

## Information Sources for Investment Decisions of U.S. Elderly Consumers

*Using data from the 2007 SCF, this study examined the use of information source for investment decisions of elderly consumers. The results indicated that many elderly consumers (about 88%) involved savings /investment decisions. The elderly used 'Experts' (39.48%) as a major information source for their investment decisions, followed by 'Friends' (24.18%). The results of the multinomial logit analysis suggested that the perceived value, the cost for search, knowledge, risk and some of the demographic factors were significantly related to the choice of the information sources for investments by elderly consumers.*

The proportion and role of elderly consumers in the financial market has increased due to population aging. In 2010, 13% of the U.S. population of people aged 65 and over and in 2050, this age group is projected to become 20.2% of the total population (U.S. Census Bureau, 2010). The current elderly population possesses over \$900 billion in disposable income; in addition, the 55 years old and over age group controls more than three quarters of the total national wealth (Brock, 2010).

As the average life span of people has increased, life after retirement is getting longer. Thus, how to manage their finances after retirement has become as important as the importance of financial preparation for this period of time. The elderly after retirement can draw down their assets to help meet

their consumption needs and some assets can even generate income for the elderly if managed carefully (Hogarth, 1991). Consequently, after retirement, consumers are still required to make financial decisions to manage their finances. However, very little attention has been paid to elderly consumers even though there has been some research related to financial decisions by consumers.

Financial decision-making (such as investments and savings decisions) is more critical than any other purchase decision. Often times, the information available for financial decisions are very complex and are not easy for average consumers to access (Chang and Hanna, 1992). In addition, financial products and services have been rapidly evolving with an extensive variety of financial products that include complex investments or savings tools. Failure to manage personal finances and inappropriate decisions for investments or savings may bring about negative consequences to both consumers and societies (Perry and Morris, 2005). Thus, obtaining information from the appropriate sources and making decisions based on these sources is very important. Among the various kinds of financial information sources, finding and the use of the appropriate information sources are very important for elderly consumers.

This study examines the types of information sources used for investment decisions for the elderly and investigates the determinants of the choice of different information sources for the elderly. The results will broaden the understanding of the use of the information sources for investment decisions by

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elderly consumers. Understanding elderly consumers' financial decision-making allows financial educators and policy makers to improve the financial education programs and related policies for elderly consumers. In addition, the results will provide useful information for financial industries to develop financial services to accommodate the growing number of customers.

## LITERATURE REVIEW

### *Elderly Consumers, Financial Structures, and Behaviors*

Elderly consumers have received attention as their market activities as well as their wealth increased. In terms of consumption behavior, older consumers are less price conscious, tend to be habitual shoppers, have needs for convenience, and health than younger consumers. According to previous research, the ability to process information and the learning ability of elderly consumers tend to decrease as age increases. As a result, elderly consumers tend to use interpersonal sources and mass media as their major information sources (Swartz and Stephen, 1984). However, whether or not the elderly consumers use different information sources from younger consumers has not been clearly established (Tongren, 1988). Contemporary elderly consumers are not dramatically different from those of the past, but contemporary elderly consumers are more active than those in the past (Brock, 2010).

The saving and consumption behaviors of the elderly have been discussed based on the life cycle hypothesis (Ando and Modigliani, 1963). The theory posited that saving occurs during the middle stages of the life cycle and elderly consumers are supposed to dissave. On the other hand, the precautionary savings model incorporated uncertainty into savings model that allows for saving to allocate resources over the life cycle as well as insure against unexpected income shocks in the future (Lusardi, 2000). The precautionary motive of saving provides additional explanation why saving occurs for elderly consumers. According to this theory, elderly consumers also save or invest in their later stage of

life that requires various financial decisions for the elderly.

As the U.S. population ages, the life after retirement is getting longer. Consequently, after retirement, consumers are continuously required to make many financial decisions to manage their finances. However, most of the previous research on the elderly is related to health issues. Finances and the financial behavior of the elderly have been discussed within part of a life cycle (e.g., Deaton and Paxson, 1998) or have focused on the impact of health on their finances (e.g., Christelis, Jappelli, and Padula, 2005; Kim and Lyons, 2008). While baby boomers are retiring and considering retirement, retirement related research, especially preparation for later life has received much attention over the last decade rather than financial structures and behaviors of the retirees or elderly consumers. However, financial management during the retirement period has also become important. Accordingly, the understanding of financial structures and financial decisions of the elderly is important.

Some studies examined the finances of the elderly (e.g., Christelis, Jappelli, and Padula, 2005; Kim and Lyons, 2008; Hogarth, 1991). Using the Survey of Health, Ageing, and Retirement in Europe, Christelis, Jappelli and Padula (2005) examined the portfolio choice of European elderly households and found that health status was negatively related to investments in stocks. Kim and Lyons (2008) examined financial security of older Americans focusing on the impact of the health of the elderly. They measured financial security of the elderly using three financial ratios: Solvency ratio, liquidity ratio, and investment assets ratio. The results of the study showed that the average income for those 65 years and older was \$46,400 and the average amount of net worth was \$410,500. In addition, they found that 5.1% of the elderly were insolvent but about 50% of the elderly met the liquidity ratio and investment assets ratio guideline. The major finding of the study was that health problems were significantly related to the financial security of the elderly. A study on retiree's asset management (Hogarth, 1991) found that most retirees also saved during the analysis period. The previous studies examined the asset

holdings of the elderly, financial security, and savings patterns; however, it was very difficult to locate a study that examined the financial decisions of the elderly.

*Investment Decision & Consumers' Use  
of Information Sources*

The consumer purchase decision process is composed of a series of steps: 1) recognition of a problem, 2) information search, 3) purchase decision, and 4) post-purchase behavior (Schmidt and Spreng, 1996). The same process can be applied to investment decisions. Among these steps, in the information search step, consumers collect information for potentially better decisions (Schmidt and Spreng, 1996). Therefore, an information search is a very important step for investment decision. In particular, for a potentially better investment decision, the source of information and the quality of the source are more important than the extent of the search. Thus, in this study, the use of information sources for investment decisions was examined.

In terms of consumer information searches and the use of information sources, the previous studies on consumer information searches and consumer behavior choosing between alternatives have been widely investigated with different concentrations and different approaches (e.g., Bloch, Sherrell, and Ridgway, 1986; Feick, Herrmann, and Warland, 1986; Guo, 2001; Lee and Cho, 2005; Lin and Lee, 2004; Loibl, Cho, Diekmann, and Batte, 2009; Ratchford, Talukdar, and Lee, 2001; Schmidt and Spreng, 1996). Much of the research examined the extent of information search while some examined the different information sources. The review of the previous research included only several studies that were most closely related since the interests of the current study was the use of different information sources.

The previous literature related to information search behavior suggested that the search for information is mainly a function of the benefits from searches and associated search costs (e.g., Feick, Herrmann, and Warland, 1986; Guo, 2001; Lin and Lee, 2004; Schmidt and Spreng, 1996).

Schmidt and Spreng (1996) proposed a model of

external consumer information search. According to the proposed model, consumer information searches were affected by the ability to search, motivation to search, perceived benefits of information searches, and perceived costs of information searches. Feick, Herrmann, and Warland (1986) applied a similar framework to examine the search behavior for nutrition information. The model suggested that the search for nutrition information is a function of the benefits of search and the costs of search. The search benefits included the usefulness of information (value), health status, age, marital status, presence of children, effects of future benefits of seeking variables, and the cost of searches (that included income, labor force participation, education, and past experience). Using this model, the study investigated the consumer information search behavior focusing on the use of different information sources. The effects of benefits of searches and cost of searches on six different information sources were examined separately using probit analyses.

Applying the cost-benefit framework to the information search for investment decision, Lin and Lee (2004) examined the effects of knowledge, amount of investment assets, risk tolerance, income, age, and education on the extent of information searches and on the use of information sources. Using data from the 2000 to 2001 MacroMonitor survey, an ordered probit analysis was conducted for examining the extent of the search and a series of probit analysis was conducted for the use of each type of information source. The study found that variables such as knowledge, risk tolerance, age, education, and income were significant factors predicting the use of different information sources: literature, media, Internet, friends, and professional financial services.

In summary, according to the previous literature, the cost-benefit approach would be useful for the explaining of the use of information sources for investment decisions. In addition, risk and knowledge would affect investment decisions. The previous studies on the use of different information sources only examined the factors related to the each source and did not examine the choice of a particular information source as a major information source

for the decision.

Based on the previous research, the empirical model was drawn as:

$$\text{Choice } (S_i) = f[\text{PV}, \text{C}, \text{K}, \text{R}, \text{D}]$$

where  $S_i$  represents the different sources for investment decisions, PV represents perceived value, C represents the cost of search, K represents knowledge, R represents risk and D represents the demographic factors of consumers. The model suggests that the probability of choosing different information sources is a function of the perceived value from information searches (PV), the cost of the search (C), Knowledge (K), Risk (R), and the demographic factors of consumers (D). The perceived value factor included variables such as having a savings goal and the amount of assets to invest. Cost of search included employment status and income variables. Education was included as a proxy for knowledge. Risk factors included perceived health risk and attitude toward risk. Lastly, the demographic factors included education, race, age, sex, homeownership, and marital status.

## METHODOLOGY

### *Data and Sample*

This study used data from the 2007 Survey of Consumer Finances (SCF). The survey has been collected every three years since 1982; the 2007 SCF has the most recent publicly released data. Due to the sensitivity of the detailed financial information in the SCF, the SCF contains some missing data. To handle the missing data, a multiple imputation technique was used, resulting in five imputates in the SCF (see Montalto & Sung, 1996, for more detail on multiple imputation). The current study used all five imputates of the 2007 SCF and applied the "Repeated Imputation Inference (RII) technique" suggested by Rubin (1987) to use information from all five imputates. Weight variables were used to accommodate the dual frame sampling design for this data (Bucks, Kennickell, Mach, & Moore, 2009).

The sample for this study was elderly consumers in the U.S. (defined as consumers 60 years of age or

older). The previous literature defined elderly consumers as consumers over age 65 (e.g., Kim and Lyons, 2008) or over age 60 (Christelis, Jappelli, and Padula, 2005). Analyzing consumers 60 years of age or older was more appropriate, since the focus of this study was investment decisions not the health status of the elderly or the effect of health; following the study which dealt with elderly consumers' investment behavior (Christelis, Jappelli, and Padula, 2005), including people 60 years and older. In total, 31.55% of the SCF 2007 data was composed of consumers that were 60 years of age or older.

### *Measurement of the Variables*

*Dependent Variables* The dependent variable in this study was information sources for investment decisions. For a question asking which information source was used for the investment/saving decisions, a respondent could choose among the 25 different information sources. For the multivariate analysis, the 25 categories were collapsed into four using the similar clarification from the previous study (Lin & Lee, 2004): 1) 'Friends' / acquaintances, 2) 'Media', 3) 'Self' /personal research and other sources, and 4) 'Experts' based on the similarity of each categories and the frequencies of answers. The first category, 'Friends,' included obtaining information from friends/relatives or obtaining information by calling around. The second category, 'Media,' included obtaining information from magazines, newspapers, books, materials in the mail, television, radio, and the Internet. The third category, 'Self/personal research and other sources' included obtaining information from personal research or past experiences, and all other categories except 'friends,' 'Media,' and 'experts' categories, such as obtaining information from an investment seminar or other institutional sources. The fourth category, 'Experts' included obtaining information from lawyers, accountants, bankers, brokers, financial planners, insurance agents, or dealers.

*Independent Variables* Two variables were included (having a savings goal and the amount of investment assets) to examine the effects of the perceived value from the information search. The previous study

(Lin & Lee, 2005) used the amount of investment assets as a proxy of perceived values from the information search. Two variables were included (employment status and income) for the cost of the search. Education was included as a proxy of knowledge to represent knowledge. Risk factors included variables such as attitude towards risk and perceived health risk. For the demographic factors, race, sex, age group, homeownership, and marital status were included.

Three types of savings goals were included (saving for old age or the future, saving for an emergency, and saving for current consumption). Each savings goal was measured as the dichotomous variable 1 if the elderly person had a savings goal and 0 otherwise. Investment assets were measured as

a continuous variable. In this study, the investment asset was defined as an asset that could easily be used for investments or savings; thus, this excluded the value of a main residence. Employment status was measured as a dichotomous variable; 1 if the respondent was working full time and 0 otherwise.

The education variable included four levels of education. Each level was measured as a dichotomous variable. Income was the total household's (before tax income) in 2006. It was measured as a continuous variable. Attitude towards risk consisted of three levels (willingness to take an above average risk, willingness to take an average risk, and those not willing to take any risk). Each level was measured as a dichotomous variable. The perceived health risk variable was measured by a subjective

Table 1. *Measurement of the Variables*

<b>Dependent Variable</b>	<b>Measurement</b>
Information sources	<b>1 Friends/relatives</b> 1 if obtaining information from friends/relatives, calling around; 0 otherwise <b>2 Media</b> 1 if obtaining information from magazines, newspapers, books, materials in the mail, television, radio, and the Internet; 0 if otherwise <b>3 Self /Other sources</b> 1 if obtaining information from personal research or past experiences; 0 if otherwise <b>4 Experts</b> 1 if obtaining information from lawyers, accountant, bankers, brokers, financial planners, insurance agents, or dealers; 0 if otherwise
<b>Independent Variables</b>	<b>Measurement</b>
Having a savings goal	
For old age /Future	1 if a respondent has a savings goal for old age or the future; 0 otherwise
For emergency	1 if a respondent has a savings goal for an emergency; 0 otherwise
For current consumption	1 if a respondent has a savings goal for current consumption; 0 otherwise
Investment asset	Total assets – (Total Liability + The value of house), Continuous; Natural log of investment asset
Employment status	1 if work full time ; 0 otherwise
Income	Before tax annual income in 2006 ; Continuous ; Natural log of income
Education	1 if the years of education <12; 0 otherwise (less than high school) 1 if the years of education =12; 0 otherwise (high school) 1 if the years of education 13~16; 0 otherwise (college degree) 1 if the years of education >16; 0 otherwise (more than college )
Perceived health risk	1 if subjective health status is not good; 0 otherwise
Attitude toward risk	
Above average risk takers	1 if willing to take a substantial or above average risk; 0 otherwise
Average risk takers	1 if willing to take an average risk; 0 otherwise
No risk takers	1 if not willing to take any risk; 0 otherwise
Race	1 if Whites; 0 otherwise
Age groups	
Young-old (60's)	1 if age 60-69; 0 otherwise
Old-old (70's)	1 if age 70 + ; 0 otherwise
Gender	1 if male; 0 otherwise
Home ownership	1 if owner; 0 otherwise
Marital status	1 if married ; 0 otherwise

question that asked the respondent about their health status; if the respondent answered that their health status was not good (if the respondent reported that their health status was so-so or poor), the answer was coded 1 (having a perceived health risk), and 0 otherwise (no health risk). Race, sex, homeownership, and marital status variables were measured as dichotomous variables. Age was subdivided into two categories of elderly consumers in their 60's (young-old) and elderly consumers that are aged 70 or over (old-old). For the multivariate analysis, income and investment assets were transformed into natural logarithms. Table 1 presents the detailed measurements of the variables.

#### Analysis

Descriptive statistics such as frequency, and univariate analyses were conducted to profile the sample. The data were weighted using weight variables and the RII technique (Rubin, 1987) was used to provide an average value of all five implicates (Montalto & Sung, 1996). A multinomial logistic analysis was conducted to investigate factors related to the use of different information sources for investment decisions. A multinomial logit analysis is appropriate because it allows the researcher to examine which methods were selected over other methods, when the dependent variable has more than two categories (Borooah, 2001). The dependent variable in this study is a categorical variable with four categories: choosing friends, choosing media, choosing self/other sources, or choosing experts, as information sources. The dependent variable in the multinomial logit analysis represents the log-odds ratio. Three log-odds ratios were estimated for this study.

where  $P_1$  = the probability of choosing friends/ acquaintance as an information source

$P_2$  = the probability of choosing media as an information source

$P_3$  = the probability of choosing self/other sources as an information source

$P_4$  = the probability of choosing experts as an information source

In  $(P_1/P_4)$  estimated the probability of choosing 'Friends' over 'Experts',  $\ln(P_2/P_4)$  estimated the

probability of choosing the 'Media' over 'Experts', and  $\ln(P_3/P_4)$  estimated the probability of choosing 'Self/other sources' over 'Experts'.

## RESULTS

### Sample Profile

The sample in this study was elderly consumers 60 years of age and over. Table 2 illustrates the characteristics of the sample. Overall, 46.6% of consumers were in their 60's and 62.77% of the consumers were males. About one-fifth of the consumers did not have a high school education, while 12.38% had a college degree or higher. Among them, 20% were working full-time. Less than half were married, around 77% were homeowners, and 85% were Caucasian. The health status of the sample was relatively good, with over 60% reporting that their health status was excellent or good. Over half (56.31%) of the respondents reported that they were not willing to take any financial risks. Only about

Table 2. Profile of the Sample: Elderly Consumers (60 Years Old and Older;  $N=1,042$ )

Categorical Variables	%
Age	
60-69	46.60
70 +	53.40
Gender ( Male)	62.77
Education	
Less than high school(<12)	21.21
High school (=12)	34.16
College (=16)	32.25
More than college (>16)	12.38
Employment Status ( Full time)	20.25
Marital Status ( Married)	49.31
Homeownership (Owner)	76.98
Race (White)	85.32
Health Status (Good)	62.26
Attitude towards risk	
Willing to take above average risk	10.49
Willing to take average risk	33.20
Not willing to take any risk	56.31
Savings goal	
For old age /Future	38.60
For emergency	23.34
For current consumption	18.75
Continuous Variables	<b>M (SD)</b>
Income	55,023.81(69,944)
Net worth	628,864.10(1,184,321)
Investment Asset	369,245.20(9,061,770)

Note: All values are weighted.

10% reported that they were willing to take above average financial risks with expectations for above average returns. Among the various savings goals, saving for old age or the future was one of the main reasons for saving (38.6%). Some (23.34%) reported that saving for emergencies was an important reason to save, while 18.75% reported that the most important reason for saving was for current consumption. The average income for the sample was \$55,000 and the average net worth was \$628,864. Among the net worth, the average amount of investment assets was \$369,245.

#### *Information Sources for Investment Decisions by Elderly Consumers*

Among the 25 different information sources for investment decisions, the elderly used bankers the most often as their information sources. Around one fifth (19.07%) got information from bankers. Secondly, the elderly obtained information from their friends and relatives (13.89%) followed by financial planners (11.09%) as an information source. The next frequently used sources were obtaining information from calling around (10.21%) and from magazines (8.89%). Among the elderly, about twelve percent reported that they did not save.

#### *The Results of Multinomial Logit Analysis*

A multinomial logit analysis was conducted to examine the preference of the information sources for investment decisions by the elderly. For the multinomial logistic analysis, consumers who reported that they did not save were excluded, because the final analysis examined the preference of the information sources for investment/saving decisions.

For this analysis, all five implicates of the SCF were used and analyzed separately for a multinomial logit analysis. The results of all five implicates showed nearly consistent results, indicating that variables such as savings goals, investment assets, income, education, attitudes towards risk, age, and homeownership were important determinants of the choice of information sources for investment decisions. The results of the first implicate of the SCF are presented in Table 4.

The model examined factors related to using

Table 3. *The Top Five Information Sources for Investment Decisions of the Elderly*

	Information Sources	%
1	Banker	19.07
2	Friends	13.89
3	Financial Planner	11.09
4	Call around	10.21
5	Magazine	8.89
	Do not save	12.03%
		--

'Friends', the 'Media', or 'self/other sources' over 'Experts' as information sources for investment decisions. The results showed that the level of investment assets and age groups were significantly related to using 'Friends' over 'Experts' as information sources for investment decisions. As the level of investment asset increased, the likelihood of using 'Friends' as a source for investment decisions decreased. Compared to consumers in their 60's, elderly consumers in their 70's were less likely to use 'Friends' as an information source for an investment.

The results on using the 'Media' as an information source suggested that savings goals, the level of income, education, attitude toward credit, and age group were significant determinants of using the 'Media' over using 'Experts' as an information source for investment decisions. The elderly were more likely to use the 'Media' over 'Experts' as an information source for investment decisions if they had a future savings goal. Elderly consumers who had a savings goal for old age or the future were 1.6 times more likely to use the 'Media' over 'Experts'.

As the level of income increased, the likelihood of using the 'Media' as a source for an investment decision over 'Experts' decreased by 18%. This was consistent with the Lin & Lee's (2004) study. The elderly were more likely to use the 'Media' over 'Experts' as an information source for investment decisions if they had more than a college education. Elderly consumers with more than a college education were 2.4 times more likely to use the 'Media' over 'Experts' when they decided on an investment. Similar to the results of the previous study (Lin & Lee, 2004), that suggested the level of risk tolerance increased the use of media as an information source for investment decisions, attitude

Table 4. Results of Multinomial Logit Analysis

Information sources	Friends ln(P <sub>1</sub> /P <sub>4</sub> )			Media ln(P <sub>2</sub> /P <sub>4</sub> )			Self & Other sources ln(P <sub>3</sub> /P <sub>4</sub> )					
	B	SE	Odds Ratio	B	SE	Odds Ratio	B	SE	Odds Ratio			
Having savings goals												
For old age /Future	0.124	0.226	1.132	0.478	0.235	1.613	*	-1.225	0.283	0.294	***	
For emergency	0.120	0.242	1.127	0.018	0.265	1.018		-0.730	0.287	0.482	*	
For current consumption	0.372	0.253	1.451	0.402	0.273	1.495		-1.385	0.379	0.250	***	
Investment asset	-0.056	0.017	0.946	**	-0.012	0.020	0.988		-0.093	0.021	0.911	***
Working for full time	-0.015	0.094	0.985		0.094	0.089	1.099		-0.129	0.130	0.879	
Income	-0.119	0.097	0.888		-0.200	0.096	0.819	*	0.371	0.142	1.449	**
Education (Less than high school) <sup>a</sup>												
High school	-0.010	0.253	0.990		0.063	0.330	1.065		0.444	0.434	1.559	
College	-0.030	0.289	0.970		0.644	0.341	1.904		0.429	0.477	1.536	
More than college	0.084	0.282	1.088		0.889	0.333	2.433	**	0.366	0.457	1.442	
Perceived health risk	-0.051	0.091	1.052		0.011	0.099	0.989		-0.250	0.133	1.284	
Attitude toward risk (Willing to take substantial risk)												
Willing to take average risk	-0.314	0.210	0.731		-0.423	0.186	0.655	*	-0.234	0.282	0.791	
Not willing to take any risk	0.107	0.247	1.113		-0.442	0.248	0.643		0.200	0.345	1.221	
White	-0.391	0.257	0.676		-0.405	0.282	0.667		-0.246	0.404	0.782	
Age70+ (age 60)	-0.346	0.167	0.708	*	-0.474	0.171	0.623	**	-0.033	0.235	0.968	
Male	0.079	0.132	1.082		-0.008	0.150	0.992		-0.123	0.201	0.884	*
Homeowner	-0.356	0.191	0.700		-0.135	0.212	0.874		-0.574	0.274	0.563	
Married	-0.086	0.243	0.918		0.230	0.257	1.259		-0.135	0.335	0.874	
Intercept	2.042	1.063	--		1.541	1.079	--		-3.604	1.581	--	
Log-Likelihood Ratio	2941.81											

<sup>a</sup> Reference groups are in parentheses.

\*p<.05, \*\*p<.01, \*\*\*p<.001

towards risk was significantly related to using the 'Media' over 'Experts'. The results indicated that elderly consumers who were willing to take an average risk were less likely to use the 'Media' over 'Experts' as an information source for investment decisions, compared to elderly consumers that were willing to take above average financial risks. The likelihood of using the 'Media' over 'Experts' decreased by 35%.

Elderly consumers in their 70's were less likely to use 'Media' over 'Experts' as an information source for their investments. When compared to elderly consumers in their 60's, the likelihood of using the 'Media' over 'Experts' decreased by 38% for elderly consumers in their 70's.

Savings goals, the level of investment assets, income, and homeownership were significant determinants of using 'Self/other sources' over 'Experts' as an information source for an investment decision. All of the savings goals were found to be significant; that is, if elderly consumers had a savings goal, then

they were less likely to use 'Self/other sources' as an information source for an investment decision over 'Experts'. Elderly consumers with a savings goal for old age or the future were less likely to use 'Self/other sources' over 'Experts' as well as elderly consumers with savings goals for emergencies or current consumption.

The likelihood of using 'Self/other sources' over 'Experts' as an information source for an investment decision decreased by 70%, 52%, and 75% for those who had savings goals for old age, emergencies, and current consumption, respectively. As the level of the investment assets increased, the likelihood of using 'Self/other sources' over 'Experts' decreased. However, the level of income increased the likelihood of 'Self/other sources' over 'Experts' as an information source increased. Homeowners were less likely to use 'Self/other sources' as an information source for an investment decisions over 'Experts'; the likelihood of using 'Self/other sources' over 'Experts' decreased by 44%.



## CONCLUSIONS AND IMPLICATIONS

Due to the aging of the population, the role of elderly consumers in the financial market has become more important. In order to understand elderly financial consumers, this study examined the current aging of financial consumers focusing on their use of information sources for investment decisions.

The results indicated that, as suggested in precautionary savings theory, many elderly consumers had some kind of savings goal and involved savings and investment decisions. Only 12% of the elderly 60 years of age or older reported that they did not save when they were asked about the use of information for their savings / investment decisions; many of the elderly did use some information for their investment decisions. More than one third reported that they had a savings goal for retirement, old age, or the future. This means that some of the elderly still have needs for their retirement preparation. Although some elderly have accumulated assets for life after retirement, they may feel that the amount of their asset is inadequate for their retirement. Therefore, continuous education on retirement preparation, educational programs on how to develop a reasonable withdrawal system for their assets during retirement life and how to preserve their assets are required for the elderly.

The results on attitude towards risk showed that high-risk takers primarily used the 'Media' and 'Self/other sources' for their investment decisions. This showed the characteristics of high-risk takers well, (Pompian, 2006) but depending on personal experience, research, or on the media might bring about inappropriate financial decisions. Thus, financial planners and educators need to provide information on how to select only appropriate and useful information for their financial decisions among the extensive information available from the media.

In addition, high risk takers need to consult with experts on their own investment experiences and knowledge to determine if their decisions (based on their own experiences and knowledge) would result in an appropriate financial decision. Financial planners and educators also need to guide them to

locate better information sources that are more appropriate to their financial situation and attitudes to lead them to a better decision.

For further investigation of the choice of information sources for financial decisions for the elderly, a multinomial logistic analysis was conducted. For this analysis, the 25 different information sources were collapsed into four categories (friends, media, self/other sources, and experts). The elderly used 'Experts' (39.48%) as a major information source for their investment decision, followed by 'Friends' (24.18%).

The results of the multinomial logit analysis showed that investment asset and age group were significant factors for selecting 'Friends' as a major source over 'Experts' for their investment decisions. Selecting the 'Media' over 'Experts' as a major information source for an investment decision was affected by having a savings goal, income, education, attitude towards risk, and age group. For selecting 'Self/other sources' over 'Experts' as a major information source for investment, having a savings goal, investment asset, income, and homeownership were important predictors.

The perceived value was the most important factor in determining the use of 'Self/other sources' as a major source for the investment decision of the elderly. The results suggested that as the perceived value from the search was greater, then elderly consumers who were unlikely to depend on personal experiences, knowledge, or other sources when they made investment decisions. If the elderly consumers had some sort of savings goal and had increased amounts of investment assets, they were less likely to choose 'Self/other sources' as a major source for their investment decisions. This implies that elderly consumers behaved reasonably when they made a financial decision because as the perceived value increased they were less likely to depend on personal knowledge but try to search for more professional information for their investment decisions.

Using the 'Media' was affected by the perceived value from the search, the cost for searches, knowledge, risk, and demographic factors. In particular, if an elderly consumer received an advanced education, they were more likely to use the 'Media' over 'Experts'

as a major information source for an investment decision. The likelihood of using the 'Media' for consumers who received more than a college education was 2.4 times more than consumers who received less than a high school education.

Overall, the results indicated that if an elderly consumer had more of an investment asset and owned a home, they were more likely to use 'Experts' as a major source for their investment decisions. In addition, elderly consumers who were in their 70's and who was willing to accept an average financial risk was more likely to use 'Experts' as a major source for investment decisions. Older consumers, more affluent consumers, and average risk takers were more likely to choose 'Experts' as their major information source for their investment decision.

It is reasonable for older elderly groups to use experts more often than other sources, because it becomes more difficult for the elderly to have sound judgment as they get older. Many times, the elderly can be targeted for financial fraud and are vulnerable to investment scams (Wyderko, 2006). Before making investment/savings decisions, consulting with experts would be useful for old consumers. In this sense, financial experts should have a strong work ethic that clients can trust; in addition, the consumer protection policies for financial consumers (especially for senior investors) need to be strengthened.

The results indicating that more affluent consumers were more likely to use experts as their information source. This suggested that if an elderly consumer did not have enough assets to invest, the consumer might perceive little or no value in consulting with financial experts. Most of the time, consulting with financial experts requires fees. Some elderly consumers might desire expert financial information; however, they avoid it as their major information source due to the high consulting fees. Therefore, financial educators should teach elderly consumers about the different fee systems of financial service providers based on their information or asset level. Among the experts, the elderly consumers obtain their information from bankers most; thus, the banking sector should pay more attention to this increasing customer sector to

develop more customized products and services that accommodate the special needs of elderly investors.

## REFERENCE

- Ando, A., & Modigliani, F. (1963). The life cycle hypothesis of saving: Aggregate implication and tests. *American Economic Review*, 53, 55-84.
- Bloch, P. H., Daniel L. S., & Ridgway, N. M. (1986). Consumer search: An extended framework. *Journal of Consumer Research*, 13(June), 119-126.
- Brock, J. N. (2010). The Evolution of the Aging Population, from <http://robinson.gsu.edu/magazine/aging.html>
- Christelis, D., Jappelli, T., & Padula, M. (2005). Health Risk, Financial Information and Social Interactions: the Portfolio Choice of European Elderly Households, from [http://www.csefit/1st\\_C6/cjp\\_June16.pdf](http://www.csefit/1st_C6/cjp_June16.pdf)
- Deaton, A. & Paxson, C. (1998). Health, Income, and Inequality over the Life-cycle. In D. A. Wise (Eds.), *Frontiers in the Economics of Aging* (pp. 431-457). Chicago and London: University of Chicago Press.
- Feick, L. E., Herrmann, R. O., & Warland, R. H. (1986). Search for nutrition information: A probit analysis of the use of different information sources. *The Journal of Consumer Affairs*, 20(2), 173-192.
- Guo, C. (2001). A review on consumer external search: Amount and determinants. *Journal of Business and Psychology*, 15(3), 505-519.
- Hopper, J. S. (1995). Family financial decision making: Implications for marketing strategy. *Journal of Services Marketing*, 9(1), 24-32.
- Howlett, E., Kees, J., & Kemp, E. (2008). The role of self-regulation, future orientation, and financial knowledge in long-term financial decisions. *The Journal of Consumer Affairs*, 42(2), 223-242.
- Kim, H., & Lyons, A. C. (2008). No pain, no strain: Impact of health on the financial security of older americans. *The Journal of Consumer Affairs*, 42(1), 9-36.
- Lee, J., & Cho, J. (2005). Consumer's use of information intermediaries and the impact on their information search behavior in the financial market. *The Journal of Consumer Affairs*, 39(1), 95-120.

- Lee, J., & Lin, Q. C. (2004). Consumer information search when making investment decisions. *Financial Services Review*, 13, 319-332.
- Montalto, C. P. & Sung, J. (1996). Multiple imputation in the 1992 survey of consumer Finances. *Financial Counseling and Planning*, 7, 133-141.
- Perry, V. G., & Morris, M. D. (2005). Who is in control? the role of self-perception, knowledge, and income in explaining consumer financial behavior. *The Journal of Consumer Affairs*, 39(2), 26-55.
- Pompian, M. M. (2006). *Behavioral Finance & Wealth Management*. Wiley Finance.
- Ratchford, B. T., Talukdar, D., & Lee, M-S (2001). A model of consumer choice of the internet as an information source. *International Journal of Electronic Commerce*, 5(3), 7-20.
- Rubin, D. B. (1987). *Multiple Imputation for Nonresponse in Surveys*. New York: John Wiley & Sons.
- Schmidt, J. B., & Spreng, R. A. (1996). A proposed model of external consumer information search. *Journal of the Academy of Marketing Science*, 24(3), 246-256.
- Tongren H. N. (1988). Determinant behavior characteristics of older consumers. *The Journal of Consumer Affairs*, 22(1), 136-157.
- U.S. Census Bureau. (2010). The Next Four Decades - The Older Population in the United States: 2010 to 2050, from <http://www.census.gov/prod/2010pubs/p25-1138.pdf>
- Wyderko, S. F. (2006). Testimony Concerning Elderly Investment Fraud. *U.S. Securities and Exchange Commission*, from <http://www.sec.gov/news/testimony/ts032906sfw.htm>

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