Women and Money

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Executive Summary
1. Mixed sex married couples represent about 48% of households in the United States, but have about 77% of the household net worth.
2. In mixed sex married couple households in 2013, only 43% of wives were considered more knowledgeable about household finances than the husband, the lowest proportion ever recorded in the Survey of Consumer Finances.
3. For households with a net worth in the top one percent, only 11% of the wives were considered more financially knowledgeable than the husband.
4. Controlling for other characteristics: college educated husbands were more likely to be more knowledgeable than the wives; Wives who had more education than their husbands were more likely to be more knowledgeable than their husbands; and the likelihood of the wife being more knowledgeable than the husband is low at both ends of the net worth spectrum, increasing both as net worth increased from zero and as net worth decreased below zero.
5. Targeting of marketing of financial services for high net worth households to males is likely to be more productive than targeting the marketing to females, but there may be social and personal financial problems related to such gender specialization.

Introduction

Role specialization is fairly typical within couple households (Coltrane 2000; Noonan 2001). Becker (1991) demonstrated that specialization in household tasks as well as specializing in household versus market work is efficient, even if household members have equal initial abilities. One set of household tasks in which specialization has been observed is the management of household finances, from paying bills to income tax return calculation to managing investments. Management of household finances is not a single task, as the concept encompasses several activities of varying complexity. Hilgert, Hogarth, and Beverly (2003) divided household financial activities into four main categories: cash flow management, credit management, saving, and investment. The present study focusses on whether the husband or the wife in mixed-sex married couple households is designated as the more financially knowledgeable person. Presumably the person who specializes in the most important tasks of that household is likely to be considered the more knowledgeable spouse. In financially less complex households, such as those that do not have investment portfolios, the spouse who pays the bills is likely to be the one who will have better knowledge to answer the questions about income, credit balances, and the value of assets. For financially more complex households, such

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as those that have investment portfolios, the spouse who has knowledge of the household's investments and assets is likely to be the more knowledgeable spouse. We analyzed mixed sex married couple households because we are interested in differences between males and females in the perception of who is more financially knowledgeable for a particular household. We did not include unmarried mixed sex couple households because we have limited information about the permanence of the relationships and such households represent a small portion of household wealth as compared to mixed sex married couples. Furthermore, a substantial majority of adults in the United States will be married at some point, even though the trend has been decreasing, with only about 10% of females age 45 to 54 in the year 2000 having never been married, though this rate is projected to go over 20% by the year 2030 (Wang and Parker 2014).

Benefits of this Research

In an era characterized by increasing labor force participation of women and attention to the financial education of women, one would expect women to be the financial decision-maker more often than in the past. Knowledge of who is the decision maker is important to financial educators and financial service firms, which have to decide whether to direct efforts to men, women, or both. Financial planners working with couple households need to take into account who is financially more knowledgeable, especially if the planner can interact with only one person. If role specialization is substantial, divorce, death, or separation from the more financially knowledgeable spouse could be a problem for the other person. The potential for a problem is illustrated by the fact that in 2008, only 35% of females age 75 to 84 were married with a spouse present (U.S. Census Bureau, 2009). Specialization in household financial management by the husband of couple households could cause problems later in life for women who lack knowledge.

Objectives

This research examines the question of who is the financially more knowledgeable spouse among mixed-sex married couple households. The research employs logistic regression analysis using data from the 2013 Survey of Consumer Finances (SCF). For a descriptive comparison over time, we also analyzed a combination of eight SCF datasets from 1992 to 2013. The Survey of Consumer Finances is particularly suited to this research because the interviews specifically are scheduled with the person the household indicates is more knowledgeable about the family's finances. The SCF takes great efforts to assure that the survey is conducted with the more knowledgeable person, who is not necessarily the person SCF designates as the household head. With the SCF surveys, it is possible to identify both the respondent and the household head, as well as whether the respondent's spouse or partner was present during the interview.

Theoretical Approaches and Prior Research

Several sociological and economic theories have been proposed to explain task specialization within the household. Sociology offers role theory, that people have societally prescribed roles that are based on factors such as sex and age, as the basic explanation for differences in the tasks that people take on. While there may be some predisposition based on

biological factors, sociologists frequently have suggested that men and women have designated roles that are learned behaviors based on socialization and social norms (Qualls 1987; Schaninger and Buss 1985; Fischer and Arnold 1994). Identification of the social norms for sex roles is fairly clear for some household tasks such as child care and food preparation, which are typically women's roles, and auto maintenance and home repair, which typically are roles of men. Some authors have concluded, however, that financial management is a sex neutral household task (Coltrane 2000; Estes, Noonan, and Maume 2007; Marini and Shelton 1993). If financial management is a sex-neutral task, we should expect a random distribution of husband and wives being designated as the financially more knowledgeable person and further, little relationship between household characteristics and whether a husband or wife has that designation.

Lindamood and Hanna (2005) reviewed some of the economic and sociological literature related to household role specialization, including two economic models that might explain role specialization, expanding the concept beyond the sociological theory. These models are the "unitary model" (also called the household production model) and the "bargaining model." Dobbelsteen and Kooreman (1997) and Elder and Rudolph (2003) discussed application of Becker's model to financial management tasks within households. Elder and Rudolph referred to the household production model as the unitary model, given the assumption of a household utility function with a unified goal of efficiency. Chen and Volpe (2002) found that female college students tend to have less knowledge about personal finance topics and less willingness to learn about these topics than male students, suggesting a predisposition to specialization among males. While attitudes and skills might contribute to differences between husbands and wives in financial management tasks, given that these tasks range from bill paying to investment decisions, it is not clear whether men or women would be more efficient in overall household financial management.

Lindamood and Hanna (2005) analyzed the 1992 to 2001 Survey of Consumer Finances datasets, and found that 47% of married couple households had the wife as the respondent, and was therefore presumably the more financially knowledgeable spouse. Their multivariate analysis found that education was related to who was the respondent, and the likelihood of the wife being the respondent decreased as income and assets increased.

The Research

Theoretical Basis

The research questions for this study are based on elements of both the bargaining model and the unitary model of family financial decision making with a focus on determinants of who is the financially more knowledgeable spouse. The unitary model, with its basis in efficiency and household utility maximization, applies to both decision making and knowledge, in that the spouse who should specialize in financial management is the one who has a comparative advantage in that. Education can increase both power and ability, thus influencing the choice of financial decision-maker under both the bargaining model and the unitary model. The person with more education might have a comparative advantage in financial management if education is assumed to result in greater financial knowledge. Controlling for time spent in the labor force, we expect that the spouse with more education should be more financially knowledgeable. Under

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a bargaining model, power derived from education, income, and sex roles determines who is the financial decision maker. If a person has power in a relationship, that person is more likely to exert control over finances and subsequently gain even greater experience and knowledge.

The concepts of tradition, power, and ability are relevant to the bargaining theory of family financial decision-making explored in earlier research. Elder and Ruldolph (2003) found that husbands with higher levels of education were more likely to be the decision-maker, but at lower levels of education, the wife was more likely to be the financial decision-maker. This finding is similar to the proposal by Ferber and Lee (1974), who asserted that there is a difference between financial planning tasks and financial implementation tasks. A person with higher levels of education and skill may be the planner, but the day-to-day tasks of implementation may be assigned to the less powerful or less skilled person. Even routine implementation of financial tasks, however, is likely to increase one's knowledge of details of family finances.

Another source of power and skill is age, and an older person is more likely to be a financial decision-maker due to the power that comes with age as well as more experience and higher levels of knowledge. Financial knowledge may come from education or experience (Hilgert, Hogarth, and Beverly 2003). Employment is another factor that increases the power and the likelihood of the employed person having more power and more experience. We used the justifications in Lindamood and Hanna (2005) in selecting independent variables for our multivariate analysis.

Statistical Model

This research uses as the dependent variable whether the wife is more financially knowledgeable in mixed-sex couple households. Basic demographic and financial independent variables found in previous research are hypothesized to be determinative of who makes the financial decisions in a household. These variables include age of husband, husband's age relative to wife's age, education of the husband, difference in education levels, racial/ethnic status, homeownership status, whether there is a dependent child present, and the health and employment status of both spouses.   We also control for whether the spouse was present during the interview, as that might influence the answer as to who is more knowledgeable.   In addition, we test the effects of financial variables, household income and net worth.

Data

The study uses the 2013 Survey of Consumer Finances (SCF) dataset, the most recent cross-sectional SCF dataset, sponsored by the Federal Reserve Board and administered every three years (Bricker, et al., 2014), and also for a descriptive comparison, a combination of the 1992 to 2013 SCF datasets. The 2013 SCF had 6,015 households (technically, primary economic units). Methods presented in the SCF Codebooks and recommendations in Lindamood, Hanna, and Bi (2007) were followed.

Because the primary analysis of this research includes only households that are comprised of mixed-sex married couples, it is of particular importance to this research to

accurately identify couples who live in the same household and share in the household's finances. The SCF takes extensive measures to assure that each unit of analysis is actually a "primary economic unit" (PEU), a grouping of people who both live in the same household and share finances. A person is not included in a PEU if that person apparently rents a room, is a roommate, or otherwise is economically independent of the person who owns or leases the housing. In this research, all households in which the respondent indicated that he or she has a spouse or partner of the opposite sex in the household and the SCF established that the spouse is living in the household and is part of the PEU were included.   (There are a small number of same-sex partner and married couples in the SCF, for instance, 42 in the 2013 dataset, but because of the focus on gender differences in decision-making in traditional married couple households, they were not included.) Using this method, 3,255 mixed-sex married couple households were identified in the 2013 SCF dataset (Table 1). For descriptive analyses other types of households in 2013 were included (Table 1), as well as mixed-sex married couples in the 1992 to 2013 SCF datasets (Figure 1).

A second important consideration for this research is identifying the more financially knowledgeable spouse. The respondent in the SCF is the person identified as "more knowledgeable about the household finances." The SCF makes extensive efforts to schedule and complete an interview with that person and the interviewers for the SCF follow a set of pre-determined rules in identifying the person to serve as the respondent in a household. An initial interview is held with a household member to gain basic information including identifying the person with whom subsequent, in depth interviews, will be held.   During that initial contact with a household, the interviewer asks a series of questions including the number of people in the household, the number of children, and the identity of each person in the household. For couple households, the interviewer states: "For this study, we would like to interview the head of the household or that person's spouse or partner if they are more knowledgeable about the household finances. Who would this be?" The instructions for interviewers state "(PROBE, IF NECESSARY)" (Staff, 2006).

It is possible that the person who responds is simply the one most available, without serious consideration for whether that person is more knowledgeable about the household's finances. It that is generally true, then we should not see in our multivariate analysis many significant effects of household characteristics on whether the husband or the wife is the respondent.

Variables

We create all variables for the analysis using data in the SCF SAS files available on the Federal Reserve Board website (www.federalreserve.gov/pubs/oss/oss2/scfindex.html).   We code income and other variables to match the Excel file distributions posted on that website and weight all data using the recommended variable to result in a sample representative of the U.S. population.   We followed the recommendations of Lindamood et al. (2007) in our analysis of the SCF data.

Dependent variables. We use whether the wife or husband is the respondent as a proxy for which one is the more financially knowledgeable respondent. The dependent variable is a

dichotomous variable equal to 1 if the respondent is the wife, and equal to 0 if the respondent is the husband.

Independent variables. Demographic variables in the model include the respondent's race/ethnicity, and the husband's age. We create four dummy variables for race/ethnicity based on the possible categories in the SCF public dataset, White, Black, Hispanic, and other. The other category is probably about 80% Asian or Pacific Islander (Hanna and Lindamood, 2008) .

We create dummy variables for the highest education level of the husband and of the wife: less than high school, high school degree, some college but less than a bachelor's degree, bachelor's degree, and a post-bachelor degree. We create variables related to differences between the husband and wife in age, education, employment, and health. We create three categories for husband-wife education differences: same level, wife more, husband more, and also include the dummy variables for the husband's education in the analysis. Age differences are based on three categories, the husband being more than five years older than the wife, the wife being more than five years older than the husband, and the difference in age being no more than five years, and we also include husband's age in the analysis. Employment status differences are based on four categories, wife employed and husband not, husband employed and wife not employed, both employed, and neither employed. Health differences are based on four categories of self-described health, both poor, neither poor, husband poor/wife not, and wife poor/male not.

Economic variables include the household's pretax income and net worth, adjusted to 2010 price levels using the method the Federal Reserve Board describes. Because the relationships between these monetary amounts and our dependent variable are not necessarily linear, we use the log of income (set to ln[0.01] if income is zero), the log of net worth (set to ln[0.01] if net worth is non-positive), and the log of –net worth (set to ln[0.01] if net worth is non-negative). We create dummy variables for whether the household owns its home, whether the household includes at least one child under the age of 18, and for whether the spouse of the respondent was present during the interview.

The Analyses

We present the proportion of households with the wife as the respondent by net worth category for 2013, and for the descriptive time trends (Figure 1) for 1992 to 2013, weighted by the SCF population weight in each survey year. For multivariate analysis of the 2013 SCF dataset, we use logistic regression (logit), which is an appropriate multivariate analysis to use with the dichotomous dependent variable of whether the wife is the respondent. We use the Repeated Imputation Inference method (Lindamood, et al, 2007) for the logistic regression for better estimates of variances of estimates and significance levels.

Results

Descriptive Results

To give some perspective on our focus on only mixed sex married couple households, Table 1 shows the distribution of types of households in the 2013 SCF, and estimates of the number of each type of household in the United States based on the SCF population weights. Only 48% of households were mixed sex married couple households, 8% were mixed sex unmarried couples, 15% were single male households, 28% were single female households, and less than 1% were same sex couple households. There were seven same sex married couples in the 2013 dataset. Our focus was on gender differences, but we decided that there were too many differences between married and unmarried mixed sex couple households, including differences in wealth, so we analyzed only married couples.

Table 1 also shows the distribution of net worth in 2013 for four household types, with same sex couples combined with mixed sex unmarried couples because of the small number of same sex couple households in the 2013 SCF. Mixed sex married couples had much higher median and mean net worth than the other three household types, with a median net worth ten times as high as the median for all unmarried couple households. Mixed sex married couple households held 77% of all household net worth in the United States.

Figure 1 shows the proportion of mixed sex married couple households with the wife as the respondent, and therefore presumably the more financially knowledgeable spouse, from 1992 to 2013. The rate fluctuated, with the highest proportion, 51%, being in the 1998 SCF, and the lowest proportion, 43%, being in the 2013 SCF. The proportion was almost constant from 1998 to 2007, then decreased in 2010 and then again in 2013.

Table 1
Household Types and Distribution of Net Worth in the United States, 2013

A. Distribution of Six Household Types

| Type	Number in U.S.	Actual number in SCF sample	Weighted %
Mixed sex married couples	58,306,025	3,255	47.6
Same sex married couples	116,412	7	0.1
Mixed sex unmarried couples	10,166,707	444	8.3
Same sex unmarried couples	819,892	35	0.7
Single male	18,838,463	874	15.4
Single female	34,282,570	1,400	28.0
All households	122,530,000	6,015	100.0

B. Distribution of Net Worth for Four Household Types

Type	Median	Mean	Proportion of total U.S. household net worth
Mixed sex married couples	$191,630	$856,119	77.1%
Unmarried couples*	$19,150	$246,666	4.2%
Single male	$34,450	$318,389	9.3%
Single female	$29,380	$177,757	9.4%
Total sample	$81,400	$528,422	100.0%

Percentages and numbers in the U.S. estimated from 2013 SCF population weights.
*Including seven same sex married couples.

Figure 1
Percent of Mixed Sex Married Couples with the Wife as the Respondent, by Survey Year, 1992-2013
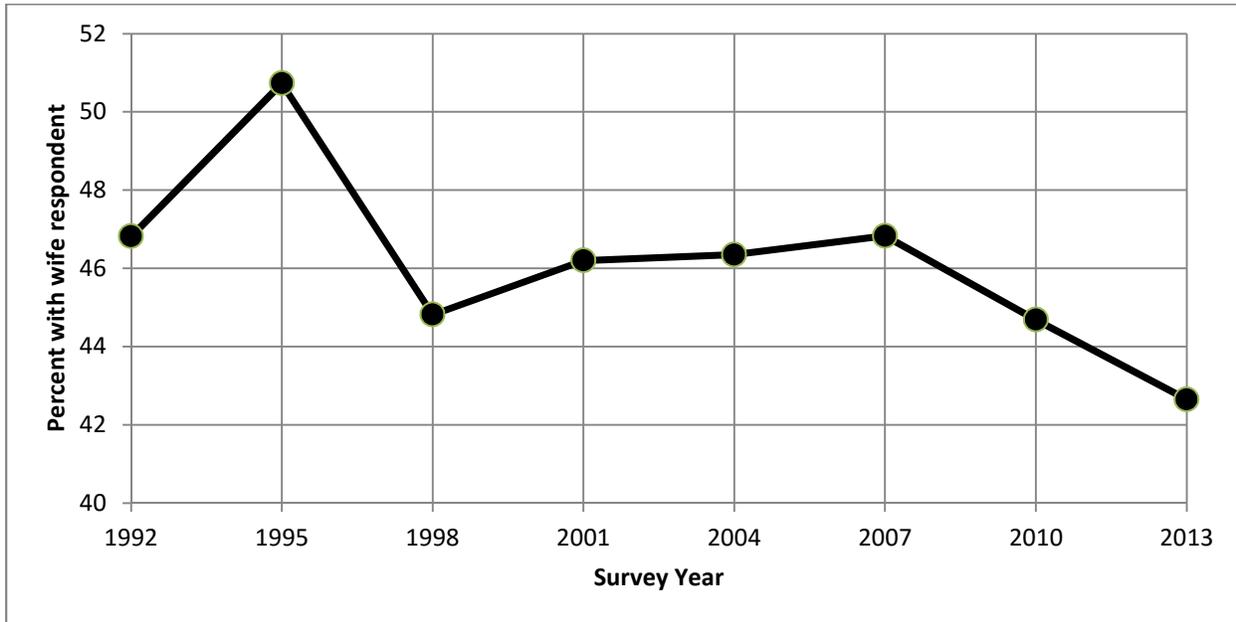
Authors' weighted analyses of the 1992, 1995, 1998, 2001, 2004, 2007, 2010, and 2013 SCF datasets.

The rate of the wife being the more financially knowledgeable spouse varied substantially by the household's net worth. Table 2 shows the pattern by categories of net worth. For the 7% of the households with negative net worth (with a mean net worth in the category of -$39,222), 43% had the wife as the respondent. The rate was about 55% for the net worth category ranging from $0 to the 25th percentile of net worth, $38,499. The rate steadily decreased as net worth increased beyond that level, from 46% for the second quartile of net worth (up to $191,359), down to 11% for the highest 1% of net worth amount mixed sex married couples, $11 million dollars and above. The top category had 492 households in the 2013 sample, but because of the over-sampling of households likely to be wealthy, it represented only 1% of the sample based on the population weights. Therefore, estimates are likely to be robust.

Table 2
Percent of mixed sex married couples with wife more financially knowledgeable, by net worth categories, 2013 SCF

Net Worth category	% of households	% with wife respondent
< $0	7.05	43.16
$0 to $38,499	17.91	54.72
$38,500 to $191,359	25.02	46.32
$191,630 to $316,839	25.00	44.39
$316,840 to $942,199	20.00	31.13
$3,221,900 to $11,049,999	4.00	19.48
>$11,049,999	1.00	10.92
Weighted analysis by authors of mixed sex married couples in the 2013 SCF, N=3,255.		

Multivariate Results

Table 3 shows the logit results for the likelihood that the wife is the more financially knowledgeable spouse, with the logit coefficients and the odds ratios for each variable. The likelihood that the wife is the respondent decreases as income increases. The likelihood increases net worth increases in positive ranges of net worth, but also decreases as net worth decreases below zero. There are no significant patterns by the racial/ethnic identification of the respondent.

Table 3
Logistic Regression Analysis of the Wife Being Financially More Knowledgeable, 2013

Variable	Coefficient	Standard error	Sig.	Odds ratio
Log (household income) {Ln(.01) if income=0}	-0.0701	0.0252	.0053	0.932
Log (-net worth) {Ln(.01) if net worth≤0}	-0.2161	0.0307	<.0001	0.806
Log (net worth) {Ln(.01) if net worth≥0}	-0.2026	0.0261	<.0001	0.817
Racial ethnic status of respondent {reference category = White}				
Black	-0.1295	0.1652	.4333	0.879
Hispanic	-0.2386	0.1523	.1172	0.788
Asian/other	-0.2155	0.1793	.2295	0.806
Age difference of husband and wife {reference category = husband more than 5 years older}				
Husband's age – wife's age < -5 (wife older)	0.5801	0.2348	.0135	1.786
Husband's age – wife's age=5 years or less (same)	0.1887	0.1054	.0733	1.208
Age of husband	0.0103	0.0046	.0235	1.010
Highest education level of husband {reference category = < high school degree }				
High school degree	0.1768	0.1689	.2953	1.193
Some college, including associate degree	-0.2933	0.1821	.1072	0.746
Bachelor degree	-0.4363	0.1930	.0238	0.646
Post-bachelor degree	-0.4917	0.2127	.0208	0.612
Highest education level of husband and wife {reference category = same level}				
Wife has more	0.5127	0.0997	<.0001	1.670
Husband has more	-0.3286	0.1044	.0017	0.720
Employment status of husband and wife {reference category = husband employed, wife not}				
Wife employed, husband not	0.2813	0.1829	.1241	1.325
Neither employed	0.1220	0.1555	.4326	1.130
Both employed	0.2447	0.0984	.0129	1.277
Have own child under 18 at home	0.0793	0.0423	.0610	1.083
Own home	0.3681	0.1238	.0029	1.445
Spouse or partner present during interview	-0.1280	0.0892	.1511	0.880
Health status of husband and wife {reference category = neither poor}				
Husband poor, wife not	0.7808	0.2364	.0010	2.183
Wife poor, husband not	-0.0954	0.2687	.7227	0.909
Both poor	-0.6641	0.4320	.1242	0.515
Intercept	0.7747	0.4259	.0689	
Concordance (averaged for 5 implicates)	72.6%			

Unweighted RII analysis of 2013 SCF dataset.

The likelihood of a wife respondent decreases as the age of the husband increases, controlling for other variables including the age difference between the husband and wife. A wife who is more than five years older than her husband is more likely to be the respondent than an otherwise similar household where the husband is more than five years older than the wife.

Households with the husband having a bachelor's or post-bachelor's degree are less likely than similar households to have the wife be the respondent than those with a husband who does not have a bachelor's degree or more. Controlling for other variables, including the education level of the husband, the spouse with more education was more likely to be the respondent. If both the husband and wife are employed, the wife is more likely to be the respondent than in otherwise similar households where only the husband is employed, but households with neither employed or only the wife employed are not significantly different from those with only the husband employed in the rate of the wife being the respondent.

Homeownership has a positive effect on the rate of the wife being the respondent, but whether both spouses were present was not significantly related to the wife being the respondent. Households with an own child under the age of 18 present do not have a significant difference in the wife being the respondent compared to those without a child under 18 present. If the husband is in poor health and the wife is not, the wife is more likely to be the respondent compared to households where neither is in poor health.

Discussion

If the wife is more than five years older than the husband, she is more likely to be the respondent, which is consistent with expectations that experience increases knowledge. The result that the older the husband, the more likely the wife is the respondent is the reverse of the finding reported by Lindamood and Hanna (2005) in their analysis of husband-wife couples in the 1992-2001 SCF datasets. If one spouse has more education than the other, that person is more likely to be financially more knowledgeable, which is consistent with a unitary model. Controlling for education differences, households with college educated husbands are less likely to have the wife be more knowledgeable, which is difficult to explain. The employment effects are not consistent with a simple unitary model based on the availability of time for household tasks, but might be consistent if learning about investments, etc. through employment are important.

The negative relationship between net worth and the wife being the respondent over positive ranges of net worth is plausibly due to higher net worth households having investments be more important components of financial tasks. The cause of the relationship for net worth over negative ranges of net worth is not as obvious, but it is likely that some households that manage businesses might have negative net worth.

The result that the wife is more likely to be the respondent when both spouses were employed, all other things equal, suggests that availability of a spouse is not the main factor determining who was the respondent. many significant effects in our multivariate analysis. The multivariate analysis has 11 variables with significant effects, with the effects of net worth and income being very strong, and the effects of education differences also being strong, which suggests that the choice of which spouse was the respondent was not random.

Implications

Even though wives were the respondents in over 40% of mixed sex married couple households, and thus presumably financially more knowledgeable, clearly husbands are still much more likely to be considered the knowledgeable spouse for households in the target market for many financial services companies, especially investment oriented companies targeting households with high incomes or financial assets.   Financial educators and advisors in financial service companies should attempt to work with both partners in couple households, as death or divorce may leave the less informed partner in a bad situation. This research shows that the wife is much less likely to be the financially more knowledgeable spouse in households with high net worth. Educational efforts should be directed to these households to increase the wife's familiarity with household's finances. Financial institutions and educators should also be aware that the wife is likely to be financially more knowledgeable in households with lower incomes and lower asset levels.

The time trend suggests that there are no generational changes developing in terms of the role of wives in family financial management decision making, though as suggested above, the increasing important of investment decisions for households might have offset what would otherwise have been an increase in wives being the more knowledgeable spouse.

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