership and financial behaviors is provided. Within a multivariate framework education, financial knowledge, learning experiences, learning preferences, and stability are found to be major determinants of type of money manager.

Introduction

Eat less. Exercise more. Quit smoking. Most people know such behaviors could lead to longer, healthier lives. However, “I know” and “I do” can be vastly different. The goal of this paper is to explore how knowing what to do with money relates to good decisions and appropriate action.

The buzz phrase of choice has become financial literacy (Hogarth, 2002), which is largely associated with knowledge about saving, spending, and borrowing. Numerous personal finance knowledge tests have been conducted, often with the same conclusion of unacceptable scores (Consumer Federation of America, 1990; Mandell, 2001; and From Bad to Worse, 2002). These tests of financial knowledge seldom link to financial behaviors by respondents. Do individuals and families who know the basics of managing money have the accompanying skills and motivation to make good decisions, meet day-to-day expenses, and build wealth for long-term financial security?

Three primary indicators often frame financial illiteracy – the Nation's growing consumer debt, an increasing number of personal bankruptcies, and a low personal savings rate. According to data from the Federal Reserve on revolving credit, U.S. households had an

average \$6,600 in revolving credit debt in early 2002, up 68 percent in real terms from that held in 1994 (Federal Reserve Board, 2002).^a Excessive credit card debt often is linked to bankruptcy, which has risen from 1.1 million filings in 1996 to 1.4 million in 2001 (filings for the first quarter of 2002 are on a pace toward 1.5 million; ABI World, 2002).

Unfortunately, saving, the antithesis of spending, is not a habit for many Americans. The national personal savings rate hovers around zero (Bureau of Economic Analysis, 2001) and is the lowest of any industrialized nation. It is well known, however, that saving is the foundation for building financial wealth and security.

The ability to save implies sound financial management skills and habits. Significant public and private funds have been dedicated to campaigns and other information tools to build public awareness about the need to make good financial decisions. Hopefully, these efforts lead to improvements in financial literacy. But as Stephen Brobeck, Executive Director for the Consumer Federation of America, asked, “is the goal [of financial education] simply to increase financial literacy – to expand consumer knowledge about the financial services marketplace and how consumers can best utilize this knowledge? Or is the goal, more fundamentally, to improve the quality of consumer financial decisions – to help ensure that consumers not only have adequate knowledge but also successfully apply this knowledge in decisions about spending, saving, and the use of credit?” (Brobeck, 2002).

The purpose of this research is to provide a profile of respondents' money management styles based on financial product ownership and behaviors. Is there a connection between what consumers know and type of money managers they are? What other factors determine

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how well individuals manage their money? Do different types of money managers use different sources for financial information?

Previous Studies

Financial Knowledge

Numerous studies and surveys have explored the levels of financial knowledge among subgroups in the population. These include joint studies by the Consumer Federation of America and American Express as well as combined efforts by the Consumer Federation of America, the Cooperative Extension System and the Consumer Literacy Consortium. Other organizations that have examined financial knowledge include the Jump\$tart Coalition for Personal Financial Literacy, the Americans for Consumer Education and Competition, the American Savings Education Council and the Employee Benefit Research Institute.

Financial Behaviors

The field of behavioral economics (at the intersection of economics and psychology) strives to understand what drives behavior. Researchers and theoreticians have posited that household behaviors are a function of how a problem is framed (for example, how much do you stand to lose versus how much do you stand to gain, with people treating losses differently than gains) as well as on the objective rate of return (see the discussion in DeBondt & Thaler, 1994).

Mullainathan and Thaler (2000) discuss hyperbolic discounting, in which households are impatient in the short run and extremely patient in the longer run (so that they indefinitely put off starting an IRA). Xiao et al (2000) applied the transtheoretical model, developed in the field of health behaviors, to financial behaviors. The underlying assumptions in this model are that change is not an event, but a set of stages, and that moving through the stages is accomplished through a set of processes. This model is useful for studying behavior changes, and, related to the current study, the role that knowledge and education may have on helping households identify useful processes to help them through the stages of changing financial management behaviors.

The literature on financial behavior suggests that there are various factors at work. Some argue that an individual's level of self-control can create differences in financial behavior (Thaler & Sherfin, 1981) as can "developmental experiences" during an individual's youth (Kotlikoff & Bernheim, 2001). Others posit that financial behaviors are not only a function of the *willingness* but the *ability* to engage in specific behaviors (Katona, 1975). Institutional constraints or limits

(including matching rates) may also affect financial behavior (Sherraden, Schreiner, & Beverly, 2002) as can "facilitation" (such as automatically enrolling employees in a 401k plan) (Madrian & Shea, 2001).

A few studies have focused on how knowledge relates to financial management behaviors. Bernheim, Garrett and Maki (2001) studied the relationship between high school financial curriculum mandates and adult savings patterns and net worth. Other studies have focused on the effects of financial education seminars in the workplace (Garman et al, 1999; Bernheim & Garrett, 1996; Kim et al, 2001). While these studies support the important role of knowledge in financial management behaviors there is also evidence, however, that people "learn by doing" (Weisbenner, 1999).

Sources of Financial Information

Some studies have looked at how consumers have learned about financial management and the sources of information they use (Bowen, 1996; Bernheim & Garrett, 1996; Garman, 1998; Hogarth & Swanson, 1995; and Perry & Ards, 2001). Others have developed compilations of financial education programs (see Vitt et al, 2000; Jacob et al, 2000; Jump\$tart, 2002; NEFE, 2001; and NRC, 2000).

While some researchers have discussed the pros and cons of a variety of delivery strategies and consumer preferences regarding these methods (Toussaint & Rhine, 2000; Rhine & Toussaint, 2002), others have focused on the associations between preferred information delivery strategies and other characteristics such as gender and length of participation in a financial education program (O'Neill et al, 2000). Still others have focused on the effects of obtaining information from different delivery sources (Bernheim & Garrett, 1996).

Summary

For the most part, previous surveys on financial knowledge have limited themselves to simple descriptive studies; this study will provide analysis in a multivariate framework. A few studies have linked education and behaviors, but the implicit assumption behind most of these studies is that education increases knowledge, which in turn affects behaviors; this study will test the knowledge-behavior linkage more directly. Finally, information sources are often studied as an indication of tastes and preferences; this study will incorporate information sources as a determinant of financial management behaviors.

Data and Methodology

The monthly Surveys of Consumers were initiated in the late 1940s by the Survey Research Center at the University of Michigan to measure changes in consumer attitudes and expectations with regard to consumer finance decisions. Each monthly telephone survey of 500 households includes a set of core questions covering consumer attitudes and expectations along with socioeconomic and demographic characteristics. In order to address the questions of interest, the Federal Reserve Board commissioned additional questions on the monthly survey regarding a household's financial knowledge, experience, behaviors, learning experiences, and learning preferences. The questionnaire was administered in November and December 2001; the data contain information from 1004 respondents.

After exploring descriptive statistics on financial product ownership and financial behaviors, the two components used to construct a typology of money managers, we present bivariate results relating money management types to various socioeconomic and demographic characteristics, measures of financial knowledge, learning patterns and preferences, and measures of financial stability, attitudes, and future-mindedness is presented. Finally, money management type is modeled within a multivariate framework.

Results

The survey asked a series of questions regarding financial product ownership and financial behaviors. Specifically, the survey asked consumers whether they had experience with any of 13 different financial products. These ranged from savings and checking accounts to credit cards, mortgages, refinancings, and investments (column1, Table 1). Consistent with other surveys, 89% of households had a checking account and 80% had a savings account. Consumers were also asked about 18 different financial management behaviors, ranging from very basic money management skills that "everyone" should do (track expenses, pay bills on time) to more sophisticated behaviors (investment diversification). While 88% indicated they paid "all their bills on time," only 49% indicated that they paid off their credit cards in full each month (column1, Table 1; note that this is a "raw" number -- this number does not yet control for credit card ownership).

Money Manager Types

Next the proportion of financial products held as well as the proportion of financial behaviors taken were calculated separately. The financial product ownership measure controlled for home ownership (that is, if you

Table 1.

Financial product ownership and fin. behaviors* (in %)

	All obs.	Lost	Bad	Good	Very good
Number of obs.	1004	369	134	190	311
Proportion of obs.	100	37	13	19	31
<u>Financial product ownership</u>					
Checking account	89	74	100	92	100
Savings account	80	61	93	85	94
Have credit card	79	57	97	79	97
Bought a house	72	53	87	70	91
Have any invest					
accounts	52	17	84	31	93
Mutual fund	46	15	69	28	84
Company pension plan	45	19	72	27	74
401k plan	45	19	72	27	74
IRA/keogh	43	16	70	21	76
Refinance mortgage or					
loan for home	35	16	51	23	57
Certificates of deposit	30	14	38	20	52
Public stock	24	7	43	11	43
Bonds	6	1	7	4	12
Mean prop. of fin.					
products owned ¹	50	29	69	41	74
Median prop. of fin.					
products owned ¹	54	31	69	42	77
<u>Financial behaviors</u>					
Pay all bills on time	88	75	90	96	98
Have an emergency					
fund	63	30	60	81	93
Spread money across					
several types of invest	53	16	74	46	93
Have a record keeping					
system	65	41	51	83	89
Balance check book					
monthly	67	49	64	82	82
Save or invest money					
out of each paycheck	49	20	40	64	78
Track expenses	59	41	32	86	76
Pay credit cards in full					
each month	49	21	53	54	76
Review credit report	58	40	47	74	74
Calculated net worth					
in past 2 years	40	14	33	47	68
Participate in 401k	37	11	47	33	68
Save for long-term					
goals	39	14	16	59	65
Use a spending plan or					
budget	46	34	14	71	59
Plan and set goals for					
your financial future	36	20	10	57	54

Table 1 Continued.

Financial product ownership and fin. behaviors* (in %)

	All obs.	Lost	Bad	Good	Very good
Do own taxes	40	31	31	47	51
Compare credit card offers before applying	35	21	34	44	47
Put money into other retirement plans IRA	22	4	16	22	47
Read about personal money management	20	5	9	23	40
Mean prop. of fin. behaviors taken ²	50	30	41	64	71
Median prop. of fin. behaviors taken ²	50	33	44	61	72

* Chi-square tests are performed between the lost, the bad, the good and the very good for each individual product and behavior. P-value < .0001

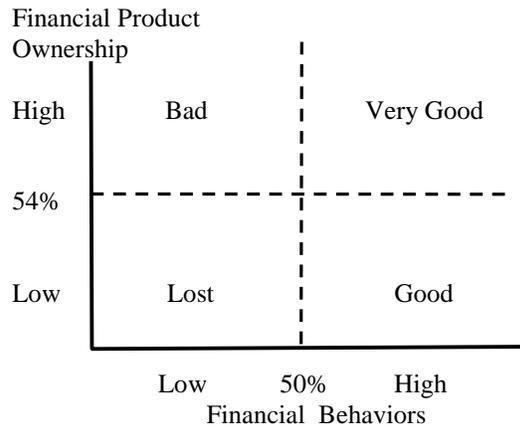
¹ Controlling for whether or not the consumer is a homeowner

² Controlling for age, checking account ownership, savings account ownership and credit card ownership as appropriate

didn't own your home, you can not be expected to refinance your mortgage). Table 1 shows that on average households owned half of the financial products available (median was at 54%). The financial behaviors measure controlled for age (related to retirement accounts), checking account ownership (related to balancing a checkbook), savings account ownership and credit card ownership (related to paying off credit card bills). Similar to financial product ownership, households are only performing half of the financial behaviors possible (median was at 50%).

Using these two measures a four-way categorical variable based on whether the consumer was above or below the median for the proportion of financial products held as well as the proportion of financial behaviors taken was created. This variable was used to describe the four basic types of money managers that exist in the financial marketplace according to financial product ownership (experience) and financial behavior. At one extreme were the "very good" money managers (31% of the sample) since they demonstrate commendable money management skills; they were above the median in both financial experience and financial behaviors. At the other end of the continuum were the "lost" money managers (37% of the sample) who were below the median for both experience and behaviors. In between these two categories were both the "good" (19% of the sample) and the "bad" (13% of the sample). Money managers are considered to be "good" if they were above the median for behaviors but below the median for experience. In contrast are the "bad" money managers who are considered as such because although they own more than the median

proportion of financial products, they did not actively engaged in financial behaviors.



On average, the "lost" held only 29% of the available financial products and were engaged in 30% of the financial behaviors (Table 1). Although the "bad" money managers were in the top half in terms of product ownership (they held on average 69% of the products), they were not actively engaged in financial behaviors; they only undertook 41% of the possible behaviors. The "good" money managers were above the median in terms of the financial behaviors (they undertook 64% of the possible behaviors) but below the median in the proportion of financial products owned (holding an average of 41% of the products). The "very good" owned the most financial products (on average, 74%) and were engaged in the widest proportion of financial behaviors (on average, 71%).

Looking back at columns two through five of Table 1 the lost were the least likely to hold each individual financial product followed by the good, the bad, and the very good. Among the financial behaviors taken, the lost money managers again were the least likely to be engaged in each and every individual behavior. For the most part, the bad, followed by the good, and finally the very good were more likely to participate in a greater proportion of financial behaviors than the previous group although these proportions do not hold for each individual behavior. Although the bad and the very good money managers were both above the median in the number of financial products held, the bad were less likely than the very good to be engaged in each and every individual financial management behavior. In most cases, the bad also were less likely than the good to participate in a given behavior. Chi square tests reveal that there were statistically significant differences in financial product ownership and financial behavior between the four types of money managers.

Examination of socioeconomic and demographic characteristics by financial product ownership and

behaviors reveal that there were differences between the groups within a bivariate framework (data available from authors). The lost money managers were the most likely to be single females while the very good money managers were the most likely to be married.

Interestingly, in many ways the very good were quite similar to the bad; these two groups were very similar with respect to race/ethnicity, age, and education. As might be expected, the lost reported the lowest mean and median income while the very good had the highest income. Statistically significant differences between the four types of money managers were found in each category within the socioeconomic and demographic characteristics.

Financial Knowledge

As part of the questionnaire, consumers were asked a set of 28 true-false questions covering savings, credit, and general financial management topics. On average, consumers answered 67% correctly (Table 3). Not surprisingly, the lost money managers received the lowest overall financial knowledge score of 59% while those who were very good obtained the highest score of 76%.

Learning Patterns and Preferences

The survey asked consumers how much they learned about financial management from 7 different sources, the most important way in which they learned, and their preferences for learning in the future. As in other studies, consumers in each category indicated they learned mostly from personal experience; the majority said this was the most important way they learned (Table 3). Friends and family were the second-most reported source of learning, followed by the media. Compared with the good and the very good a higher proportion of the lost and the bad reported that friends and family were the most important source of financial information.

Turning to how people preferred to get future information, the top-ranked sources were media, and brochures. The Internet, courses, and seminars ranked somewhat lower, although with the exception of the lost, more than half indicated that these would be effective ways to learn about financial management.

Interestingly, the preferred methods of learning can be classified as individually focused and “on demand” – that is, consumers want information on their time, not on someone else’s schedule.

Financial Stability, Attitudes, and Future-Mindedness

Factors that may influence financial product ownership and behavior include consumers’ level of financial stability as well as their attitudes and future-mindedness. The Survey of Consumers asked questions regarding an

individual’s financial position in comparison to a year ago as well as their future expectations. Not surprisingly, the lost money managers were the most likely to state that they were worse off now while the very good were the most likely to state that they were better off now (Table 4). Respondent’s across the different categories, however, were much more optimistic regarding their future expectations about their financial standing. Although the very good were slightly more likely than the lost to believe that they would better off next year (45% versus 40%), only 8 percent of both groups believed that they would be worse off.

The survey also asked individuals on a scale of 0 to 100 what they perceived their chances were with respect to specific events. Interestingly, the good money managers

Table 3.
Average financial knowledge test scores and Sources of Financial Information (in %’s)

	Lost	Bad	Good	Very good
Financial Knowledge score	59	69	66	76
Most important way learned about personal finances:				
Personal financial exp.	47	42	49	51
Friends and family*	24	25	19	17
TV, radio, magazines, newspapers*	8	13	11	14
Training courses/seminars	3	4	6	5
Employer	3	5	6	5
HS or college course	7	5	4	4
Internet	0	4	4	1
No answer	8	1	1	1
Effective ways to learn about personal finances:				
TV, radio, magazines, newspapers**	66	74	71	76
Info. brochures	65	65	64	70
Video presen. at home	65	63	60	67
Internet/computer program***	43	56	61	67
Info. seminars in community	49	52	50	58
Formal courses at a school	53	53	56	52

** T-tests are performed between the means of each individual score for the lost, the bad, the good and the very good. P-value<.0001
Chi-squared tests are performed between the lost, the bad, the good, and the very good. *** P-value<.01; ** P-value<.05; * P-value<.10

on average were the least likely to believe that their family income would increase by more than the rate of inflation in the next five years while the very good money managers were the most confident that their family income would increase. With reference to job stability, the bad were the most pessimistic. On average

they believed that they had a 25% chance that within the next five years either they or their spouse will lose a job that they wanted to keep. Most households were not optimistic that income from Social Security and job pensions will be adequate to maintain living standards.

Table 4.
Current financial standing and perceptions of future standing (in % 's except where noted)

	Lost	Bad	Good	Very good
Financial standing in comparison to a year ago:				
Better now***	29	34	45	48
Same	32	31	29	29
Worse now***	37	35	25	24
na	2	-	1	-
Expected financial standing a year from now:				
Will be better off	40	43	43	45
Same	46	46	48	44
Will be worse off	8	10	6	8
na	6	1	3	2
In comparison to 5 years ago, chances that you will have a comfortable retirement have:				
Gone up	17	24	24	32
Same	53	46	45	46
Gone down	26	28	29	21
na	4	1	2	1
Probability that income will increase > inflation in five years ^{1,2}	35	44	34	53
Probability of job loss ^{1,2}	20	25	19	18
Probability of adequate retirement income	34	40	36	40

*** Chi-squared tests are performed between 4 groups. P-value<.01
¹ on a scale from 0 to 100 where 0 equals "absolutely no chance" and 100 is "absolutely certain"

² T-tests are performed between 4 groups. P-value<.0001

Modeling Money Management Types

In order to explore the factors that influence money management types, a multinomial logit model was used. The "very good" money managers are used as the reference category. The statistical analysis program Stata was used to estimate the multinomial regression and provide marginal effects, which are more easily interpreted than parameter coefficients.

Empirically:

type of money manager = $f(\text{socioeconomic \& demographic characteristics; financial knowledge; financial learning experiences and preferences; stability, attitudinal, and future-mindedness measures})$

Previous studies suggest that family background is associated with financial behavior (Thaler & Sherfin, 1981, Kotlikoff & Bernheim, 2001). Age, marital status and gender, ethnicity, education, and region are included. Other researchers have argued that financial behaviors are subject to an individual's economic resources (Katona, 1975). Income, measured as the log of household income is included, in the regression. As a proxy for experience and to control for any curvilinear effects of age, age-squared is also included. Since other studies have found vehicle ownership to be a significant determinant of holding a bank account and financial experience, it is included in this model as well (Stegman and Faris, 2001).

Given the number of studies (O'Neill et al, 2001; Staten et al 2002) which highlight the importance of financial education (and implicitly financial knowledge) financial knowledge is also included in the regression.

How individuals learn about financial management may also affect financial behavior and financial product ownership since certain learning experiences may be more conducive to stimulating behavioral change. Therefore, financial learning experiences are also controlled for. Using factor analysis, two factor scores were obtained. The first factor, which is defined as "proactive," represents those who said that they learned a lot in high school, outside courses, the media and/or the Internet. The second factor, defined as "reactive," included personal experiences, friends and family, and/or an employer. Since the questions were not exclusive, individuals could obtain high factor scores on both. Financial learning preferences may also relate to type of money manager. Two dummy variables based on a series of questions found in the survey were created. Individuals that said that they like to learn through informational seminars and/or formal courses at a school received a 1 for "like to learn in a group environment," 0 otherwise. If an individual said that they liked to learn through video presentations, informational brochures, the media and/or the internet than the individual obtained a 1 for "like to learn individually," 0 otherwise.

Other researchers have argued that in the case of savings, "the level and rate of savings also depend on expected variation in income" (Sherraden et al 2002, p.3). To control for financial stability, two dummy variables regarding whether or not the consumer's finances are the same or better than a year ago and their outlook on their financial status for next year were included. Attitudes and future-mindedness as measured by a consumers' perceived chances that their family income will increase by more than the rate of inflation within the next five years and their expectations that they or their spouse will lose their job within the next five years were also measured. These two variables are included as

continuous variables on a scale of 0 to 100 where 0 signifies “no chance” and 100 is “absolutely certain.”

Multivariate Results

With the exception of region, all variables were significantly associated with the type of money manager. Interpreting the coefficients and odds ratios in multinomial regressions can become a bit daunting. To simplify the discussion of results, this paper will not go into the details of the coefficients and resulting odds ratios from the multinomial logistic regression. This discussion will focus on the marginal effects of the significant independent variables and on the predicted probabilities of being in each of the four money manager categories. This will identify more clearly how particular characteristics affect financial product ownership and financial behaviors.

Given that within a bivariate framework the greatest differences were found between the lost and the very good, it was not surprising that within a multivariate framework the greatest number of statistically significant variables were found for the lost relative to the very good. The variables with the greatest marginal effect for being lost were not owning a vehicle, being Hispanic and being a single male (Table 5). While the model predicted that an individual had a 30% chance of being lost, not owning a vehicle, being Hispanic and being a single male increased the chances of being lost by 21, 18 and 15 basis points, respectively. Income, having at least a college degree, and having finances the same or better than that of a year ago had the largest marginal effects in reducing the probability of being lost. Evaluated at the means of all the other variables, households with an income of \$30,000 had a 39% chance of being lost, while those with a \$50,000 income had a 27% chance (Table 6). Those with at most a high school degree had a 30% chance of being lost while those with at least a college degree had only a 17% chance. Households whose current finances were worse than a year ago had a probability of being lost of 40%, while those whose finances were the same or better had a probability of 25%.

While the actual probability of being bad was 13%, this model overpredicted the bad by 4 basis points. In this case, the variable with the largest positive marginal effect was being a single female, with a 21% chance of being in the bad category. On the other hand, being Black and having completed some college decreased the respectively. Evaluated at the means of all the variables, probability of being bad by 16 and 4 basis points, the probability of being bad was 17%. Blacks had only a 3% chance of being bad while those with some college had a 14% chance all else equal.

Table 5.
Marginal Effects^{1,2} (bold cells are significant at $\leq .10$)

	Lost	Bad	Good	Very good
Predicted probability	0.30	0.17	0.27	0.27
Actual distribution	0.37	0.13	0.19	0.31
<u>Socioeconomic & Demographic Characteristics</u>				
Marital status and gender (relative to those who are				
Single male	0.15	-0.04	0.00	-0.11
Single female	0.07	0.07	-0.04	-0.09
Race/ethnicity (relative to those who are White)				
Black	0.13	-0.16	0.08	-0.06
Hispanic	0.18	-0.08	0.11	-0.21
Other	-0.04	0.02	-0.18	0.20
Age ²	-0.10	0.04	-0.12	0.18
Age squared ²	0.00	0.00	0.00	0.00
Education (relative to those with high school or less)				
Some college	-0.08	-0.04	-0.03	0.16
College or more	-0.20	0.09	-0.02	0.13
Region (relative to the Northeast)				
West	0.02	0.03	-0.05	0.00
Midwest	-0.01	0.02	0.07	-0.08
South	0.09	-0.02	-0.02	-0.05
Log of household	-0.22	0.10	-0.10	0.23
Vehicle ownership (relative to owning an old vehicle)				
No vehicle	0.21	0.04	-0.07	-0.19
New vehicle	-0.06	0.04	0.02	-0.01
Financial knowledge	-0.05	-0.01	-0.02	0.08
<u>Financial learning experiences (factor scores)</u>				
Proactive	-0.10	-0.01	0.04	0.07
Reactive	-0.07	-0.02	0.03	0.06
<u>Financial learning preferences</u>				
Like to learn in a group	-0.10	0.04	-0.06	0.11
Like to learn indiv.	-0.08	0.03	0.05	0.00
<u>Stability, Attitudes, & Future-mindedness measures</u>				
Finances are the same or better than a year ago	-0.15	-0.02	0.09	0.08
Expect fin. to be the same or better next year	0.06	0.00	0.07	-0.13
Chances that inc. will increase >infl. in 5 yr. ²	0.00	0.00	-0.02	0.02
Chances of job loss ²	-0.01	0.01	0.00	-0.01

¹ Marginal effects are calculated at the means of the other variables

² The continuous variables were scaled by a factor of 10 to help interpret the marginal effects. For example, the marginal effect of age on being "lost" is -.10. This signifies that increasing an individual's age by 10 years decreases the probability of being "lost" by 10 basis pts.

Our model overpredicted the good and underpredicted the very good. The actual probabilities for the good and the very good were respectively 19 and 37 percent although the predicted probabilities were 27 percent for both of these groups. In the good manager category, the greatest marginal effects of 11 and 7 basis points were for Hispanics and for households who expected their finances to be the same or better next year, respectively. On the other hand, being of an “other” ethnicity, age,^b and income had the largest marginal effect in reducing the probability of being good by 18, 12, and 10 basis points, respectively.

Interestingly, these same variables (other ethnicity, age, and income) had the largest marginal effects for being a very good money manager. The marginal effects were 20, 23, and 18 basis points, respectively. Persons of “other” races had a 46% chance of being in the very good category, households 65 years old had a 64% chance of being very good, and households with \$90,000 incomes had a 43% chance of being a very good money manager. On the other hand, individuals who were Hispanic, who had no car, who expected their finances to be the same or better next year and who were a single male had reduced probabilities of being very good by 21, 19, 13 and 11 basis points, respectively.

Probability Estimates

This section examines how, as a given characteristic (such as age, education or the financial knowledge score) changes, the predicted probabilities of being in each of the four categories changes as well.^c As consumers age, they were less likely to be a lost or a good money manager and more likely to be a very good money manager. This model predicts that a 35-year old has a 38% probability of being lost while only an 11% probability of being very good. In contrast a 65-year old has only an 11% chance of being lost and a 64% chance of being very good. This interpretation, however, needs to be approached with caution since the cross-sectional data does not control for cohort effects.

Looking at the predicted probabilities by education provides similar results. As consumers’ level of education increases, the probability of being lost or good decreases while the chances of being bad or very good increase. Both the lost and the good were below the median in terms of financial products held, while the bad and the very good were above the median. Thus, education may be related more to product use and less to financial behaviors.

Table 6.
Predicted probabilities given certain characteristics^{1,2}
(bold cells are significant at $\leq .10$)

Characteristic	Predicted probability of being..			
	Lost	Bad	Good	Very good
Actual distribution	0.37	0.13	0.19	0.31
Predicted	0.30	0.17	0.27	0.27
Marital status and gender				
Married	0.30	0.17	0.27	0.27
Single male	0.43	0.13	0.26	0.18
Single female	0.35	0.21	0.24	0.20
Race/ethnicity				
White	0.30	0.17	0.27	0.27
Black	0.42	0.03	0.34	0.21
Hispanic	0.47	0.09	0.37	0.08
Other	0.26	0.19	0.10	0.46
Age				
35	0.38	0.11	0.39	0.11
45	0.31	0.16	0.28	0.25
55	0.20	0.19	0.16	0.45
65	0.11	0.18	0.08	0.64
Education				
High school degree	0.30	0.17	0.27	0.27
Some college	0.24	0.14	0.24	0.38
College or more	0.17	0.23	0.24	0.36
Household income				
\$30,000	0.39	0.13	0.30	0.18
\$50,000	0.27	0.18	0.26	0.29
\$70,000	0.20	0.21	0.21	0.38
\$90,000	0.16	0.22	0.18	0.43
Vehicle ownership				
No vehicle	0.50	0.21	0.20	0.10
Old vehicle	0.30	0.17	0.27	0.27
New vehicle	0.27	0.19	0.28	0.26
Financial knowledge score				
50	0.38	0.18	0.30	0.14
60	0.34	0.17	0.28	0.20
70	0.29	0.16	0.26	0.28
80	0.24	0.15	0.24	0.37
Financial learning preferences				
Like to learn in a group enviro't	0.27	0.18	0.25	0.31
Do not like to learn in a group enviro't	0.36	0.14	0.30	0.20
Like to learn individ.	0.29	0.17	0.27	0.27
Do not like to learn individ	0.37	0.14	0.22	0.27

Table 6 Continued.
 Predicted probabilities given certain characteristics^{1,2}

Characteristic	Predicted probability of being..			
	Lost	Bad	Good	Very good
Financial learning experiences				
Both proactive and reactive methods	0.05	0.08	0.31	0.56
Proactive methods and reactive method (per. exp.)	0.08	0.13	0.32	0.46
HS and outside courses	0.22	0.17	0.29	0.32
Only reactive methods	0.29	0.14	0.27	0.30
No method	0.47	0.18	0.19	0.15
Financial situation relative to a year ago				
Same or better	0.25	0.16	0.30	0.29
Worse	0.40	0.18	0.21	0.21
Expected financial situation a year from now				
Same or better	0.30	0.17	0.27	0.26
Worse	0.25	0.17	0.20	0.38
Chance that income will increase by more than inf., next 5 yr.				
30% chance	0.30	0.16	0.29	0.24
50% chance	0.30	0.17	0.25	0.28
70% chance	0.28	0.18	0.22	0.32
90% chance	0.27	0.18	0.19	0.36
Chance that you or your spouse will lose job, next 5 yr.				
30% chance	0.29	0.18	0.27	0.26
50% chance	0.28	0.21	0.26	0.25
70% chance	0.26	0.24	0.26	0.24
90% chance	0.25	0.27	0.25	0.22

¹ Probabilities were calculated by using means of all variables except for the variable of interest. For example, for education we used the means for all other variables and supplied values of 1 (hs degree or less) and 0 (more than a hs degree) in the equation to arrive respectively at the 0.30, 0.17, 0.27, and 0.27 probabilities for the lost, bad, good and very good given that an individual has a hs degree or less.

² Rows sum to 1

Household income was also a significant determinant of the type of money manager. As might be expected, this model predicted that as a consumer's level of income increased, their probability of being lost decreased while their probability of being very good increased. Consumers with a household income of \$30,000 had a 39% probability of being a lost money manager and an 18% probability of being a very good money manager. When a consumer's income increased to \$90,000, their chances of being lost were only 16% while their chances of being very good were 43%.

One of the areas in which policy makers and community educators can have the greatest role is in supporting

financial literacy. Although the financial knowledge score did not have a large marginal effect, it was the only statistically significant determinant besides level of education associated with a decreased probability of being lost, bad, and good and increased the probability of being very good. Consumers with a financial knowledge score of 50 had a 38% chance of being lost while only a 14% chance of being very good. Conversely, consumers that received a score of 80 on the financial literacy quiz had a 24% probability of being a lost money manager and a 38% probability of being a very good money manager. These results support the widely-held notion of the importance of financial literacy and its impact on both increasing the array of financial products owned as well as the number of financial behaviors undertaken.

Another area in which both policy makers and community educators can play an important role is in the way in which financial information is disseminated. As explained earlier, factor scores for ways in which consumers learned about financial topics as well as their learning preferences were included within the regression. Both the "proactive" and "reactive" factor scores were significant determinants of type of money manager. Consumers who relied only on reactive sources (experience, family and friends, employers) had a 29% chance of being lost and a 30% chance of being very good. Consumers who relied only on proactive sources plus personal experience had an 8% chance of being lost and a 46% chance of being very good. Those who relied on both proactive and reactive sources had a 5% chance of being lost and a 56% chance of being very good. The message to educators and policy makers is that it takes a mix of mutually-reinforcing learning sources to maximize the probability that consumers will become very good money managers.

These results show that policy makers and community educators need to be sensitive to learning styles and learning preferences. Learning in a group environment was a statistically significant determinant in decreasing the probability of being a lost or a good money manager and in increasing the probability of being very good. Those who preferred to learn in a group environment had a 31% chance of being very good, compared with only 20% of those who did not like group-learning environments. Learning preferences may be an indication of a consumer's motivations to learn about financial topics since consumers who prefer informational seminars and/or formal courses at a school may be taking greater strides in increasing their financial knowledge in compared with consumers who only chose to learn on their own.

Stability measures also proved to be significant determinants of the type of money manager. Although only marginally significant, consumers who expected

their finances to be worse next year were less likely to be good money managers and more likely to be very good; thus if their predictions do come true, the very good managers should be in a better position to cope with reduced resources.

Not surprisingly, the greater the perceived chance that income will increase by more than the rate of inflation within the next five years, the lower the probability of being a lost money manager and the greater the probability of being very good. Interestingly, this study also found that the greater the perceived chance of either the consumer or his/her spouse of losing a job, the greater the probability of being a bad money manager. This model predicted that consumers who perceived that they had a 30% chance of losing their job within the next five years had an 18% probability of being bad while the probability of being bad increased to 27% if they perceived they had a 90% chance of losing a job.

Discussion and Conclusions

The survey found that while one half of all consumers are either good or very good money managers based on the proportions of financial products held and financial behaviors undertaken, alarmingly 37% were “lost” and 13% were bad money managers.

It was disturbing to note that within a multivariate framework, Hispanics, Blacks, and lower-income households had a greater probability of being lost. While the predicted probability of being lost was 30%, Hispanics had a 47% chance, Blacks had a 42% chance, and households with incomes of \$30,000 had a 39% chance of being lost. Hispanics and Blacks were most likely to fall into the lost and good categories; these two categories were below the median for financial experience (measured as product holdings). This finding may be an indication of the lack of financial products and services available to minority and low-income households.

A key finding of this study was the significance of both education and financial knowledge. In addition to income, these were the only statistically significant variables associated with a decreased probability of being lost and an increased probability of being very good money managers. These findings not only support the well-held notion of the importance of education but of financial literacy in particular. All else equal, the model predicted that a consumer who scored 50 on the financial literacy quiz had a 14% chance of being a very good money manager but would have a 37% chance if the consumer scored 80 on the quiz.

The study also found that learning experiences and learning preferences were associated with type of money managers. Consumers who used proactive as well as

reactive methods to learn about financial management topics were less likely to be lost and bad money managers and more likely to be very good. Learning in high school, outside courses, media and the Internet had a slightly greater marginal effect among the lost than did learning through personal experience, friends and family or an employer. Individuals who liked to learn in a group environment also had a decreased probability of being lost. As mentioned previously, this variable may actually serve as a proxy for a consumers’ motivations to learn since informational seminars and/or formal courses requires a certain level of commitment from the consumer.

Implications for AFCPE Members

This research shows an expected connection between consumer knowledge and acceptable financial decision-making. It delineates which segments of the population are more knowledgeable about personal finance, and how they prefer to learn. However, there is a need to better understand the differing effects of information delivery (improving awareness) actual education (resulting in a skill set and motivation to take action).

The distinction between information and education is an especially important point for policymakers and program leaders making decisions about allocation of resources. Does the pizzazz and sponsor brand recognition of yet another mass media campaign, often costing millions of dollars, really result in an educated consumer, one who will save and invest more, reduce debt, and plan for a financially secure future? How significant are results such as press pick-up, the dollar value of air time, and circulation figures when it comes to the affect on the national personal savings rate? What value does one more brochure or one more web site have on motivating consumers to make informed financial decisions? Financial literacy campaigns, and learning tools (e.g., web sites, brochures), all important in their own right, need to be coupled with audience-targeted educational strategies. Accompanying program evaluations need to prove that dollars spent on financial education actually increase the financial well-being of consumers.

For consumer educators, the well-known messages take on greater significance when personal financial security is a first-line defense for weathering troubled economic times. In a nutshell, these messages are:

- Be a facilitator for the learner to discover solutions for his or her own problems, not the expert who waltzes in with all the answers.
- Target educational strategies to specific audiences, always using formative research to be certain the message is appropriate and effective.
- Make it easy for learners to access education at times and places that are convenient for their lifestyle. Educational delivery at the workplace,

through place-based and interest-based groups, and via the internet all have appropriateness for certain audiences.

- Create environments for peer-to-peer outreach, specifically calling on those within an audience target group who have employed personal finance strategies resulting in successful actions.

For researchers program evaluation research calls for more attention to proving that financial education changes behaviors. Further, do these positive changes in behavior stay with the individual over time? For basic and applied research, several questions remained unanswered. What can we learn about the relationship between knowing about money and making good decisions? For those who are equally knowledgeable or in otherwise similar circumstances, what motivates some to save and invest, while others choose not to, or even fall into severe debt?

A financially secure populace is an appropriate vision for policymakers, consumer educators, practitioners, and researchers. When planning, saving, and investing become as important to all Americans as buying consumer goods and services to look good, feel good, and make an impression, can success be celebrated.

Endnotes

- a. In February 2002, revolving credit balances stood at \$704.7 billion for the 106 million households in the U.S., an average of \$6,648 per household. In February 1994, the numbers were \$314.9 billion and 97 million, respectively, for an average of \$3,246 per household in nominal dollars. In constant 2002 dollars, the two balance numbers would be \$6,648 and \$3,938.
- b. Age is scaled by a factor of 10 to help interpret the marginal effects. Increasing an individual's age by 10 years decreases the probability of being "lost" by 10 basis points.
- c. The marginal effects sum to zero across the 4 categories, which follows from the requirement that the probabilities across all categories sum to 1 (Greene, 1998, p. 518).

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