Who is and who is not willing to use online employer-provided retirement investment advice

So-Hyun Joo
John E. Grable
Hyuncha Choe

This study used classification tree analysis to examine who is and who is not willing to use online employer-provided retirement investment advice. Using data from the Retirement Confidence Survey (Employee Benefit Research Institute, 2004), the study focused on who was more likely to use online retirement investment advice when it was available from their employer. Results indicated that those who were younger, those who participated in a defined contribution retirement plan, and those who made joint (with someone else in their household) personal finance decisions were more likely to use online professional retirement investment advice.

• • • •

Employers are increasingly recognizing the importance of of providing education in financial planning and financial counseling, including knowledge of financial stress management techniques, as a mechanism to increase productivity and improve employee satisfaction (Hira & Loibl, 2005). This recognition stems from the realization that (a) few workers have adequate knowledge of personal finance issues; (b) workers often feel overburdened when faced with the many choices associated with making financial decisions; (c) not many workers have enough time to learn how to effectively manage their personal financial situations; and (d) the complexities of financial life often lead individuals to make inappropriate, inadequate, and ineffective financial decisions.

The need for financial education in general, as well as specifically in the workplace, has been well documented in the literature (Fox, Bartholomae, & Lee, 2005). When seeking information in the financial marketplace, individuals have many choices. Some individuals turn to financial information sources such as stockbrokers, financial planners, financial counselors, books, magazines, and the Internet to help shape financial knowledge and behaviors (Bei, Chen, & Widdows, 2004; Lee & Cho, 2005). The use of the Internet as a source of investment advice is one that more and more people turn to on a daily basis. The proliferation of online brokerage accounts demonstrates this phenomenon. According to Dewally (2003), people held approximately 6.4 million online brokerage accounts in 1999, near the height of the

• • • •

So-Hyun Joo, Personal Financial Planning, Texas Tech University; John E. Grable, Personal Financial Planning, Kansas State University; and Hyuncha Choe, Consumer Studies, Seoul National University. *The information in this article was presented at the 2005 Association for Financial Counseling and Planning Education conference in Scottsdale, Arizona.* *Correspondence concerning this article should be addressed to So-Hyun Joo, Personal Financial Planning, Texas Tech University, Box 41162, Lubbock, TX 79409 (e-mail: sjookwun@yahoo.com).*

stock market bubble. In 2000, the number of accounts exceeded 13 million. Since 2000, the number of online brokerage accounts has decreased slightly, but it still remains above the 1999 level.

Research suggests that some people are willing to use Internet services not only to find information but also to conduct transactions (Bei et al., 2004; Gershoff, Makherjee, & Mukhopadhyay, 2003). However, little is known about the factors that influence whether a person will use the Internet as a source of financial information (Dewally, 2003). Even less is known about the type of person who uses employer-provided financial services Internet portals to gather information and manage retirement investments. Employers and employee assistance providers, however, need precisely this type of information to gauge the effectiveness of their financial education initiatives. Without such data, employers are unable to verify with certainty that the money spent on Internet services is meeting the needs of employees. For example, if an employer finds that the type of employee who uses Internet services does not match the demographic characteristics of a company's workforce, two results may occur. First, the employer may find that money is being spent with little effect (i.e., no improvement in knowledge, attitudes, or behaviors) and terminate the employee benefit, and second, the employer may use such findings to adjust Internet offerings to meet the needs of its unique workforce.

The purpose of the current study was to use classification tree analysis to examine factors that can be used to predict who is and who is not willing to use online retirement investment advice when it is offered by an employer. The findings from this research have several implications for employee benefits administrators, employee assistance professionals, financial advisers, researchers, and policy makers. First, a classification tree analysis gives an easy-to-understand categorization of Internet and non-Internet users. Using classification tree results, financial practitioners, including employee benefits administrators and employee assistance professionals, who follow the decision models, can more easily segment their clients into profile groups. By segmenting clients, professionals can develop targeted strategies designed to (a) improve their clients' financial wellness, (b) maximize the use of educational programs, and (c) improve the effectiveness of the services they provide. Employers can also use classification tree analysis to understand the cost and benefit characteristics of Internet education. Researchers can also benefit from the use of classification tree analyses. Classification tree analysis methods, such as those used in this study, allow researchers to examine more complicated data without restrictions on variable distribution. Finally, policy makers tend to appreciate classification tree analysis because of its prescriptive categorization ability, which can help to promote family well-being through a better awareness of who uses Internet information.

REVIEW OF LITERATURE

Interest in the effectiveness of the Internet as an investor resource goes back to the beginning of the World Wide Web in the early to mid-1990s. Grinder (1997) summarized the financial services information available online up to that time. He concluded that even in 1997, the growth of the Internet was beginning to overwhelm individuals with

information. Since the mid-1990s, researchers have published numerous academic studies on evaluating and ranking financial Web sites (e.g., Ciccotello & Wood, 2001; Unsal & Movassaghi, 2001). Ciccotello and Wood concluded that online financial advice provided middle-class consumers with a reasonable level of consistency and usefulness. More specifically, they found that the Internet does a good job of providing information and service in the areas of insurance and income taxes. However, discussion of other financial planning topics, such as estate planning, are not effectively delivered through the Internet. Certain types of consumers, such as investors, have embraced the Internet for obtaining financial services. According to Unsal and Movassaghi, 1 out of 3 equity trades in the United States is placed online. They estimated that as much as 15% of all brokerage accounts are Internet based.

Other researchers have taken an interest in understanding the characteristics of financially literate Internet users. Volpe, Kotel, and Chen (2002) surveyed 530 online investors to determine levels of investment savvy among financial services Internet users. They found that online investors, in general, were not particularly more knowledgeable than were others in terms of investment topics. Their findings were noteworthy in describing the type of online investor who tends to be more knowledgeable: namely, those over age 50, men, active traders, and those with graduate degrees. Volpe et al.'s findings suggested that online "investors' knowledge of investments is insufficient and needs to be improved in the future" (p. 8). They stressed that simply providing online users with access to information will not lead to increased knowledge. Only through consistent long-term education can investors become more effective when working in the capital markets.

Trahan and Gitman (2003) used a different focus when studying the way in which employees of American corporations are given financial advice in the workplace. Their study specifically reviewed the corporate market for financial planning services. Although Trahan and Gitman did not directly ask survey respondents about the use of the Internet, their study did provide insights into the way in which employers can benefit by providing investment and financial planning advice and services to employees. Trahan and Gitman found that employers that do provide financial planning services are in a better position to attract and retain key employees. They determined that nearly 67% of U.S. corporations provide some type of financial planning service to senior managers. Almost all of these services are made available in personal settings. Few firms, on the other hand, offer services to noncritical employees. Trahan and Gitman recommended further study to determine the factors associated with the distribution and delivery of personal financial planning benefits.

A critical question remains to be answered in the literature: What are the factors associated with a person's willingness to use online employer-provided retirement investment advice? Researchers have widely reported that Internet users, in general, tend to be younger, better educated, more technically savvy, and more knowledgeable than the general population about the services they access through the Internet (Bei et al., 2004; Briggs, Burford, DeAngeli, & Lynch, 2002). Few researchers have studied whether or not these same types of factors also influence the use of employer-provided online services. The answer to this question is not unimportant. Trahan and Gitman (2003) reported that "corporations compete for scarce managerial talent and employees face increased responsibility for managing a myriad of complex personal

financial decisions" (p. 16), meaning that a better understanding of who is willing to use online services may help businesses refine the nature and scope of their Internet offerings to attract and retain employees. Findings from this type of research can also be used by employee assistance providers and financial counselors and planners as they market services to firms and their employees.

METHOD

We used classification tree analysis to examine employees' willingness to use online, professional, employer-sponsored retirement investment advice. Using data from the Retirement Confidence Survey (RCS; Employee Benefit Research Institute, 2004), we focused on determining who is and who is not more likely to use employer-provided Internet retirement investment advice.

Participants

The 2004 RCS consists of cross-sectional data. The observations for the dataset include 1,002 individuals. For the RCS, individuals were interviewed during a 22-minute telephone call. Random-digit dialing was used to obtain a representative cross-section of the U.S. population. Respondents answered a series of questions while the interviewers recorded their responses. The sample for this study was limited to respondents employed at the time of the survey (N = 783). Limiting the sample was necessary to ensure that only those individuals who were employed were compared to determine the factors associated with the willingness to use employer-provided Internet services. The inclusion of retired or nonworking respondents would have skewed the results of the study, which, in turn, would have limited the generalizability of the findings.

Variables

Dependent variable. The dependent variable used in this study was the willingness to use online (i.e., Internet) professional retirement investment advice from an employer. The 2004 RCS contains the following questions about employer-provided financial education and advice:

1. In the past 12 months, has an employer or work-related retirement plan provider given you educational material, information, or seminars about retirement planning and savings?
2. In the past 12 months, has an employer provided you with access to professional investment advice for retirement purposes, that is, access to specific recommendations about which stocks, bonds, and mutual funds you should invest your money in for retirement?
3. IF NOT PROVIDED INVESTMENT ADVICE BY EMPLOYER, if an employer offered you access to this type of professional investment advice, how likely do you think you would be to take advantage of it if the advice was available? Would you be *very likely, somewhat likely, not too likely,* or *not at all likely*?

Respondents were then asked to indicate how likely they were (from *very likely* to *not at all likely*) to access information in the following three ways: online, in person, or by telephone.

Of the 783 respondents, 171 stated that their employer provided them with access to professional investment advice for retirement (i.e., a positive response to Questions 1 and 2), 600 said that they did not have access to such advice, and 12 admitted that they did not know the answer to the question. Because the purpose of the current study was to examine who was more *willing* to use online investment services, we further limited the sample to the 600 respondents who did not have professional retirement investment advice at their workplace. Although it may be important to examine the willingness to use online professional advice of individuals who currently use such services, this was not possible given the data used. Filtering questions in the RCS excluded those participants who had access to workplace financial advice from providing input about their willingness to use online professional advice. The current study was designed to focus only on those workers who did not have access to retirement investment advice at the workplace. Respondents who answered that they were *very likely* or *somewhat likely* to use online professional retirement investment advice provided by an employer were coded 1 ($n = 272$), and those who answered that they were *not too likely* or *not at all likely* to use online professional investment services were coded 0 ($n = 316$).

Independent variables. A primary advantage of classification tree analysis is that it requires a minimum of modeling constraints. Any amount and type of data can be used as independent variables. This allowed for a diverse number of independent variables to be used in the current study including the entire RCS question base in which respondents provided responses. Independent variables also included demographic characteristics, retirement outlook, retirement confidence, retirement preparedness, attitude toward retirement, and personal financial status. Specific examples of the variables used included age, gender, marital status, income, education, ethnicity, assets, expected retirement age, retirement savings, investment confidence, savings behavior, and confidence in the Social Security and Medicare systems.

Classification and regression trees are based on binary recursive modeling. Because of this, data need not be recoded in the traditional sense of dummy coding. Furthermore, issues related to multicollinearity do not cause the same interpretation problems as one finds in a regression analysis. Therefore, reporting of means, standard deviations, and other related data related to each variable are not provided.

Method of Analysis

A classification tree analysis was conducted using CART® (Classification and Regression Tree, 2005) to classify who was more likely to use online employer-provided retirement investment advice. CART® software uses the original classification and regression trees formula developed by Breiman, Friedman, Olshen, and Stone (1984). Ten-fold cross-validation and Gini splitting criterion were used. No specific penalty was given to the variables. The sample was weighted to represent the U.S. national demographic level using a weight variable that RCS provides. Descriptive statistics and other analyses

were obtained using SPSS for Windows. Being a nonparametric method, classification tree analysis does not require a model. Instead, classification tree analysis methods tend to be widely used for data mining. Kolyshkin and Brookes (2002) discussed data mining as "a process that uses a variety of data analysis tools to discover patterns and relationships in data that may be used to make valid predictions" (p. 3).

CART® has advantages to offer compared with other data analysis tools. First, it does not assume normal distribution. CART® can "handle numerical data that are highly skewed or multi-modal, as well as categorical predictors with either ordinal or non-ordinal structure" (Lewis, 2000, p. 5). Second, CART® has unique methods for handling missing values; it substitutes missing data with *surrogate splitters*. A surrogate splitter "contains information that is typically similar to what would be found in the primary splitter" (Salford Systems, 2003).

RESULTS

Demographic Characteristics

Table 1 shows selected demographic characteristics of the current study sample. Because of the nature of this type of analysis, the average respondent resembled the national demographic and socioeconomic profile of the United States as of 2003 and 2004.

Classification Tree Findings

The CART® procedure identified the tree with four terminal nodes depicted in Figure 1. The cross-validated relative cost (interpreted as $1\text{-}R^2$) was 0.810. The prediction success statistics showed that the classification tree offers better than an 80% prediction success rate in categorizing those who are not willing to use online retirement investment advice and a more than 54% prediction success rate in categorizing those who are willing to use online retirement investment advice.

The classification tree analysis provided some interesting insights into who was and who was not willing to use online professional retirement investment advice. Node 1 (i.e., root node) in Figure 1's classification tree started by asking about a respondent's age. If a respondent was 38.5 years of age or older, he or she was moved to Terminal Node 4, which suggested that the person was not willing to use online retirement investment advice when it was available at the workplace (i.e., Class = 0). If a respondent was younger than 38.5 years old, he or she was moved to the next decision point, which was a question about retirement plan type. If a respondent younger than 38.5 years old did expect to receive money from a defined contribution retirement account, he or she was classified into Terminal Node 3, which indicated that the person was willing to use online retirement investment advice if it became available (i.e., Class = 1). If a respondent younger than 38.5 years old and did not expect to receive money from a defined contribution retirement plan (such respondents might have included those who were not participating in a defined contribution retirement plan at their workplace), he or she was moved to Node 3. At that point, a question was asked about the

TABLE 1

Demographic Characteristics of Sample

Characteristic	%
Gender	
Men	50.2
Women	49.8
Marital status	
Married	56.8
Living with partner	6.8
Divorced or separated	15.5
Widowed	3.3
Single, never married	17.5
Ethnicity	
African American	9.4
Hispanic	5.5
White	82.0
Other	3.1
Income	
Less than $15,000	10.1
$15,000–$25,000	12.6
$25,001–$35,000	12.1
$35,001–$50,000	22.9
$50,001–$60,000	7.9
$60,001–$75,000	10.6
$75,001–$100,000	9.4
More than $100,000	14.4
Homeowners	72.9
Education	
Some high school or less	6.8
High school graduate	26.8
Some college	31.2
College graduate	20.6
Postgraduate work	5.7
Graduate degree	8.9
Employer	
A large corporation	20.5
A small business	23.5
Government	7.7
Nonprofit/education	7.8
Self-employed	13.3
Other	27.2
Investment assets	
Less than $25,000	53.4
$25,000–$50,000	11.4
$50,001–$100,000	11.0
$100,001–$150,000	6.6
$150,001–$250,000	5.8
$250,001–$500,000	5.8
More than $500,000	6.0

Note. Average age of participants was 44.2 years (SD = 11.18). Average number of children per participant was 1.3 (SD = 0.89).

way in which the respondent made financial decisions for his or her household. If the financial decisions for a respondent's household were made primarily by a single individual (i.e., either by the respondent or someone else, including a

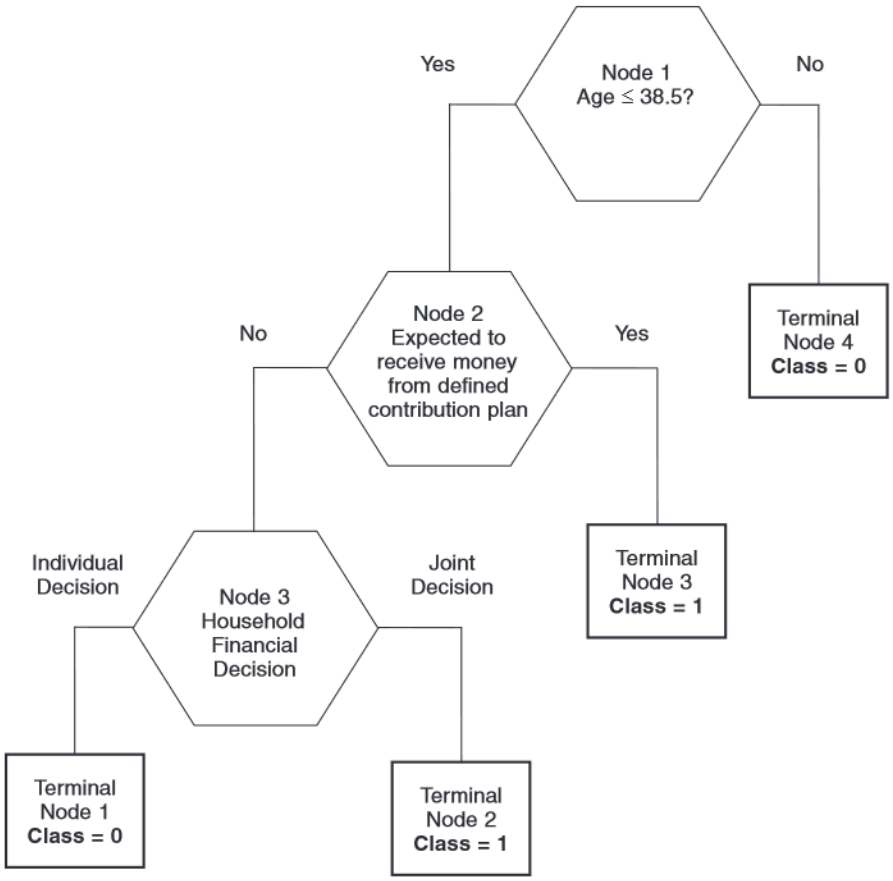

FIGURE 1

CART® Classification Tree Showing Who Is and Who Is Not Willing to Use Online Employer-Provided Investment Advice

Note. Class = 0 are those who are not willing to use online investment advice. Class = 1 are those who are willing to use online investment advice.

spouse), the respondent was then moved to Terminal Node 1, which classified the person as not willing to use online retirement investment advice (i.e., Class = 0). If a respondent's household financial decisions were jointly made (i.e., by both the respondent and someone else), the respondent was moved to Terminal Node 2, which classified the person as willing to use online retirement investment advice (i.e., Class = 1).

DISCUSSION

American businesses are increasingly shifting the burden of managing complex financial decisions to their employees. Accordingly, employers are searching for

methods of providing financial information and advice to help employees make sound financial decisions. Corporations and other employers are doing this for two reasons. First, employers need to provide information to employees to fulfill fiduciary requirements. Simply telling employees that they are now responsible for managing their own retirement decisions may not be enough to meet standard thresholds prescribed by the U.S. Department of Labor, the Employee Retirement Income Security Act (ERISA), and the Internal Revenue Service. Employers who do not provide baseline investment management training to employees may find themselves with legal problems in years to come if employees fail to reach their retirement objectives.

Second, employers often provide financial information and advice as a way to recruit and retain employees (Trahan & Gitman, 2003; Veiga, Baldridge, & Eddleston, 2004). Research suggests that two primary concerns of employers who provide online retirement investment advice are low use rates and participation by relatively homogenous subsets of employees.

According to the findings of the current study, younger workers who participated in defined contribution retirement plans, as well as those who made joint financial decisions in their households, tended to be more willing than others to use online investment advice for retirement purposes. Specifically, the results of the current study indicate the following:

1. Employees over age 38.5 were *not* inclined to be users of employer-provided online financial advice.
2. Employees under age 38.5 who participated in or expected to receive money from a defined contribution plan (e.g., 401[k], 403[b], 457) were more willing to use online financial advice.
3. Employees younger than 38.5 who did not participate in a defined contribution plan, as well as employees who were living with a significant other and who made individual, rather than joint, financial decisions, tended to be less willing to use online financial advice.
4. Employees under age 38.5 who did not participate in a defined contribution plan but did make joint financial decisions were more willing, on average, to use online financial advice.

In general, the findings of the current study support literature findings about who is and who is not more likely to use the employer-provided online financial advice. The users of online financial information and advice tended to be younger, better educated, and more technically savvy than the general population (Bei et al., 2004; Briggs et al., 2002). This result helps explain the age gap found in the current study. Employees over 38.5 years of age were also individuals born before 1970—generations that entered adulthood prior to the Internet boom. Employees under age 38.5 conversely represented those who matured concurrently with the widespread development of the World Wide Web. The results of the current study indicated that younger employees placed more trust, relative to their older counterparts, in online sources of financial information.

Given the finding of the current study related to employees' retirement plan option, we concluded that those who participate, in one way or another, in a defined contribution plan are also more likely to be willing to use online services. Employees who contribute to a nonmandatory retirement plan demonstrate greater knowledge of retirement preparation than those who do not contribute to such a plan. Participation in a nonmandatory form of a retirement savings plan may be a proxy for increased financial knowledge.

The findings of the current study related to joint decision-making style should be of interest to human resources and counseling professionals. Employees who are less than 38.5 years of age and do not participate in a defined contribution plan will still tend to be more likely, relative to employees over 38.5 years of age, to use online advice if they make financial decisions jointly with their spouse or partner. Individuals who exclude their partner from the financial decision-making process are less likely to use online sources of information. One explanation for this finding is that joint decision makers may look at more diverse sources of information than individual decision makers. The finding may also imply that joint decision makers are those who already use technology as a tool in decision making.

The current financial environment in the United States necessitates the need for financial education. Some researchers (Kim, Garman, & Quach, 2005) suggested the use of workplace financial education to improve the well-being of employers (i.e., minimization of possible liability lawsuits) and employees (i.e., greater financial stability). Other researchers have suggested that employers should provide advice in addition to information to produce effective outcomes from workplace financial education (Garman, 2004; Joo & Grable, 2000). A common misconception is that employers are forbidden by ERISA, the U.S. Department of Labor, and IRS regulations from sponsoring investment advice. Employers tend to shy away from the practice because of uncertainties associated with fiduciary constraints. However, it is possible, although not widely practiced, for organizations to sponsor education that includes general financial and investment advice to all employees in a workforce. More information about fiduciary constraints can be found at http://www.dol.gov/ebsa/publications/fiduciaryresponsibility.html. Workplace financial education and advice can be provided as an employee benefit or as a component of an employee assistance program. The findings of the current study are also useful to the designers of employee benefit and assistance programs. Targeted and customized online educational programs will tend to be seen as a useful benefit by younger married employees—especially when they participate in company-sponsored defined contribution plans. On the other hand, if the majority of employees in an organization's workforce are over age 40, offering online investment programs may result in lack of participation and overall employee reluctance to use such services.

The findings of the current study have additional implications for career counselors and human resources personnel. Career counselors can use the information from the CART® analysis to help design their own outreach efforts. Counselors working with younger married couples can expect this group to effectively use online services. Counselors can also use the information on

joint decision makers' characteristics, including their tendency to use online advice. As the current study demonstrated, those who make financial decisions with their partner or spouse are more likely to use Web-based information. This finding suggests a possibility of different information search methods according to decision-making style.

As with employee assistance program designers, human resources personnel can also use the findings of the current study when they design service delivery methods for their employees. Rhine and Toussaint-Comeau (2002) described the benefits of this type of research. They concluded that knowing more about the ways in which people prefer to obtain financial information can assist employers in the design and implementation of effective financial education programs. On the basis of the findings of the current study, the following are three ways in which financial education programs can be made more effective. First, services and materials should match the demographic profile of the employee base. This may mean presenting retirement investment information to younger employees through the Internet and to older employees through traditional workshops. Second, it is important to design materials that meet the needs not only of employees but also of employees' spouses or partners. Third, the link between the use of defined contribution plans and the use of other employer-sponsored education benefits should be exploited by employers as a tool for increasing employee participation in benefit offerings and educational initiatives.

Employers who embrace online financial and retirement investment advice face some serious threats that need to be addressed to fully meet the needs of their employees. First, as more people become accustomed to obtaining information online and trading stock via the Internet, there is a risk that demand will outstrip technological capacities. This happened in the late 1990s (Unsal & Movassaghi, 2001). This may happen again when the U.S. equities markets rebound in the future. Second, it is possible that regulators will take a renewed look at how employers provide information and advice. Regulators may also begin to evaluate the quality of employer-provided financial advice. If such information and advice do not meet rudimentary fiduciary standards, firms could face legal liabilities. Third, the proliferation of the Internet as a tool for providing advice to employees also makes the medium a source of potential fraud and abuse (Griffiths, 2003; Unsal & Movassaghi, 2001). Few regulators patrol the Internet, and, because of this, the possibility increases daily that an outside person or organization will infiltrate an employer's Web site. The issue of identity theft, for example, illustrates how employers who use the Internet may subject themselves to liability if data are stolen. Finally, employers and employee assistance providers who offer Internet services need to be sure to provide adequate disclaimers and disclosure about risks incurred when investing, investment terminology, and information concerning privacy issues.

In summary, the topic of employer-provided online investment advice warrants additional research. Although the RCS fairly represents the entire U.S. population, replication of this research with other datasets is recommended. To provide more meaningful outcomes in the future, researchers should assess the

client profiles of current online professional advice and use other parametric and nonparametric analyses.

REFERENCES

Bei, L.-T., Chen, E. Y. I., & Widdows, R. (2004). Consumers' online information search behavior and the phenomenon of search vs. experience products. *Journal of Family and Economic Issues, 25*, 449–467.

Breiman, L., Friedman, J., Olshen, R., & Stone, C. (1984). *Classification and regression trees.* Pacific Grove, CA: Wadsworth.

Briggs, P., Burford, B., DeAngeli, A., & Lynch, P. (2002). Trust in online advice. *Social Science Computer Review, 20*, 321–332.

Ciccotello, C. S., & Wood, R. E. (2001). An investigation of the consistency of financial advice offered by Web-based sources. *Financial Services Review, 10*, 5–18.

Classification and Regression Tree. (2005). Salford-systems. Retrieved February 10, 2005, from http://www.salford-systems.com

Dewally, M. (2003). Internet investment advice: Investing with a rock of salt. *Financial Analysts Journal, 59*, 65–77.

Employee Benefit Research Institute. (2004). *Retirement confidence survey.* Retrieved February 10, 2005, from http://www.ebri.org/surveys/rcs/2004/

Fox, J., Bartholomae, S., & Lee, J. (2005). Building the case for financial education. *The Journal of Consumer Affairs, 39*, 195–211.

Garman, E. T. (2004). The importance of workplace financial education to employers. In *The American Express guide to workplace financial education and advice* (pp. 29–40) Minneapolis, MN: American Express Retirement Services.

Gershoff, A. D., Makherjee, A., & Mukhopadhyay, A. (2003). Consumer acceptance of online agent advice: Extremity and positivity effects. *Journal of Consumer Psychology, 13*, 161–170.

Griffiths, M. (2003). Internet abuse in the workplace: Issues and concerns for employers and employment counselors. *Journal of Employment Counseling, 40*, 87–96.

Grinder, B. (1997). An overview of financial services resources on the Internet. *Financial Services Review, 6*, 125–140.

Hira, T. K., & Loibl, C. (2005). Understanding the impact of employer-provided financial education on workplace satisfaction. *The Journal of Consumer Affairs, 39*, 173–194.

Joo, S., & Grable, J. E. (2000). Improving employee productivity: The role of financial counseling and education. *Journal of Employment Counseling, 37*, 2–15.

Kim, J., Garman, E. T., & Quach, A. (2005). Workplace financial education participation and retirement savings by employees and their spouses. *Journal of Personal Finance, 4*, 92–108.

Kolyshkin, I., & Brookes, R. (2002). *Data mining approaches to modeling insurance risk* [White paper]. Retrieved on February 10, 2005, from http://www.salford-systems.com/doc/insurance.pdf

Lee, J., & Cho, J. (2005). Consumers' use of information intermediaries and the impact on their information search behavior in the financial market. *The Journal of Consumer Affairs, 39*, 95–120.

Lewis, R. J. (2000). *An introduction to classification and regression tree (CART) analysis*. Paper presented at the 2000 Annual Meeting of the Society for Academic Emergency Medicine. Retrieved on February 10, 2005, from http://www.saem.org/download/lewis1.pdf

Rhine, S. L. W., & Toussaint-Comeau, M. (2002). Adult preferences for the delivery of personal finance information. *Financial Counseling and Planning, 13*, 11–24.

Salford Systems. (2003). *An overview of the CART® methodology*. Retrieved on February 10, 2005, from http://www.salford-systems.com/421.php

Trahan, E. A., & Gitman, L. J. (2003). The corporate market for personal financial planning services benefits. *Financial Services Review, 12*, 1–18.

Unsal, F., & Movassaghi, H. (2001). Impact of Internet on financial services industry: A case study of on-line investing. *Managerial Finance, 27,* 54–65.
Veiga, J. F., Baldridge, D. C., & Eddleston, K. A. (2004). Toward understanding employee reluctance to participate in family-friendly programs. *Human Resource Management Review, 14,* 337–351.
Volpe, R. P., Kotel, J. E., & Chen, H. (2002). A survey of investment literacy among online investors. *Financial Counseling and Planning, 13,* 1–14.