

Chapter 1

Introduction

Statement of the Problem

Saving for investments has declined from 7.6 % in 1992 to only 1 % in 2001, according to the Federal Reserve Board's Survey of Consumer Finances (Aizcorbe, et al. 2001). This decline in motivation to invest is grounds for serious concern. Also startling, over half of the 2005 Retirement Confidence Survey respondents report having less than \$50,000 in total savings and investments, while over half also report they need to accumulate at least \$250,000 for retirement, not taking into consideration other long-term financial goals (Employee Benefit Research Institute and Matthew Greenwald & Associates, Inc., 2005). Today, more than ever, it is important for consumers to invest to prepare for long-term financial security.

In 2004, over 50 million retired and disabled Americans and their families, and the widowed families of deceased workers received Social Security benefits, also known as Old Age, Survivors and Disability Insurance (Social Security Administration, 2004). Many of these 50 million rely on the benefits as their only income. Due to a long-term fiscal deficit of the Social Security program, reform will be necessary in the coming years. Although it is not possible to determine what future changes will be made, it appears likely that citizens will become increasingly responsible for funding their retirement.

Further, large companies in several industries, have recently dropped or significantly reduced their pension plans. United Airlines has been allowed to terminate its employee pension plans, creating the largest pension default in corporate history

through bankruptcy proceedings to allow the company to continue operating (Maynard, 2005). Many Enron employees lost their retirement savings when the company failed because they had only invested in company stock (Behr & Pearlstein, 2001). Companies are also changing from traditional defined benefit pension plans to defined contribution plans, some of which are only funded by the employee contributions, others where the employer may match all or part of the employee contribution (Stone, 2005).

Despite the need for long-term financial security and the potential responsibility of financing retirement and/or disability income, there has been only a slight increase in investing among Americans. The percentage of U.S. families having any type of asset was almost unchanged between 1998 and 2001. The share of financial assets (transaction accounts, certificate of deposit, savings bonds, bonds, stocks, mutual funds, retirement accounts, cash value of life insurance, other managed assets and other financial assets), as a share of total assets, only increased 1.3 percentage points from 1998 to 2001, compared to rising 9.1% between the six years from 1992 to 1998. The rise in financial assets was directly offset by a decrease in the share of non-financial assets (vehicles, primary residence, other residential property, business equity or other) (Aizcorbe, et al. 2003). Consumers need to increase their investing and preparations for long-term financial security.

Financial education plays a key role in preparing consumers for long-term financial security. Consumers who are able to effectively manage their financial matters avoid debt and save for the future, have emergency savings funds and are able to meet important long-term goals, such as retirement, home ownership or education. Financially educated individuals are also more likely to have lower stress levels, have an increased

motivation and morale and are more productive at work because they are less likely to spend work time on personal financial matters (Garman, Grable, & Leech, 1996; Shirer & Tobe, n.d.).

Financial education focuses on many important aspects of financial management, including saving and investing. Although the words saving and investing are frequently used interchangeably, there are differences between the two. Saving primarily refers to asset allocation to provide funds for emergencies and for making purchases in the near future, generally three years or less (O'Neill, 2000). Savings yield low rates of return, are easily accessible and are generally viewed as safe, with little or no risk to the principal involved. In contrast, once an individual has adequate savings, investing refers to achieving long-term financial goals (three or more years), and increasing net worth. Investing generally offers more potential appreciation than savings, is not as easily accessible and involves more risk (O'Neill, 2000).

All consumers need to be knowledgeable about investing. However, barriers keep consumers from furthering their financial education, which prevents consumers from making financial behavior changes. Some of the barriers include “lack of time and money, inconvenient scheduling or location of classes and even lack of confidence” (Gibson, Boelter, Boyce and LeFebvre, 1992). These are just a few reasons educators are emphasizing actions to help consumers learn to better manage their finances.

In 2002, the United States Department of Agriculture Cooperative State Research, Education, and Extension Service (USDA CSREES, 2004) launched a new educational initiative entitled *Financial Security in Later Life*. The program's goals are to:

1. Help people improve personal finance behaviors leading to financial security in later life
2. Enhance the capacity of local educators and their partners to deliver effective programs
3. Increase economic vitality and quality of life for families and communities (USDA CSREES, 2004).

Tools for consumers and educators are provided to support achieving the initiative goals. These tools include online educational resources, community programs and information for Cooperative Extension agents to aid in instruction. Increasing availability of technology and continuing growth of the Internet have made financial educational tools more obtainable. The fraction of people who used online financial educational resources almost doubled between 1998 and 2001 (Aizcorbe, et al. 2000). One available online resource is, *Investing For Your Future: A Cooperative Extension System Basic Investing Home Study Course* (O'Neill et al., 2000).

The *Investing For Your Future* (O'Neill et al., 2000) home study course is available free of charge to any consumer, both online (<http://www.investing.rutgers.edu>) and in print. It was developed by a consortium of six land-grant universities including Rutgers University, Cornell University, Clemson University, Virginia Tech, Michigan State University, and the University of Idaho. The course is sponsored with cash and/or in-kind support from Rutgers Cooperative Extension, New Brunswick, NJ, participating universities, the U.S. Department of Agriculture Cooperative State Research, Education, and Extension Service (USDA CSREES), and the U.S. Securities and Exchange Commission. The course consists of eleven main units:

1. Unit 1: Basic Building Blocks of Successful Financial Management
2. Unit 2: Investing Basics
3. Unit 3: Finding Money to Invest
4. Unit 4: Equity Investing
5. Unit 5: Fixed-Income Investing
6. Unit 6: Investing in Mutual Funds
7. Unit 7: Tax-Deferred Investing
8. Unit 8: Investing With Small Dollar Amounts
9. Unit 9: Getting Help: Investing Resources
10. Unit 10: Selecting Your Team of Financial Professionals
11. Unit 11: Investment Fraud

Over 2,000 people have registered with the *Investing For Your Future* (O’Neill et al., 2000) online course and roughly 4,000 people have received the print version. To date approximately \$34,000 has been spent on this program (O’Neill, 2001). It requires annual updating, due to factors such as tax law changes and indexing of certain tax rate schedules. The online version is updated at the beginning of every year.

Purpose of the study

The purpose of this study is to evaluate the *Investing For Your Future* (O’Neill et al., 2000) course to determine if it is positively affecting the financial behavior of participants. Since USDA CSREES (2004) defined the number one goal as “Help people improve personal finance behaviors leading to financial security in later life,” this goal

needs to be evaluated to see how the program is fulfilling it. If the financial educational resources available to consumers do not help them change behaviors, then the resources should be reevaluated.

This study will investigate what stage of change course participants are in for specific investing behaviors after completing *Investing For Your Future* (O'Neill et al., 2000). The study is based on the Transtheoretical Model of Change, developed by Prochaska (1979), which describes five different stages of behavior; *precontemplation*, *contemplation*, *preparation*, *action* and *maintenance*. These stages allow for investing behaviors to be measured. The desired stage is either the *action* or *maintenance* stage, which indicates that an investing behavior has been established. The stages in relation to investing behaviors are described in the following:

Precontemplation

An individual is not thinking of future financial needs, not taking any actions to prepare for investing.

Contemplation

An individual has set investing goals, but is not otherwise preparing to do any investing behavior.

Preparation

An individual has both set goals and actively sought after information about an investing behavior.

Action

An individual has not only done the preparatory actions, but has also engaged in the investing behavior.

Maintenance

An individual has performed an investing behavior (action) over an ongoing period of time.

This study evaluated whether theoretical predictions of the Transtheoretical Model of Change (Prochaska, 1979) were applicable to empirical evidence found from changes in investment behavior of *Investing for Your Future* (O'Neill et al., 2000) course participants. The relationship was examined by identifying what stage participants are in after participating in the *Investing for Your Future* O'Neill course, for the following fifteen investing behaviors:

1. Reduced expenses to “find” money to invest
2. Established an emergency reserve fund
3. Calculated personal net worth and/or cash flow
4. Set specific financial goals (with a date and cost)
5. Determined amount of money needed to achieve goals
6. Established a dollar-cost averaging investment plan
7. Increased the amount of money invested monthly
8. Investigated specific investments (e.g., prospectus)
9. Purchased one or more new investments
10. Investigated investments available through employer
11. Determined my federal marginal tax bracket
12. Used one or more new investor resources (e.g. books, magazines, websites)
13. Joined or started an investment club

14. Consulted one or more financial professionals
15. Learned more about investment fraud

Objectives

The feedback from participants will be examined to evaluate the following objectives of this proposed study:

1. Identify demographics of course participants, including age, educational level, gender, ethnicity, marital status and household income.
2. Explore the usefulness of the eleven-unit course, participants' previous experience with investing, and overall assessment of the course.
3. Identify course participants' stage for each of the fifteen investing behaviors after participation in *Investing For Your Future* (O'Neill et al., 2000), and any relationships between demographic variables.
4. Examine participants' feedback regarding what features should be deleted or added and to determine the overall usefulness of the course.

Research Questions

The research questions used to guide this study are:

- RQ1: As a result of completing the home study course *Investing For Your Future* (O'Neill et al., 2000), do consumers improve personal financial behaviors based on the Transtheoretical Model of Change (Prochaska, 1979)?
- RQ2: How do the survey results from this study compare to the previous study completed in 2001 by O'Neill?

Hypotheses

Hypotheses for this study include:

1. *Investing for Your Future* (O'Neill et al., 2000) course participants will have high education levels and high-level incomes in comparison to the average American adult.
2. Participants will rate the *Investing for Your Future* (O'Neill et al., 2000) course as valuable to them.
3. *Investing for Your Future* (O'Neill et al., 2000) course participants will have increased their savings after completing the course.
4. As a result of participation in *Investing for Your Future* (O'Neill et al., 2000), participants will have improved their personal investing behavior based on the Transtheoretical Model of Change (Prochaska, 1979). A majority of participants would move into the desired staged of action or maintenance stage for each of the individual investing behaviors after completing the course.

Significance of the Study

This study is among the first to apply the Transtheoretical Model of Change to a financial consumer educational program, specifically to investing behavior. The Transtheoretical Model of Change has mainly been used to study health-behavior changes. This study provides the USDA CSREES's (2004) *Financial Security in Later Life* a model for evaluating their online tools for educators and consumers, especially those offered online.

Although one evaluation has already been conducted on *Investing For Your Future* (O'Neill et al., 2000), this study went beyond the previous study, and offered longer-term insight into the course effectiveness. Recommendations were also made for changes to the home study course.

Delimitations

Delimitations of this study include the fact that the study confines itself to surveying only online *Investing For Your Future* (O'Neill et al., 2000) participants. The scope of the study was also narrowed to participants that registered online since the last course evaluation was conducted.

Limitations

The sampling procedure used in this study decreases the generalizability of the findings. The low response rate also decreases the generalizability of the study findings.

Variables and their Operational Definitions

These terms are used for this study:

Financial security – “the ability to meet future needs while keeping pace with day-to-day obligations” (USDA CSREES, 2004).

Invest – “to commit (money or capital) in order to gain a financial return” (American Heritage Dictionary, 2000). For the home study course, investing is done by committing money to earn interest or dividends as well as capital gains by investing in things such as stocks, bonds, mutual funds or real estate.

Net worth – The dollar value remaining when the principal value of liabilities are subtracted from the fair market value of assets.

Reduced expenses to “find” money to invest – This investing behavior means the individual has decreased spending to have more financial assets for investing.

Established an emergency reserve fund – This investing behavior means the individual has allocated financial assets towards an emergency fund, typically 3-6 months of the individual/household’s living expenses.

Calculated personal net worth and/or cash flow – This investing behavior means the individual has determined the dollar value left over when they subtract the principal value of their liabilities from the fair market value of their assets, in other words subtract what they owe from what they own and/or determined the income they have coming into the household less the expenses being paid from that income to determine what money is available to invest.

Set specific financial goals (with a date and cost) – This investing behavior means the individual has specified detailed financial goals, including when they need the money, and how much money they need. The financial goals should be SMART: specific, measurable, attainable, realistic and on a timeline.

Determined amount of money needed to achieve goals – This investing behavior means the individual has determined the dollar value needed to achieve their financial goals. They may then determine the predetermined amount of money to set aside on certain intervals (daily, weekly, monthly or annually) to achieve the goals.

Established a dollar-cost averaging investment plan – This investing behavior means the individual has established a plan to invest a set amount of money on a regular interval, regardless of the price per share or they have set a plan to purchase a certain number of shares, regardless of the price per share. The former is the more common plan

since it is easier to set aside a specific amount of money. Planning allows for the fluctuation in securities markets, and reduces the impact, reducing the average cost per share over time.

Increased the amount of money invested monthly – This investing behavior means the individual has allocated more financial assets for investing on a monthly basis.

Investigated specific investments (e.g., prospectus) – This investing behavior means the individual has sought out more resources and information on a specific investment opportunity, such as reading a prospectus, which describes information about a mutual fund.

Purchased one or more new investments – This investing behavior means the individual bought at least one new investment of any type, including anything from bonds to real estate.

Investigated investments available through employer– This investing behavior means the individual has sought information and/or resources from their employer about investments they offer, such as a 401(k) or a 403(b) plan.

Determined my federal marginal tax bracket – This investing behavior means the individual has examined the tax rate schedules and determined which of the six tax brackets they are in, which determines the rate they pay on the last dollar earned by the household. The tax bracket amounts change on an annual basis to adjust for inflation. This will help determine the benefit of pretax dollar contributions and tax-deferred earnings.

Used one or more new investor resources (e.g., books, magazines, websites) –

This investing behavior means the individual has sought out additional new resources to further their investing education, such as online finance news or magazines.

Joined or started an investment club – This investing behavior means the individual has become a member of, or initiated, an organization of investors who meet on a regular basis and contribute toward investments.

Consulted one or more financial professionals – This investing behavior means the individual has had contact with at least one financial professional to get recommendations for their financial and/or investing activities.

Learned more about investment fraud – This investing behavior means the individual has sought out information about the many types of investment fraud, such as cold calling, internet fraud, pyramid schemes, Ponzi schemes, “pump and dump” scams, affinity fraud and foreign fraud. They may also learn ways to protect themselves from becoming a victim of investment fraud, such as checking the legitimacy of an investment by calling the U.S. Securities and Exchange Commission or their state securities regulator.

Summary

This chapter addressed the study’s purpose, objectives, research questions, and hypotheses. Also included was the significance of the study and variables and their operational definitions. The next chapter will describe the existing knowledge in a literature review format, including in depth explanation of the Transtheoretical Model of Change.

Chapter 2

Review of Literature

This literature review includes discussion of the Transtheoretical Model of Change (Prochaska, 1979), a previous course evaluation of the *Investing For Your Future* (O'Neill et al., 2000) course, similar financial consumer education evaluations and background on each of the demographic characteristics and investing behaviors.

The Transtheoretical Model of Change

James O. Prochaska and his colleagues, including Carlo DiClemente and John Norcross, developed the Transtheoretical Model of Change at the University of Rhode Island in the 1970s and 80s (Prochaska, 1979). Prochaska and his team derived the model by studying daily human experiences and combining existing psychotherapy models. The name 'transtheoretical' came from the combination of change variables from many existing psychotherapy theories. The goal of the model is to help people intentionally change behavior by understanding processes of change (Prochaska, 1979).

The original model was based on the following psychotherapy theories: Alderian, behavioral, cognitive, existential, exposure, humanistic, Gestalt, person-centered (client-centered), psychoanalytic, psychodynamic and systemic (Prochaska, 1979). Newer editions of the text feature inclusion of even more psychotherapy theories, including culture sensitive, eclectic, gender sensitive and interpersonal (Prochaska, Norcross, & DiClemente, 1994).

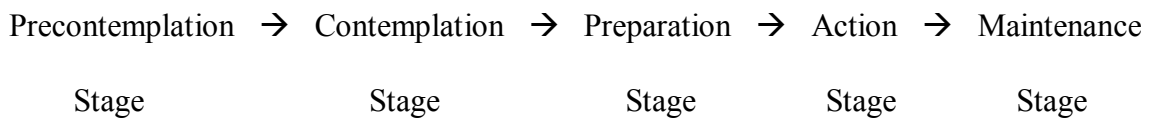
The Transtheoretical Model of Change (TTM) (Prochaska, 1979) was originally applied to health-related behavior changes, such as quitting smoking, weight loss, and

drug and alcohol abuse (Prochaska, 1979). Today it is used for research in many fields around the world. To many, the TTM (Prochaska, 1979) is considered a great innovation in the science of behavior. With almost three decades of research, TTM (Prochaska, 1979) has shown that behavior change is not an event, but a process (Prochaska, et al. 1994).

TTM (Prochaska, 1979) is used to encourage behavior changes by recognizing what stage a person is in and then deciding what processes they can use to progress forward. As seen in Figure 1, TTM (Prochaska, 1979) suggests that in order for people to make a change, they go through five distinct stages: *precontemplation*, *contemplation*, *preparation*, *action*, and *maintenance*.

FIGURE 1

The Stages of Change



The first stage of the change process, *precontemplation*, is where the person or household is not thinking of making any change, because they do not feel that change is necessary. People in this stage are not seeking information to help make a change and may not have ever identified a problem that needs a change. Other people around them may identify a problem for precontemplators, but they themselves, still do not plan to make a change (Prochaska, DiClemente, & Norcross, 1992).

The second stage of the change process is *contemplation*, where people begin to think about or ‘contemplate’ having a problem, and possible solutions. In this stage, people set goals and begin to seek out information and a solution to their problem. Contemplators become more open to help since they realize they may not be able to solve the problem on their own (Prochaska, et al. 1994). For this study *Investing for Your Future* (O’Neill et al., 2000) course participants are all at least in this stage, since they have all sought out information on investing through enrolling in the course.

The primary factor in moving between the second stage, contemplation, and the third stage, preparation, is decision making. Decision making is the process of evaluating the choice or resolution of alternatives (Deacon & Firebaugh, 1988). In order to make a decision, it is necessary to complete an evaluation of the positives and negatives of making a change. This evaluation, also known as decisional balance, is best made using the following categories (Janis & Mann, 1977):

1. Consequences of the change to self
2. Consequences of the change to others
3. Reactions of self as a result of the change
4. Reactions of others as a result of change

Writing the evaluation down may also help in the decision-making process (Axinn, Hall & Paolucci, 1977; Janis & Mann, 1977). An example of a decisional balance scale is illustrated in Table 1. Individuals must be clear in defining their honest thoughts and feelings on paper. They should include all thoughts and not strictly focus on the negatives or positives. When the evaluation is complete, everything should be

weighted, and when the pros outweigh the cons, then the individual is probably ready to move to the preparation stage. An alternate to decisional balance, would be to draw a decision tree illustrating alternate chains and their potential outcomes (Axinn, Hall & Paolucci, 1977; Deacon & Firbaugh, 1988; Crandall, Gross, & Knoll, 1973).

Table 1

Sample Decisional Balance Scale for Deciding to Make a Change to Invest or Not

| | Pros | Cons |
|--|---|---|
| 1. Consequences of the change to self | Increased money Secure Retirement Increased happiness Fulfilling goals | Requires time Requires saving Less money for current needs for self |
| 2. Consequences of the change to others | Spouse will be happy Fund children's education | Cut current spending on things for others |
| 3. Reactions of self as a result of the change | See self as responsible Proud of reaching goals See self as self-sufficient | Anxious about return Worried about choices & market |
| 4. Reactions of others as a result of change | Spouse will feel provided for Children will be pleased | Unhappy about loss of current spending |

Note. Sample decision to invest or not. Adapted from *Changing for Good* by Prochaska, et al. (1994), New York: Avon Books. pp. 134, 139, & 140.

The third stage of the change process is *preparation*. In this stage people are planning to make changes soon. They are 'preparing' the last steps before acting on their

goals. They might be seeking additional help or information and may even realize they could encounter difficulty in changing their behavior (Prochaska, et al. 1994).

The fourth, and generally desired stage of the change process, is *action*. This is the stage where, either an unhealthy behavior ends or the desired behavior begins. This is the most challenging stage and requires strength and support to prevent a relapse to the old behavior, or a halt in the new good behavior (Prochaska, et al. 1994).

The final step identified, before the change is accomplished and considered completed or ongoing, is *maintenance*. This stage generally starts six months after the start of the *action* stage. In the *maintenance* stage people are trying to make the change permanent. People have to learn to resist temptation and ‘maintain’ their new behavior.

TTM (Prochaska, 1979) research has found that scores based on the five stages of change were better predictors of behavior change than were demographic variables such as age, gender, education level; or behavior-related variables such as defined goals, confidence level, or social support (Prochaska, et al. 1992). Prochaska and Velicer’s (1997) later studies found that that programs created for specific individuals and interactive methods, such as behavioral counseling and computer-generated expert programs, produce greater long-term results with respect to changes in health habits than do non-interactive interventions, such as self-help manuals. Kerkman (1998) theoretically explained how to use the Transtheoretical Model (Prochaska, 1979) in financial counseling and supported it with a case study.

After Kerkman's (1998) successful application of the TTM (Prochaska, 1979), the model was applied to MONEY 2000TM. Xiao, et al, conducted a study (2004) to determine if Money 2000TM was successful at changing financial behavior according the TTM model (Prochaska, 1979). Survey findings imply that some of the change processes used by MONEY 2000TM participants are associated with specific stages of change. The survey findings also suggest there may be differences in behavioral changes between financial education program participants who increased their savings and those who reduced their debts. They implied that future studies should gather in depth information on these stages and further validate the relationship between change stages and processes claimed by the theory (Xiao, et al. 2004).

A recent study by Shockey and Seiling (2004) reaffirms that the purpose for financial education is to inspire change in financial management behavior and to supply resources that will assist individuals or families in achieving their goals. Most importantly, they emphasize that increased knowledge alone does not necessarily convert into behavior changes.

The main goal of the Shockey and Seiling (2004) study was to test the applicability of the TTM (Prochaska, 1979) for financial education, to enable participants in an Individual Development Account (IDA) program to change savings behaviors (begin or increase savings). The study successfully demonstrated that behavior change can be measured by some distinct but related behaviors in such a way that preparedness to change can be determined for a set of specific money management behaviors (Shockey & Seiling).

Prior Evaluation of Investing For Your Future

Dr. Barbara O'Neill (2003) conducted the previous course evaluation of *Investing For Your Future* (O'Neill et al., 2000) in the summer of 2001. O'Neill collected responses from the online course evaluation and/or print evaluations from registrants from 2000 through July of 2001.

The study examined the relationship between course participation and corresponding behavior change with respect to fifteen specific investment practices recommended in the action steps at the end of each unit of *Investing For Your Future* (O'Neill et al., 2000). However, the study only reported percentages of responses and there was no analysis to determine if these are representative of overall improvements in behavior changes. O'Neill's (2003) study was completed over three years ago and had other limitations. The study used a convenience sample representing only a small fraction of the course users. It is possible that there was selection bias if the respondents to the course evaluations were the most successful financially. Since this study was conducted, O'Neill has indicated the need for further investigation of the course.

Self-reported implications from the study found that *Investing For Your Future* (O'Neill et al., 2000) positively affected participants, since about 9 out of 10 respondents rated the course as very valuable or valuable to them personally. More than half (51.3%) of the respondents indicated "some" prior investing experience, while 10.5%, 28.3%, and 9.9%, indicated "a lot," "a little," and "none" (O'Neill, 2003). The audience consisted of Americans with similar demographics, and O'Neill (2003) recommended that the program be marketed to a more diverse audience and possibly translated to other

languages. Some planned behavior changes were identified and should be further developed in the course. Implications suggested that learners need help with planned behavior changes and programs and educational resources should be developed to address behavior changes.

Other Consumer Financial Program Evaluations

Using Credit Wisely

Using Credit Wisely (Gibson, Boelter, Boyce, & LeFebvre, 1992) is a consumer credit distance education program that is audio and print based, created by the Extension faculty at the University of Wisconsin. This learn-at-home course consists of three units: “Evaluating Consumer Credit Decisions,” “Managing Your Credit Load,” and “Resolving Consumer Credit Problems.” An evaluation was conducted to revise the program and to learn about the process employed by learn-at-home participants.

The random sample of thirty-three participants was surveyed over the telephone three to six months after enrolling in the course. Results indicated that participants had considerably reduced their consumer debt and made financial behavior changes in their credit, spending and saving. Two thirds (66%) of the respondents indicated that they made consumer credit behavior changes because of program participation. The majority (96%) of respondents indicated a strong preference for the learn-at-home education method (Gibson, Boelter, Boyce, & LeFebvre, 1992).

The study emphasizes the fact that distance education puts increased responsibility on the learner, and that the greatest need for support is at the initial period

of enrollment. Researchers suggested that at home participants are too busy to come to programs, therefore they might not always find the time to respond to a survey either.

Money2000TM

Another financial education program, similar to *Investing For Your Future* (O'Neill et al., 2000) and linked through Cooperative Extension is MONEY 2000TM (O'Neill 2001). The program was offered in about 30 states between 1996 and 2000. Its goal was to increase the financial well being of participants. By January of 2001, 13,338 participants had increased their net worth by \$19,565,490, through increasing their savings by \$10,618,271 and reducing debt by \$8,247,219 (O'Neill, 2001).

The most unique thing about MONEY 2000TM is that it was developed based on the Transtheoretical Model of Change (Prochaska, 1979). MONEY 2000TM was the first personal financial application of the Transtheoretical Model of Change (Prochaska, 1979) outside of health-related behavior changes.

Demographic Characteristics

Age

Age may have an impact on investing behavior change, according to the Transtheoretical Model of Change (Prochaska, et al. 1994). Possible causes of movement from the precontemplation stage to the contemplation stage may be developmental and environmental forces which the individual has no control over, such as aging. Age milestones or significant birthdays may provide an individual increased awareness of the

need to provide for long-term security, and therefore the individual may move to the contemplation stage.

Older consumers have more total savings and investments than younger consumers, according to the 2005 Retirement Confidence Survey (EBRI and Matthew Greenwald & Associates, Inc., 2005). Between the ages of 25 to 34, the majority (70%) reported saving less than \$25,000. Half of the consumers between age 35 to 44 reported saving less than \$25,000, as did 41% of the age group 45-54 and 39% of the age group 55 and older. This supports the idea that as consumers get older, and get closer to retirement they are more likely to prepare financially (EBRI and Matthew Greenwald & Associates, Inc., 2005).

O'Neill's (2003) previous course evaluation reported that participants in *Investing For Your Future* were predominately middle aged. There were 3.1% under 25 years of age, 16.7% between ages 25 and 34, 17.7% between ages 35 and 44, 29.2% age 45 to 54, 21.3% ages 55 to 64, 8.3% age 65 to 74 and 3.9% age 75 and over.

Educational Level

Educational level may also have impact on investing behavior change, according to the Transtheoretical Model of Change (Prochaska, et al. 1994). Individuals with higher levels of education may have been exposed to more financial education. These individuals may have heightened awareness of investing and might be more likely to consider long term investing, which may influence which stage they are in.

Employee Benefit Research Institute et al. (2005) reported that education level tends to be a major determinant in whether consumers save or invest. Generally those with higher education levels save more and invest more than those with lower levels of

education. The most recent, 2001, Survey of Consumer Finances (Aizcorbe, et al. 2003) reported a positive relationship between education of head of household and family net worth. Households headed by someone: without a high school diploma had an average net worth of \$103,000; with a high school diploma had an average of \$180,700; with some college had an average of \$284,700; and with a college degree reported an average of \$793,700 (Aizcorbe, et al. 2003).

It is possible that those with higher education levels are also more likely to participate in financial education programs. In the previous *Investing For Your Future* (O'Neill et al., 2000) course evaluation, O'Neill (2003) found that the majority of participants 90.54%, had attended some post-secondary school. Of the respondents, over half, 53.7% had a four-year degree or advanced college degree, while 36.84% had a two-year degree, some college or had attended a post-secondary trade school (O'Neill, 2003).

The most recent U.S. Census (2000) reports that, for the population over age 25, the majority, 80.4%, have graduated from high school and approximately a quarter, 24.4%, have a bachelor's degree or higher. The 24.4% with at least a bachelor's degree may be more likely than the other three-quarters to use financial education programs. The Census reported that 28.6% had obtained their high school diploma, 27.3% had some college or a two-year degree (with no report of trade schools), and 24.4% had a four-year degree of advanced college degree (U.S. Census Bureau, 2000).

Gender

Men may be more likely to invest or to prepare for long-term financial security than women, according to the most recent retirement survey (EBRI and Matthew Greenwald & Associates, Inc., 2005). Men are more likely than women to say that they

are preparing for retirement (EBRI and Matthew Greenwald & Associates, Inc., 2005). However, this is not true if the incomes are held constant for men and women, in which case men and women appear equally as likely to say they are saving for retirement.

Due to differences in the workplace today, men may earn more income or may be offered workplace retirement savings plans more often than women. Men are more likely to report that they are contributing to a workplace retirement savings plan; however, 57% of men are offered this benefit, compared to only 45% of women (EBRI and Matthew Greenwald & Associates, Inc., 2005).

Women are more risk-averse when it comes to investing than men (Weber, Blias & Betz, 2002). This indicates that women are more likely to invest in lower risk investment options than men, or perhaps, not invest as much as men. However, a study commissioned by the Merrill Lynch Investment Managers found that women make fewer investment mistakes than men, make the mistakes less often, and are less likely to repeat the mistakes (DeBaise, 2005).

Women are also more likely than men to rely on advice from a financial professional (DeBaise, 2005). The Merrill Lynch study found that 70% of women had a primary financial adviser, compared to 50% of men. The study also found that women are more likely to have a formal financial plan in place, 77% versus 62% of men (DeBaise, 2005).

Ethnicity

Ethnicity, race and/or culture may also influence investment behavior. The 2001 Survey of Consumer Finances (Aizcorbe, et al. 2003) found that white non-Hispanics reported an average net worth over four times that of nonwhite or Hispanics, 482.9%

versus 115.3% of respondents (Aizcorbe, et al. 2003). Of these respondents, the percentage of families who saved whose respondent was white non-Hispanic was 62.9, which is more than the 47.5 % of families who saved whose respondent was a nonwhite or Hispanic.

The 2001 Survey of Consumer Finances (Aizcorbe, et al. 2003) revealed that 96.5% of white non-Hispanic families reported having any financial assets, while 82.4% of nonwhite or Hispanics reported having financial assets. The specific investment/financial asset categories included: ‘transaction accounts, certificates of deposit, savings bonds, bonds, stocks, mutual funds, retirement accounts, life insurance, other managed assets or ‘other.’ White non-Hispanics held higher percentages of assets in every category except ‘other.’

The previous course evaluation by O’Neill (2003) found the majority of course participants, 85.1%, were white. Another 9% of the respondents were African Americans.

Marital Status/ Dependents

Marriage also may have impact on investing behavior change, according to the Transtheoretical Model of Change (Prochaska, et al. 1994). Marriage is identified as one of the developmental forces that possibly cause movement from the precontemplation stage to the contemplation stage. Marriage is a significant life event that may provide the needed push to move to the contemplation stage (Prochaska, et al. 1994). Along with marital status, the birth of a child may also be a developmental force to encourage movement between stages.

The previous course evaluation reported that the largest group, 37.7%, of *Investing For Your Future* (O'Neill et al., 2000) participants was married with no dependent children (O'Neill, 2003). Another 31.4% were married with dependents, a quarter were single with no dependents, and 5.9% were single with dependents.

Household Income

Household income is a major determinant in investing behavior. Household income represents a potential financial resource that can be used to invest. There is a strong positive relationship between personal household income and savings rates among all income ranges, including the lowest and highest (Dynan, Skinner, & Zeldes, 2000). This may indicate that there is also a relationship between household income and investing. The 2001 Survey of Consumer Finances (Aizcorbe, et al. 2003) revealed that as family's percentiles of income increased, so did their holdings of financial assets (transaction accounts, certificate of deposit, savings bonds, bonds, stocks, mutual funds, retirement accounts, cash value of life insurance, other managed assets and other financial assets), up until the 90th to 100th percentile of income where there is a .1% decrease (Aizcorbe, et al. 2003).

The stages of change theory has been applied to financial education for families with low incomes to determine if educators better meet the needs of participants by gearing the program toward the participants' level of readiness to learn and change (Shrier & Tobe, n.d.). A pilot-test of the application of the Transtheoretical Model of Change (Prochaska, 1979) to financial education designed for low-income participants resulted in significant improvement in the financial knowledge and attitudes of participants. Shirer and Tobe (n.d.) propose that financial education programs that

incorporate the stages of the Transtheoretical Model of Change (Prochaska, 1979) motivate people with low-income to lead healthier financial lifestyles, including preparing for long-term financial security.

The previous *Investing For Your Future* course evaluation revealed that the participants were predominately middle income (O'Neill, 2003). Household incomes of under \$15,000 were reported by 3.8% of the sample and 11.5% earned between \$15,000 and \$30,000. Middle-income earners made up 22.9% of the sample with incomes of \$30,001 to \$45,000 and 21.9% of the sample earned \$45,001 to \$65,000. Another 17.5% earned between \$65,001 and \$80,000, 11.5% earned between \$80,001 and \$100,000, and the remaining 10.9% earned above \$100,000.

Investing Behaviors

Reduced expenses to “find” money to invest

This investing behavior means an individual has decreased their spending in order to allocate financial assets towards investing. An individual at the precontemplation stage for this investing behavior is not thinking of future needs that can be met by investing now and is not taking any actions to decrease spending. Someone at the contemplation stage has set investing goals, but is not otherwise preparing to decrease expenses. An individual at the preparation stage has both set investing goals and actively sought ways to decrease spending. Someone at the action stage has not only done the preparatory actions, but has also engaged in reducing expenses. Finally, someone at the maintenance stage has decreased expenses to have money to invest over an ongoing period of time.

The application of the Transtheoretical Model of Behavior Change (Prochaska, 1979) to Individual Development Account Program, examined setting aside money and saving money and found successful application of the stages of change (Seiling and Shockey, 2004). Almost half of participants (49%), increased their scores for setting aside money and 45% saved money. The increase in mean score indicated a move toward a higher level of change. Although there was a move in the positive direction with these actions, they all stayed at the preparation stage (Seiling and Shockey, 2004).

O'Neill's (2003) previous study reported that 36.6% of the participants in the previous *IFYF* (O'Neill et al., 2000) study indicated yes, that they had done this; 7.4% answered no, they had not done this; 23.4% planned to do it; while 32.6% had reduced expenses to find money to invest before the course.

Established an emergency reserve fund

This investing behavior means an individual has allocated financial assets toward an emergency fund, typically 3-6 months of the individual/household's living expenses. An individual at the precontemplation stage for this investing behavior is not thinking of the need to establish an emergency fund, and not taking any actions to contribute to the fund. Someone at the contemplation stage has set a goal to establish an emergency fund, but is not otherwise contributing to a fund. An individual at the preparation stage has both set the goal and actively sought information about emergency reserve funds. Someone at the action stage has not only done the preparatory actions, but has also established an emergency fund. Finally, someone at the maintenance stage has established a fund, and kept the fund over an ongoing period of time.

Emergency reserve funds are an important aspect of investing behavior because they are recommended for all families to have as a hedge against uncertainty. An emergency fund acts as personal insurance or back-up cash in case of emergencies. It is important for the fund to be easily accessible, which generally means low yielding cash assets, such as money market funds, because one never knows when it will be needed. Those who have long term investments but no emergency fund often tap an investment in a time of emergency, generally paying penalties and sometimes not replacing the money.

This investing behavior also was employed when applying the Transtheoretical Model of Behavior Change (Prochaska, 1979) to the Individual Development Account Program. It examined setting aside money for unplanned expenses (Seiling and Shockey, 2004). Results found that almost half, 49%, of participants increased their scores for setting aside money for unplanned expenses. The increase in mean score indicated a move towards a higher level of change, and the .52 mean score was the largest increase in mean scores across the study. Even though there was a move in the positive direction, respondents all stayed at the preparation stage (Seiling and Shockey, 2004).

The 2003 *IFYF* (O'Neill et al., 2000) course evaluation (O'Neill, 2003) reported that 26.6% of participants indicated yes, that they had established an emergency reserve fund; 5.6% answered no, they had not done this; 21.5% planned to do it; while 46.3% did this before the course.

Calculated personal net worth and/or cash flow

This investing behavior means that an individual has determined the dollar value of everything they own after subtracting liabilities from assets; in other words subtracting what they owe from what they own. An individual at the precontemplation stage is not

thinking of determining their net worth and not taking any actions to calculate it. Someone at the contemplation stage would indicate they have set a goal to determine their net worth, but is not otherwise preparing to calculate it. An individual at the preparation stage has both set the goal of calculating it and actively sought information about net worth and/or cash flow. Someone at the action stage, has not only done the preparatory actions, but has also calculated their net worth and/or cash flow. Finally, an individual at the maintenance stage has calculated their net worth, over an ongoing period of time, perhaps on an annual basis.

Calculating net worth allows the consumer to examine their financial situation. They can then make wise investment decisions based on this information. Generally, it is best to calculate net worth on an annual basis and then make financial adjustments based on the calculation (O'Neill, 2000).

O'Neill's (2003) previous evaluation of *IFYF* (O'Neill et al., 2000) reported that 34.3% of participants indicated yes, that they had calculated their net worth and/or cash flow; 8.2% answered no, they had not done this; 20.9% planned to do it; and 34.3 did this before the course.

Set specific financial goals (with a date and cost)

This investing behavior means an individual has specified detailed financial goals, including when they need the money, and how much money it will take. An individual at the precontemplation stage is not thinking of future financial goals, not taking any action to set financial goals. Someone at the contemplation stage has decided to set financial goals, but has not set any specific ones. An individual at the preparation stage has both decided to set financial/investing goals and collected information on the goals they want

to set and examined their future needs. An individual at the action stage, has not only done the preparatory actions (for example, determined how much they will need for retirement), but has also written down specific financial goals, such as “I will save \$400,000 for my retirement by the time I am age 65, on June 22, 2045.” Finally, someone at the maintenance stage has set the specific financial goals, but is also meeting the financial goal(s) over a period of time.

The authors of Individual Development Account Program study investigated setting and using a financial goal (Seiling and Shockey, 2004). Results indicated that 38% of participants increased their score for setting and using a financial goal. The increase in mean score indicated a move towards a higher level of change from the preparation stage to the desired action stage (Seiling and Shockey, 2004).

O’Neill’s (2003) earlier evaluation of *IFYF* reported that the largest group of participants, 35.6%, indicated yes, that they had set specific financial goals; 11.5% answered no, they had not done this; 34.5% plan to do it; while 18.4% answered that they did this before the course.

Determined amount of money needed to achieve goals

This investing behavior means an individual has determined the dollar value needed to achieve their specific financial goals. Then they may determine the amount of money required to set aside on certain intervals (daily, weekly, monthly or annually) to achieve the goals. An individual at the precontemplation stage is not thinking of achieving any financial goals, and not taking any actions to calculate the amount need to reach them. Someone at the contemplation stage has set a goal to determine how much is needed, but has not yet calculated the dollar amount. An individual at the preparation

stage has both set the goal and actively investigated information about their financial goal. Someone at the action stage has done the preparatory actions and has also determined the amount needed to achieve their goals. Lastly, an individual at the maintenance stage has determined how much is needed, and is regularly investing the amount needed to achieve their goals.

As previously mentioned, authors of the program, Individual Development Account, investigated setting and using a financial goal (Seiling and Shockey, 2004). In order for the individual to use the goal, they must determine the amount of money needed to achieve it. They found that 38% of participants increased their score, which indicated a move toward a higher level of change, from the preparation stage to the desired action stage (Seiling and Shockey, 2004).

The 2003 *IFYF* course evaluation (O'Neill, 2003) reported that 31.2% of participants indicated that they had determined how much money was needed to achieve their financial goals, 11.6% answered they had not done this, 37% planned to do it, and 20.2% did this before participating in the course.

Established a dollar-cost averaging investment plan

It is best to 'buy low and sell high' but market timing is exceedingly challenging to accomplish. Dollar-cost averaging investment plans account for fluctuation in securities prices, and reduce the impact of market volatility, allowing the acquisition of the maximum shares at a below average cost per share. Those who are dollar-cost averaging avoid guessing when shares are high or low and it is less emotionally draining on investors (O'Neill, 2000).

This investing behavior means the individual has established a plan to invest a set amount of money on a regular interval, regardless of the price per share of the investment tool. An individual in the precontemplation stage is not thinking of dollar-cost averaging, and is not taking any actions establish a plan. An individual at the contemplation stage has set a goal to establish a plan to invest a set amount of money on a regular interval, but has not otherwise determined how much or other details. Someone at the preparation stage has both set the goal of establishing the plan and sought information about dollar-cost averaging. An individual at the action stage has not only done the preparatory action, but has also established their plan. Finally, someone at the maintenance stage has established and maintained their dollar-cost averaging investment plan and contributed to it over an ongoing period of time.

The previous evaluation of *IFYF* (O'Neill et al., 2000) reported that 23.4% of participants indicated yes, that they had calculated their net worth and/or cash flow, 22.8% answered no, they had not done this, 28.7% plan to do it, and 25.1% did this before the course (O'Neill, 2003).

Increased the amount of money invested monthly

This investing behavior means an individual has increased the amount of financial assets allocated for investing on a monthly basis. An individual at the precontemplation stage is not thinking of increasing the amount they invest, and not taking any actions to increase their monthly investments. Someone at the contemplation stage has set a goal to increase the amount of monthly investing, but is not otherwise doing it. An individual at the preparation stage has both set a goal and looked for information on increasing their monthly investments, such as which funds to increase.

Someone at the action stage, has not only done the preparatory actions, but has also actually increased their monthly money invested. Lastly, an individual at the maintenance stage has increased the amount invested monthly, and done it regularly for a period of time.

A suggested time to increase the amount of money invested monthly is any time the individual receives a raise or household expenses decrease. If an individual receives an annual raise, then they might designate a specific percentage of their total income for investments, or a percentage of their raise. An individual who has been in the maintenance stage of tracking their existing investments, may reverse the stage processes to review their investments and enter the contemplation stage by determining how much to invest, then return to the action stage again, by adjusting the amount invested monthly.

The largest group of 2003 *IFYF* course (O'Neill, 2003) participants, (37.1%), indicated that they had increased the amount invested monthly, 21.7% answered no, they had not done this, 30.9% planned to do it, and 10.3% did this before participating in the course.

Investigated specific investments (e.g., prospectus)

This investing behavior means an individual has sought more resources and information on a specific investment opportunity, such as reading a prospectus, which describes information about a mutual fund. An individual at the precontemplation stage is not thinking of future needs to invest, and not taking any actions to look at investment potential. An individual at the contemplation stage has set a goal to investigate certain investments, but is not yet doing it. Someone at the preparation stage has both set the goal and actively sought information about specific investments. An individual at the

action stage, has not only done the preparatory actions, but has also gathered information on specific investments. An individual at the maintenance stage has investigated certain investment opportunities, and continues to examine more.

By investigating specific investments, the individual is increasing their knowledge of investments and possibly increasing their potential to invest in the specific investment and assuring that they are using the best ones for the situation. The 2003 *IFYF* (O'Neill et al., 2000) course evaluation (O'Neill, 2003) found that almost half of participants, 48.9% indicated yes, that they had investigated specific investments, 13.6% answered no, they had not done this, 24.4% plan to do it, and 13.1% did this before the course.

Purchased one or more new investments

This investing behavior means the individual has bought at least one new investment, which can include everything from a bond to real estate. An individual at the precontemplation stage is not thinking of purchasing new investments, and not taking any actions to do so. An individual at the contemplation stage has set a goal to buy at least one new investment, but has not yet done it. Someone in the preparation stage has both set the goal and gathered information about new investments. An individual at the action stage has not only done the preparatory actions, but has actually purchased at least one. Finally, someone at the maintenance stage has purchased new investments over time.

The authors of the 2001 Survey of Consumer Finances report (Aizcorbe, et al, 2003) revealed that consumers purchased new investments, because there was a slight increase in overall ownership of financial assets from 1998 to 2001, with the median holdings increased 14.3% (Aizcorbe, et al). However, this increase is only a small part of the 97.2% increase since 1992. There was a decline of at least 1 % in households headed

by retired persons which is to be expected since people in this life-cycle stage are usually withdrawing money from investments to cover expenses.

O'Neill (2003) reported in her evaluation of *IFYF* course evaluation that 38.5% of participants indicated that they had purchased at least one or more investments, 24.6% answered, they had not done this, 29.1% planned to do it, while 7.8% did this before the course.

Investigated investments available through employer

This investing behavior means an individual has sought information and/or resources from their employer about investments they offer, such as a 401(k) plan or stock options. An individual at the precontemplation stage for this investing behavior is not thinking of investing opportunities through their employer, and not taking any actions to investigate them. Someone at the contemplation stage has set a goal to discuss investment opportunities with their employer or through use of employer resources, but is not actually doing so. An individual at the preparation stage has both set the goal and actively sought information on employer investment possibilities. Someone at the action stage, has not only done the preparatory actions, but has actually obtained information about investments through their employer. Lastly someone at the maintenance stage has and continues to examine possible investments through their employer.

Depending on the career the individual has and the segment of the economy where they work, they will have different investment opportunities available through their employer. A career or job change may have impact on this investing behavior change. A career change is an example of one of the developmental forces, which cause

movement from the precontemplation stage to the contemplation stage (Prochaska, et al. 1994).

Respondents to the 2003 *IFYF* course evaluation (O'Neill, 2003) reported that 26.5% indicated that they had investigated investments through their employer, 36.5% answered no, they had not done this, 4.1% planned to do it, while 32.9% did this before the course.

Determined my federal marginal tax bracket

This investing behavior means the individual has examined the tax rate schedules and determined in which of the six tax brackets they fall, which determines the rate they pay on the highest dollar of household earnings. The tax rates change on an annual basis to adjust for inflation. An individual at the precontemplation stage is not thinking about their tax bracket, and not taking any actions to determine which bracket they are in. An individual at the contemplation stage has set a goal to determine their bracket, but is not looking for federal tax information. Someone at the preparation stage has both set the goal and actively sought federal tax information. An individual at the action stage has not only done the preparatory actions, but has also determined their marginal tax bracket. Lastly, someone at the maintenance stage has determined annually for multiple years.

Determining marginal tax-brackets is an important investment behavior because it helps determine the benefit of pretax dollar contributions and tax-deferred earnings. This investment behavior may impact the Transtheoretical Model of Behavior Change (Prochaska, 1979) stage of other investing behaviors. By determining their marginal tax bracket, an individual may see the benefit of tax-deferred investing through a retirement

account with pre-tax dollars, and therefore move into the precontemplation or action stage of investigating through their employer.

In the last *IFYF* course evaluation O'Neill (2003) found that that 26.7% of participants indicated that they had determined their marginal tax bracket, 21.7% answered they had not done this, 21.1% plan to do it, while the largest group, 30.5% had done this before the course.

Used one or more new investor resources (e.g., books, magazines, websites)

With today's increased information accessibility, there are always new investor resources available to consumers. Jones (2002), using the most recent Nationwide Financial Survey of High Income Professionals, revealed that even individuals with financial advisors are using the Internet as an educational and informational supplement to their financial advisors. Jones also reported that respondents frequently use many other investor resources, including newspapers, magazines and books.

This investing behavior means the individual has sought additional new resources to further their investing education, such as online business or finance new or magazines. An individual at the precontemplation stage is not thinking of using new resources, and not taking any actions to find or use them. Someone at the contemplation stage has set a goal to use new investor resources, but is not actually doing so. An individual at the preparation stage has both set the goal and actively sought after new investor resources. Someone at the action stage, has not only done the preparatory actions, but has also used the new resources. Lastly, someone in the maintenance stage has used new investor resources over an ongoing period of time.

O'Neill (2003), using the 2003 *IFYF* course evaluation, reported that a majority of participants (64.4%) indicated that they had used one or more new investor resources, 10.3% answered they had not done this, 14.3% plan to do it, while 12% did this before participation in the course.

Joined or started an investment club

This investing behavior means an individual has become a member of, or initiated, an organization of investors who meet on a regular basis to learn about and practice investing. An individual in the precontemplation stage for this investing behavior is not thinking of membership in an investment club, and not taking any actions to pursue membership. Someone in the contemplation stage has set a goal to join to start an investment club, but is not otherwise joining or initiating one. An individual at the preparation stage has both set the goal and actively sought after information about investment clubs. Someone at the action stage has not only done the preparatory actions, but has also joined or started an investment club. Finally, an individual at the maintenance stage has established membership in an investment club, and maintained membership for an ongoing period of time.

Respondents predominately (79.1%) answered no to this behavior in the 2003 *IFYF* course evaluation (O'Neill, 2003), 2.8% indicated that they had joined or started an investment club, 14.1% plan to do it, while 4% did this before participating in the course.

Consulted one or more financial professionals

This investing behavior means an individual has had contact with at least one financial professional to get advice and/or recommendations for their financial and/or investing activities. An individual at the precontemplation stage is not thinking of

consulting a financial professional, and not taking any action to contact one. An individual at the contemplation stage has set a goal to consult with a financial professional, but has not done it yet. Someone at the preparation stage has both set the goal and looked for information about contacting financial professionals. An individual at the action stage has not only done the preparatory actions, but has also consulted with an advisor. Lastly, someone at the maintenance stage has established a relationship with a financial professional and maintained consultation with them.

In the previous *IFYF* course evaluation (O’Neill, 2003), participants reported that 27.8% indicated consulted a financial professional, 36.7% answered that they had not done so, 18.3% plan to do it, while 17.2% did this before participation in the course.

Learned more about investment fraud

Today there are many investment fraud schemes, such as cold calling, Internet fraud, pyramid schemes, Ponzi schemes, “pump and dump” scams, affinity fraud and foreign fraud. Consumers need to learn ways protect themselves from becoming a victim of investment fraud, such as checking the legitimacy of an investment by calling the U.S. Securities and Exchange Commission (U.S. SEC) or their state securities regulator. A consumer who becomes a victim of investment fraud, or knowledge of someone who has been victimized might have heightened awareness to encourage a change in behavior, possibly from preparation to precontemplation, precontemplation to contemplation or contemplation to action.

This investing behavior means an individual has sought out information about the many types investment fraud. An individual at the precontemplation stage for this investing behavior is not thinking about the risk of investment fraud, and not taking any

action to learn about it. Someone at the contemplation stage has set a goal to learn more about investment fraud, but has not actually done so. An individual at the preparation stage has both set the goal and actively sought information about investment fraud. Someone at the action stage has not only located resources about investment fraud, but has also read and learned about it. Finally, someone at the maintenance stage has continued to learn about investment fraud for a period of time.

The previous *IFYF* course evaluation (O'Neill, 2003) respondents reported that over half (56.1%) indicated that they had learned more about investment fraud, 22.8% answered they had not learned more, 15% plan to do it, while 6.1% did this before participation in the course.

Summary

This chapter contained a review of literature, laying the framework for this study. The review included a previous course evaluation of *IFYF* (O'Neill, 2003), similar financial education evaluations, and literature on the Transtheoretical Model of Change (Prochaska, 1979). Findings suggest that the Transtheoretical Model of Change (Prochaska, 1979) should have successful application to this study. The next chapter will describe the methodology and procedures of this study and explain critical components such as the theory-based variables.

Chapter 3

Methods

As identified earlier, the purpose of this study is to determine if consumers improve their personal financial behaviors as a result of completing the home study course *Investing For Your Future* (O'Neill et al., 2000), based on the Transtheoretical Model of Change (Prochaska, 1979), and to determine how survey results from this study compare to a previous study. This chapter will cover the methodology used for the study, including research design, sampling, instrumentation, data collection, data analysis and procedure.

Research Design

This study employs a quantitative online survey design. This design was selected because online surveys are an efficient and effective way to collect data. Online surveys have several advantages over traditional mail and telephone surveys, including access to hard to reach audiences, faster turnaround time, fewer respondent errors, and reduced marginal costs (Cude, Gutter, Lawrence, & Lyons, 2005). Generally online surveys offer larger sample sizes, faster response rates, less data processing, and lower costs (Bachmann, Elfrink, & Vazzana, 2000; Cude, Gutter, Lawrence, & Lyons, 2005; McDonald & Adam, 2003). This design allows for the examination of a sample of *Investing For Your Future* course participants from all over the United States. Further, since the course was offered online so some participants were undoubtedly accustomed to doing things online, making it appropriate to use an online survey.

Sample

The sample was selected using a single-stage sampling procedure. Since *Investing For Your Future* has been available for over five years, and a previous evaluation has been conducted, only participants who signed up for the course after the last evaluation survey was conducted were considered. This meant the possible sample consisted of all participants from June 1, 2001, to April 11, 2005; a total of 1,123 people. The initial sample consisted of 1,123, *Investing For Your Future* registrants.

Instrumentation

Structure

For the purpose of this study, the author examined analysis of data collected from the course evaluation survey forms (see Appendix A). Since previously used instruments were successful, the existing instruments were adapted, though there was new interpretation of data collected.

Source of Content and Form

The research instrument is found in Appendix A. The survey consisted of nine questions, broken down into twenty-eight items, and primarily contained three types of questions: course evaluation, demographics and investing behaviors. The survey was adapted from the one used in the original evaluation by O'Neill (2003).

The first five questions were multiple choice and open-ended, allowing participants to assess the course and their own previous investing experience. The sixth item solicited identifying demographics of course participants, including age, educational level, gender, ethnicity, marital status, household income and state of residence.

The final section of the survey contained 15 items to identify how course participants changed the following behaviors:

1. Reduced expenses to “find” money to invest
2. Established an emergency reserve fund
3. Calculated personal net worth and/or cash flow
4. Set specific financial goals (with a date and cost)
5. Determined amount of money needed to achieve goals
6. Established a dollar-cost averaging investment plan
7. Increased the amount of money invested monthly
8. Investigated specific investments (e.g., prospectus)
9. Purchased one or more new investments
10. Investigated investments available through employer
11. Determined my federal marginal tax bracket
12. Used one or more new investor resources (e.g., books, magazines
Websites)
13. Joined or started an investment club
14. Consulted one or more financial professionals
15. Learned more about investment fraud

The participants evaluated their behavior by responding to each item “did before the course,” “did more than six months ago,” “did within the last six months,” “plan to do within one month,” “plan to do within six months,” or “don’t plan to do.” Each of the participant’s responses to the fifteen individual behaviors were established in one of five

distinct stages: *precontemplation, contemplation, preparation, action, and maintenance* as seen in Table 2.

Table 2

Stage Categorization Based on Survey Response For Individual Investing Behaviors

| Stage | Response |
|------------------|---|
| Precontemplation | “don’t plan to do” |
| Contemplation | “plan to do within six months” |
| Preparation | “plan to do within one month” |
| Action | “did within the past six months” |
| Maintenance | “did before the course” or “did more than six months ago” |

The survey instrument was reviewed, analyzed and critiqued by several Certified Financial Planners® and researchers to ensure the content validity of the instrument. A pilot test was conducted to reinforce the usability of the instrument. The survey was pilot tested on a group of consumers and financial professionals who were not included in the sample of this study. The pilot test feedback was incorporated into the instrument.

Data Collection

Procedure

To determine the best way to conduct the data collection, Dillman’s, “Mail and Internet Surveys: The Tailored Design Method” (2000) was consulted. This latest edition addressed the mixed method of using mail and Internet surveys, but did not address strictly online surveys. Dillman’s twenty-three email survey principles were considered

as the procedure was designed. Implementation strategies were adapted from both his Internet and mail methods.

The sample was obtained using printed email registration form receipts from Rutgers University. Each form contained a name and email address of the registrant. These email addresses were typed into a Microsoft Word Excel spreadsheet. Simultaneously a request was made through Virginia Tech's listserv, for the capability of emailing hundreds of users that remain unidentified to others – for a listserve to be titled InvestingForYourFuture@listserv.vt.edu. The sample's email addresses were uploaded from Excel into the listserv list. An incentive of a random drawing of ten \$50.00 gift certificates for the online retailer, Amazon.com, was offered to those who responded by the survey deadline.

The survey and planned procedures were submitted to the Virginia Polytechnic Institute and State University (Virginia Tech) Institutional Review Board for Research Involving Human Subjects (IRB). This was done to protect the rights and ensure the safety of everyone involved in the study. Approval was granted by the VT IRB on March 10, 2005, and the approval letter is found in Appendix B.

The survey was created using the Virginia Tech survey website, found at <http://survey.vt.edu>. The survey was hosted online by Virginia Tech at <https://survey.vt.edu/survey/entry.jsp?id=1112113571036>. The survey questionnaire was sent via email to the sample using the email listserv, InvestingForYourFuture@listserv.vt.edu as a link in an email (Appendix C) on April 1, 2005.

Undelivered Email

Within the very same minute the survey was emailed, three emails were received titled, “INVESTINGFORYOURFUTURE: error report from” different domain names. A full example email error report can be found in Appendix D. A surprisingly large number of email error reports continued to come in, reporting that hundreds of people in the sample did not receive the email and therefore did not receive the survey. The first survey was completed approximately twelve hours after the email was sent.

Due to the overwhelming number of error reports, efforts were made to find means to reach the entire sample. The error report emails, such as those in Appendix D were carefully reviewed and used to collect the email addresses that could not be reached along with reasons for this. The list contained 415 email addresses that were reported to not be working. The list was carefully analyzed and corrections were made to 13 email addresses in an attempt to fix possible spelling errors and grammatical errors. Individual emails were forwarded to these addresses, however they were also not effective at reaching the course registrants.

Reasons for unsuccessful delivery to the 415 users included:

1. Recipient address rejected: No such user
2. No such user
3. Sorry, no mailbox here by that name
4. Recipient address rejected: Invalid recipient
5. Recipient address rejected: Unrouteable address
6. No relaying allowed
7. Addressee unknown

8. User not listed in Directory
9. This account has been disabled
10. Your e-mail is being returned to you because there was a problem with its delivery.
11. Mailbox Not Found
12. User mailbox exceeds allowed size
13. Not our customer
14. No such user
15. Recipient address rejected; unknown or illegal user
16. This mailbox is full. Please try again later.
17. Sorry, no mailbox here by that name.
18. Your mail to the following recipients could not be delivered because they are not accepting mail from ashahan@vt.edu.

The list of email addresses and reasons was sent to Virginia Tech Computing Customer Support Center (4-Help) for analysis and suggestions on further proactive steps to reach more of the sample. The first follow-up survey was scheduled to go out while waiting for a response from 4-Help. Before this was sent, a proactive step was taken to increase response rates. Research on spam filters was conducted to determine any steps that could prevent being caught in spam filters (Spencer 2004; Waldrop (n.d.)). The name associated with the email address, in the “From” line was changed from “ashahan” to “Investing For Your Future.” The first follow-up email, as seen in Appendix E, was sent on April 12, 2005.

The second follow-up email was scheduled for delivery on April 16, 2005. This follow-up was to be mailed to the listserv by the primary investigator/author of *Investing For Your Future* (O'Neill et al., 2000), Barbara O'Neill, in anticipation that course participants would recognize her name. Although O'Neill was identified as an InvestingForYourFuture listserv administrator the delivery was unsuccessful, however this was not identified until Sunday April 17, 2005. Due to low response rates, unsuccessful email delivery, and anticipated suggestions from Virginia Tech's 4-Help a joint decision was made to push the survey deadline back to April 25, 2005. An email (Appendix F), was sent explaining the extended deadline and also requesting replies or explanation for not participating in the survey.

The response from 4-Help, received April 18, 2005 (Appendix G), explained that the email bounce-back errors were because of end user problems that could only be fixed by them: the email account is disabled, not valid or does not exist; the message is being flagged as Spam (unsolicited email); and in one instance was being blocked. The error reasoning indicated that for the most part there was nothing else that could be done.

Further research was conducted to determine possible reasons for being flagged as Spam. The messages did not appear to be breaking any common Spam identifying guidelines (Consumer's Union, 2003). Lastly, another message was sent to the user who was blocking the message, but it was not successfully delivered either.

Based on a new schedule, a third follow-up email (Appendix H) was sent on April 22, 2005, as written by Barbara O'Neill, though mailed from "Barbara O'Neill ashahan@vt.edu". The fourth and final email reminder (Appendix I) was mailed on April 24, 2005.

The sample was given twenty-five days to respond to the survey. The response period ended on April 25, 2005. Fifty-one surveys were received. The password protected survey results were retrieved in spreadsheet format using the Virginia Tech survey software.

Data Analysis Procedure

The password protected survey results were exported into SPSS 11.0 (SPSS, Inc., 2001). The results were coded for analysis, following the coding key in Appendix J. Sample means and standard deviations were gathered to facilitate a description of the sample. Primary analysis consisted of frequencies, correlations and chi-square tests to determine relationships between variables and identify change behavior stages.

Summary

This chapter described the underlying research design and methodology of this study. It identified the sample size and description, along with the selection method. The instrumentation was also explained through structure, source of content and form. This chapter also identified complications of emailing links to the online survey, and strategies used to attempt to increase survey response. Next the data collection procedure was described. Lastly, the data analysis plan and procedure was elucidated.

Chapter 4

Results and Discussion

Introduction

The purpose of this study was to evaluate the home study course, *Investing For Your Future* (O'Neill et al., 2000), to determine whether theoretical predictions of the Transtheoretical Model of Change (Prochaska, 1979) are applicable to empirical evidence found from changes in the investment behavior of *Investing for Your Future* (O'Neill et al., 2000) course participants. The relationship was examined by looking at fifteen investing behaviors including:

1. Reduced expenses to “find” money to invest
2. Established an emergency reserve fund
3. Calculated personal net worth and/or cash flow
4. Set specific financial goals (with a date and cost)
5. Determined amount of money needed to achieve goals
6. Established a dollar-cost averaging investment plan
7. Increased the amount of money invested monthly
8. Investigated specific investments (e.g., prospectus)
9. Purchased one or more new investments
10. Investigated investments available through employer
11. Determined my federal marginal tax bracket
12. Used one or more new investor resources (e.g., books, magazines Websites)
13. Joined or started an investment club
14. Consulted one or more financial professionals

15. Learned more about investment fraud

To achieve this purpose, the following previously identified objectives were analyzed:

1. Identify demographics of course participants, including age, educational level, gender, ethnicity, marital status, household income and state of residence.
2. Explore the usefulness of eleven-unit course, participants' previous experience with investing and overall assessment of the course.
3. Identify course participants Transtheoretical Model of Change (Prochaska, 1979) stage after participation in *Investing For Your Future* (O'Neill et al., 2000), and identify any correlations between stage and demographics.
4. Examine participants' feedback regarding features to be deleted or added and to determine the overall usefulness of the course.

Research Questions

The research questions used to guide this study are:

- RQ1: As a result of completing the home study course *Investing For Your Future* (O'Neill et al., 2000), do consumers improve personal financial behaviors based on the Transtheoretical Model of Change (Prochaska, 1979)?
- RQ2: How do the survey results from this study compare to the previous study completed in 2001 by O'Neill (2003)?

This results section will also indicate if hypotheses were supported. Hypotheses for this study include:

1. *Investing for Your Future* (O'Neill et al., 2000) course participants will have high education levels and high-level incomes in comparison to the average American adult.
2. Participants will rate the *Investing for Your Future* (O'Neill et al., 2000) course as valuable to them.
3. *Investing for Your Future* (O'Neill et al., 2000) course participants will have increased their savings after completing the course.
4. As a result of participation in *Investing for Your Future* (O'Neill et al., 2000), participants will have improved their personal investing behavior based on the Transtheoretical Model of Change (Prochaska, 1979). The majority of participants would move into the desired staged of action or maintenance stage for each of the individual investing behaviors after completing the course.

This section reports the analytical results for each of these objectives. As of April 25, 2005, there were 51 responses to the online survey. Out of the 708 course registrants in the final sample, this is only a 7.2 % response rate. This low response rate can be attributed to many factors, which will be discussed in the final Summary, Implications and Recommendations chapter. This low response rate may result in self-selection bias.

Sample Description

Table 3

Descriptive Statistics of the Sample of *Investing For Your Future* Participants

| | Total (%) |
|-----------------------------|-----------|
| <hr/> | |
| Age (n=50) | |
| Under 25 | 0 |
| 25-34 | 21.6 |
| 35-44 | 11.8 |
| 45-54 | 27.5 |
| 55-64 | 27.5 |
| 65-74 | 9.8 |
| Over 75 | 0 |
| Educational Level (n=51) | |
| Less than high school | 0 |
| Completed high school | 2 |
| Some College | 7.8 |
| Post-secondary trade school | 0 |
| Two year college degree | 15.7 |
| Four year college degree | 35.3 |
| Advanced degree | 39.2 |

Gender (n=50)

| | |
|--------|------|
| Male | 52.9 |
| Female | 45.1 |

Marital Status (n=50)

| | |
|------------------------------------|------|
| Single with no dependent children | 27.5 |
| Single with dependent children | 7.8 |
| Married with no dependent children | 25.5 |
| Married with dependent children | 37.3 |

Ethnicity (n=50)

| | |
|------------------|------|
| White | 62.7 |
| Hispanic | 7.8 |
| African-American | 17.6 |
| Asian | 5.9 |
| Native American | 2 |
| Other | 2 |

Household Income (n=49)

| | |
|----------------------|------|
| Under \$15,000 | 2 |
| \$15,001 - \$30,000 | 9.8 |
| \$30,001 - \$45,000 | 15.7 |
| \$45,001 - \$65,000 | 13.7 |
| \$65,001 - \$80,000 | 11.8 |
| \$80,001 - \$100,000 | 23.5 |
| Over \$100,000 | 19.6 |

Note: Any rows not totaling 100%, are due to respondents not answering that item.

Age

The demographic data collected from the answered surveys provides insight into a possible bias throughout the rest of the results. Over half of the respondents were middle aged: 21.6% were age 25 to 34, 11.8% were age 35 to 44, 27.5% were age 45 –54, 27.5% were age 55 to 64, and 9.8% were age 65 to 74. None of the respondents were under 25 and none were over 75. One respondent chose not to answer this question. The median age of a U.S. Citizen in 2000 was 35.3 years old, and the largest age group (16%) is between ages 35-44 (U.S. Census Bureau, 2000). The age of participants does not represent the population of the United States.

Education Level

Respondents reported that they were predominately well educated. Ninety-eight percent had completed some post-secondary education, and every respondent had at least completed high school. Two percent had only completed high school, while 7.8% had completed some college, 15.7% completed a two year college degree and 35.3% completed a four year college degree. The highest percentage, 39.2%, had completed an advanced degree.

The most recent U.S. Census (2000) reports that, for the population over age 25, a majority, 80.4%, have graduated from high school and approximately a quarter, 24.4%, have a bachelor's degree or higher, so this quarter of the population may be more likely than the other three-quarters to use financial education programs. The Census reported that 28.6% had obtained their high school diploma, 27.3% had some college or a two-

year degree (with no report of trade schools), and 24.4% had a four-year degree of advanced college degree (U.S. Census Bureau, 2000). Therefore the sample has more education compared to the United States population.

Gender & Marital Status

One respondent chose not to specify gender, however the remaining respondents were 45.1% male and 52.9% female. The 2000 Census reported that 48.15% of the population is male while the other 51.85% is female, close to the distribution of the survey responses (U.S. Census 2000).

One respondent also did not specify their marital status. Over a quarter, 27.5%, were single with no dependent children, while 7.8% were single with dependent children. Approximately another quarter, 25.5%, were married with no dependent children and 37.3% were married with dependent children. According to the most recent Census, 54.4% of the population is now married, while the other 45.6% (U.S. Census Bureau, 2000) is single. The sample was somewhat representative of the population; 62.8% of the respondents were married, and 35.3% were single.

Ethnicity

Again, one respondent opted out of answering the question on ethnicity. Almost two-thirds of the respondents (62.7%) were white while 7.8% were Hispanic, 17.6% were African-American, 5.9% were Asian, 2% were Native-American and another 2% identified themselves in the other category. The racial distribution of United States citizens reported by the 2000 Census was 75% were white, while .1 % were Pacific-Islander, 12.3% were African-American, 3.6% were Asian, 2% were Native-American

and another 5.5% identified themselves in the other category (U.S. Census Bureau, 2000).

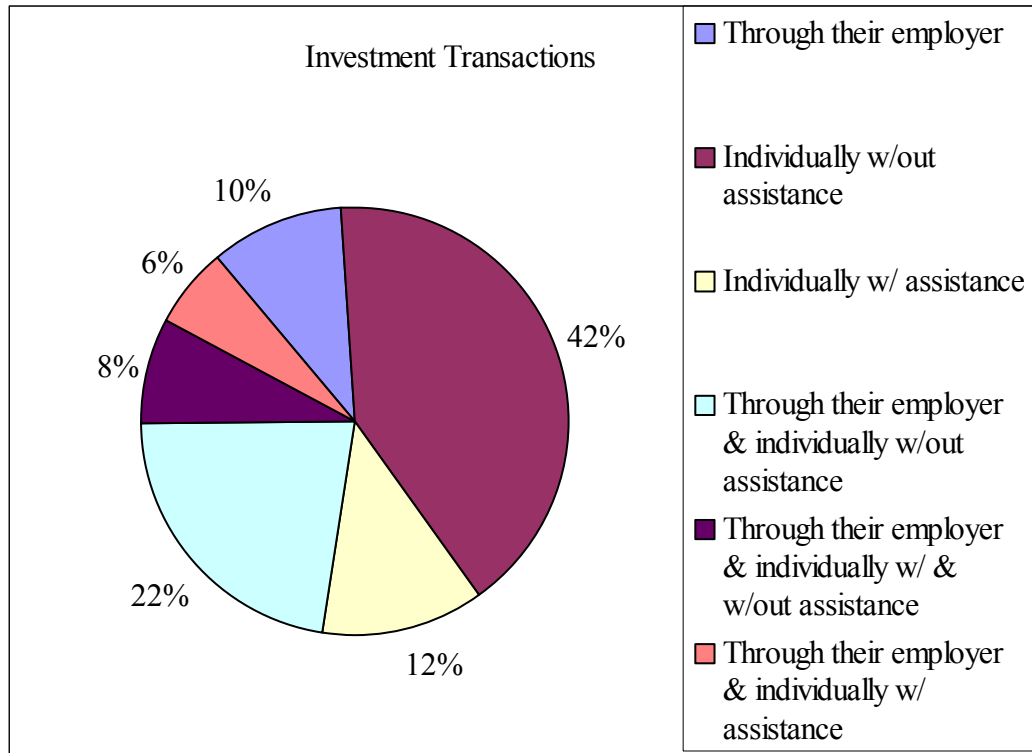
Household Income

Household incomes were predominately middle to upper income, with 15.7% earning \$30,001 to \$45,000, 13.7% earning \$45,001 to \$65,000, 11.8% earning \$65,001 to \$80,000, 23.5% earning \$80,001 to \$100,000 and 19.6% over \$100,000. Two percent earned under \$15,000 and 9.8% earned \$15,001 to \$30,000. The average income of a United States citizen is \$56,644 and the median income is \$41,994 (U.S. Census Bureau, 2000).

Transaction Preference

The final descriptive item revealed how the respondents' investment transactions were completed. As seen in Figure 1, participants primarily completed their investment transactions individually without the assistance of financial advisors. Forty-two percent complete their investment transactions individually without assistance, 22% through their employer and without assistance, 12% individually with assistance, 10% through their employer, 8% through their employer and individually with and without assistance, 6% through their employer and individually with assistance.

Figure 2. How the investment transactions are completed by *Investing For Your Future* survey respondents.



These descriptive statistics define the average respondent to be between ages 45 to 65, and therefore approaching retirement. The largest groups of respondents have advanced education, are female, white, married with dependent children, have some investing experience and have household incomes between \$80,000 and \$100,000. Compared with the US population, the respondents are more educated, have higher household incomes, and are more likely to be married.

Comparison to previous findings

These demographic characteristics are similar to O’Neill’s findings, where the typical respondent was predominately middle-aged, well educated, more likely to be female and white. They differ in that the largest portion of her respondents were married

with no dependents and with the largest percentage earning between \$30,001 to \$45,000. The most significant difference is in the income ranges, with participants in this study earning higher incomes.

Course Assessment and Evaluation

The majority of course participants rated the course positively; 37.7% rated the course “very valuable” and 47.1% rated the course as “valuable.” Only 15.7% rated the course as “somewhat valuable.”

The largest group of respondents (43.1%) reported ‘some’ prior experience with investing. The second largest group, 27.5% had ‘a little’ experience with investing and the third largest group, 17.6% had ‘a lot’ of experience. The smallest group, 11.8% represented those who rated their prior experience with investing as ‘none.’

Of the 51 respondents, the most frequently reported assessment of the level of the content of the course was ‘basic (some new information)’ representing 68.6% of the sample. Another 27.5% of respondents reported the course to be ‘somewhat advanced (did not understand some topics).’ Only 3.9% reported the course to be ‘very basic (very little new information)’ and no one reported the course to be ‘very advanced (did not understand very much).’

Since completing *Investing For Your Future*, 62.7% of the respondents have increased their savings; thus 37.3% have not increased their savings. This was down slightly from the 70% from the previous respondents (O’Neill, 2000) that reported they had saved or invested. Overall, responses to the course assessment and evaluation were similar to the previous course evaluation responses (O’Neill, 2003).

Results of Statistical Analysis

Chi-square tests and correlations were completed to investigate differences between overall course rating, assessment level of the course content, and respondent's prior investment experience. This test was conducted to explore any associations between the defined variables. Due to limited responses, the data were recoded to combine responses into fewer categories.

The chi-square tests (Table 4) indicated an association between the assessment level of *Investing For Your Future* (O'Neill et al., 2000) and prior experience with investing, based on $\alpha=.01$. Pearson's Chi-square was reported as 8.4 with a p-value = .004. There is a negative correlation between level and experience (-.406). This indicates that those with more previous investing experience tended to rate the course assessment level as very basic to basic.

Table 4

Chi-Square Analysis of Assessment Level Investing For Your Future (O'Neill et al., 2000) by Prior Investment Experience (N=51)

| Investment Experience | Assessment Level of Course | | |
|-----------------------|----------------------------|-------------------|-------|
| | Very Basic to Basic | Somewhat Advanced | Total |
| <hr/> | | | |
| None to a little | | | |
| Frequency | 10 | 10 | 20 |
| Percent | 19.6 | 19.6 | 39.2 |
| Row Percent | 50 | 50 | 100 |
| Column Percent | 27 | 71.4 | 39.2 |

Some to a lot

| | | | |
|----------------|------|-------|------|
| Frequency | 27 | 4 | 31 |
| Percent | 52.9 | 7.8 | 60.8 |
| Row Percent | 87.1 | 12.9 | 100 |
| Column Percent | 73 | 28.6 | 60.8 |
| Total | | | |
| Frequency | 37 | 14 | 51 |
| Percent | 72.5 | 27.5 | 100 |
| Row Percent | 72.5 | 27.5 | 100 |
| Column Percent | 100 | 100 | 100 |
| Statistic | DF | Value | Prob |
| Chi-Square | 1 | 8.4 | .004 |

Chi-square tests did not reveal any significant relationships between overall rating of the course and previous investing experience. There was also no significant relationship identified between overall rating and assessment level in this study. Chi-square tests from the previous course evaluation found an association between the overall evaluation of the course and assessment of the content (O'Neill, 2003). Previous respondents who assessed the course level as somewhat advanced or very advanced were more likely than others to rate the course as very valuable (60% vs. 40%). This study had no respondents assess the level as very advanced, had more respondents with a lot of experience, which as indicated above rate the course as basic to very basic.

Behavior Change Analysis

The responses to each of the 15 investing behaviors were evaluated to establish which stage they are in by responses “did before the course,” “did more than six months ago,” “did within the last six months,” “plan to do within one month,” “plan to do within six months,” or “don’t plan to do.” The data were recoded to analyze these stages. All participants were in one of five distinct stages: (a) *precontemplation*, (b) *contemplation*, (c) *preparation*, (d) *action*, and (e) *maintenance*.

1. *Precontemplation* - Respondents were identified in this stage if they responded, “don’t plan to do.”
2. *Contemplation* – Respondents were categorized in this stage, if they respond “plan to do within six months.”
3. *Preparation* – Participants were considered to be in this third stage if they answered “plan to do within one month.”
4. *Action* – Participants were considered in this stage if they answered “did within the past six months.”
5. *Maintenance* – Participants were considered in the final stage if they answered “did before the course” or “did more than six months ago.”

Percentages of respondents identified in stages for each of the fifteen investing behaviors are shown in Table 5. Strictly based on the frequency percentages in Table 5, it appears that after participating in the course, except for joining an investment club, the majority of respondents were in the action and maintenance stages. This was similar to the previous course evaluation which reported that only 2.8% of the respondents did this action, and 79.1% did not plan to join an investment club (O’Neill, 2003). It is possible

that respondents were not in the action or maintenance stage for joining an investment club because they do not have the time to commit to this investing action, or may not desire to join an investment club.

Table 5

Transtheoretical Model of Change (Prochaska, 1979) Stages for Investing Behaviors

| Investing Behavior | Stage of Change (%) | | | | |
|------------------------------|---------------------|---------------|-------------|--------|-------------|
| | Precontemplation | Contemplation | Preparation | Action | Maintenance |
| 1. Reduced expenses | 5.9 | 9.8 | 7.8 | 15.7 | 58.8 |
| 2. Established Emer. Fund | 2 | 5.9 | 9.8 | 5.9 | 76.5 |
| 3. Calc. net worth | 5.9 | 13.7 | 0 | 17.6 | 60.8 |
| 4. Set specific goals | 11.8 | 11.8 | 3.9 | 21.6 | 51 |
| 5. Det. \$ Amt for goals | 7.8 | 9.8 | 0 | 25.5 | 56.9 |
| 6. Estab. \$-cost Avg plan | 25.5 | 17.6 | 3.9 | 7.8 | 43.1 |
| 7. Inc. \$ invested monthly | 17.6 | 17.6 | 11.8 | 17.6 | 35.3 |
| 8. Investigated investments | 13.7 | 11.8 | 0 | 15.7 | 56.9 |
| 9. Purch new investment(s) | 23.5 | 19.6 | 5.9 | 21.6 | 29.4 |
| 10. Investigate emp. invest. | 19.6 | 2 | 2 | 7.8 | 66.7 |
| 11. Det fed mar tax bracket | 15.7 | 7.8 | 3.9 | 9.8 | 58.8 |
| 12. Use new inv. resource(s) | 5.9 | 11.8 | 2 | 23.5 | 54.9 |
| 13. Join/start invest club | 72.5 | 11.8 | 2 | 0 | 9.8 |
| 14. Consult fin professional | 27.5 | 7.8 | 5.9 | 17.6 | 39.2 |
| 15. Learn about inv fraud | 13.7 | 11.8 | 5.9 | 29.4 | 39.2 |

Note: Any rows not totaling 100%, are due to respondents not answering that item.

For further statistical analysis the data had to be recoded again, and combined into smaller categories in order to enforce statistical validity. The Transtheoretical Model of Change (Prochaska, 1979) stages were examined by looking at Precontemplation, Contemplation to Preparation, and Action to Maintenance. It was also important to distinguish which participants were in the desired stage of Action or Maintenance, and which actually did the behavior before the course, as seen in Table 6. Roughly a quarter reported engaging in the investment behavior after participating in the course.

Determining which respondents were in the desired stages of Action or Maintenance after course participation was important to show applicability of the Transtheoretical Model of Change (Prochaska, 1979). This reaffirms the successful applicability of the model to financial behavior previously shown by Xiao, et al (2004) and Shockey and Seiling (2004).

Table 6

Transtheoretical Model of Change (Prochaska, 1979) Stages for Investing Behaviors

| Investing Behavior | Desired Stage of Action or Maintenance (%) | Did before the course (%) | Did after the course (%) |
|-----------------------------|--|---------------------------|--------------------------|
| 1. Reduced expenses | 74.5 | 49 | 25.5 |
| 2. Established Emer. Fund | 82.4 | 56.9 | 25.5 |
| 3. Calc. net worth | 78.4 | 49 | 29.4 |
| 4. Set specific goals | 72.5 | 43.1 | 29.4 |
| 5. Det. \$ Amt for goals | 82.4 | 43.1 | 39.2 |
| 6. Estab. \$-cost Avg plan | 51 | 35.3 | 15.7 |
| 7. Inc. \$ invested monthly | 52.9 | 23.5 | 29.4 |

| | | | |
|------------------------------|------|------|------|
| 8. Investigated investments | 72.5 | 33.3 | 39.2 |
| 9. Purch new investment(s) | 51 | 15.7 | 35.3 |
| 10. Investigate emp. invest. | 74.5 | 66.7 | 7.8 |
| 11. Det fed mar tax bracket | 68.6 | 51 | 17.6 |
| 12. Use new inv. resource(s) | 78.4 | 45.1 | 33.3 |
| 13. Join/start invest club | 9.8 | 5.9 | 3.9 |
| 14. Consult fin professional | 56.9 | 35.3 | 21.6 |
| 15. Learn about inv fraud | 68.6 | 25.5 | 43.1 |

Chi-Square tests were conducted to examine possible relationships between demographic variables and investing behavior stages. Four significant relationships were identified.

The first significant relationship was between education level and the first investment behavior, reducing expenses to find money to invest. Education was combined into two categories, those with education through a 2-year degree and those with at least a 4-year degree (Table 7). Based on $\alpha = .01$, a positive relationship was identified with a significance of .292 and a p-value of .038. This positive relationship suggests that after participating in *Investing For Your Future*, those with higher levels of education are more likely to be in the action or maintenance stage of reducing expenses to have money to invest. This supports the Employee Benefit Research Institute et al. (2005) report that education level tends to be a major determinant in whether consumers save or invest.

Table 7

Chi-Square Analysis of Transtheoretical Model of Change (TTM) (Prochaska, 1979)

stages for reducing expenses to find money to invest by education level (N=51)

| TTM Stage for | Education Level | | |
|----------------------------------|-------------------------|--------------------------|-------|
| Reducing expenses | Through a 2-year degree | At least a 4-year degree | Total |
| Precontemplation | | | |
| Frequency | 2 | 1 | 3 |
| Expected | .8 | 2.2 | 3 |
| Percent | 3.9 | 2.0 | 5.9 |
| Row Percent | 66.7 | 33.3 | 100 |
| Column Percent | 15.4 | 2.6 | 5.9 |
| Contemplation/Preparation | | | |
| Frequency | 5 | 4 | 9 |
| Expected | 2.3 | 6.7 | 9 |
| Percent | 9.8 | 7.8 | 17.6 |
| Row Percent | 55.6 | 44.4 | 100 |
| Column Percent | 38.5 | 10.5 | 17.6 |
| Action/Maintenance | | | |
| Frequency | 6 | 32 | 38 |
| Expected | 9.7 | 28.3 | 38 |
| Percent | 11.8 | 62.7 | 74.5 |
| Row Percent | 15.8 | 84.2 | 100 |
| Column Percent | 46.2 | 84.2 | 74.5 |

| | | | |
|----------------|------|------|-----|
| Total | | | |
| Frequency | 13 | 38 | 51 |
| Expected | 13 | 38 | 51 |
| Percent | 25.5 | 74.5 | 100 |
| Row Percent | 25.5 | 74.5 | 100 |
| Column Percent | 100 | 100 | 100 |

| Statistic | DF | Value | Prob |
|------------|----|-------|------|
| Chi-Square | 3 | .292 | .038 |

The second statistically significant relationship identified was between the investing behavior, investigated investments available through employer and education level. For statistical validity, education level was combined into two categories. Chi-square tests revealed a positive relationship at $\alpha = .01$, with a significance of .290 and a p-value of .039 (Table 8). This positive relationship suggests that after participating in *Investing For Your Future* (O'Neill et al., 2000), those with higher levels of education are more likely to be in the action or maintenance stage of investigating investments available through their employer. It is possible that those with higher levels of education are more likely to work in a career that has investments available through their employer.

Table 8

Chi-Square Analysis of Transtheoretical Model of Change (TTM) (Prochaska, 1979)

stages for investigated investments available through employer by education level

(N=51)

| TTM Stage for investigating employer investments | Education Level | | |
|---|-------------------------|--------------------------|-------|
| | Through a 2-year degree | At least a 4-year degree | Total |
| Precontemplation | | | |
| Frequency | 4 | 6 | 10 |
| Percent | 7.8 | 11.8 | 19.6 |
| Row Percent | 40 | 60 | 100 |
| Column Percent | 30.8 | 15.8 | 19.6 |
| Contemplation/Preparation | | | |
| Frequency | 1 | 1 | 2 |
| Percent | 2 | 2 | 3.9 |
| Row Percent | 50 | 50 | 100 |
| Column Percent | 7.7 | 7.7 | 3.9 |
| Action/Maintenance | | | |
| Frequency | 7 | 31 | 38 |
| Percent | 13.7 | 60.8 | 74.5 |
| Row Percent | 18.4 | 81.6 | 100 |
| Column Percent | 53.8 | 81.6 | 74.5 |
| Total | | | |
| Frequency | 13 | 38 | 51 |

| | | | |
|----------------|------|-------|------|
| Percent | 25.5 | 74.5 | 100 |
| Row Percent | 25.5 | 74.5 | 100 |
| Column Percent | 100 | 100 | 100 |
| Statistic | DF | Value | Prob |
| Chi-Square | 3 | .290 | .039 |

The third significant relationship identified by the chi-square tests was between the investing behavior, consulting one or more financial professional, and ethnicity. Due to the limited survey response, for statistical validity, ethnicity was combined into the two categories: White and Other. Chi-square tests revealed a negative relationship at $\alpha = .01$, with a significance of -.345 and a p-value of .013. As shown in Table 9, this negative relationship suggests that that after participating in *Investing For Your Future* (O’Neill et al., 2000), Caucasians are more likely to be in the action or maintenance stage of consulting a financial professional. This also suggests that other ethnicities are less likely to seek help from others when it comes to investing behaviors.

Table 9

Chi-Square Analysis of Transtheoretical Model of Change (TTM) (Prochaska, 1979) stages consulting one or more financial professionals by ethnicity (N=51)

| TTM Stage for consulting financial professionals | No answer | Ethnicity | | |
|--|-----------|-----------|----------|-------|
| | | White | Hispanic | Total |
| Precontemplation | | | | |

| | | | | |
|---------------------------|-----|------|------|------|
| Frequency | 0 | 7 | 7 | 14 |
| Percent | 0 | 13.7 | 13.7 | 27.5 |
| Row Percent | 0 | 50 | 50 | 100 |
| Column Percent | 0 | 21.9 | 38.9 | 27.5 |
| Contemplation/Preparation | | | | |
| Frequency | 0 | 3 | 4 | 7 |
| Percent | 0 | 5.9 | 7.8 | 13.7 |
| Row Percent | 0 | 42.9 | 57.1 | 100 |
| Column Percent | 0 | 9.4 | 22.2 | 13.7 |
| Action/Maintenance | | | | |
| Frequency | 1 | 22 | 6 | 29 |
| Percent | 2 | 43.1 | 11.8 | 56.9 |
| Row Percent | 3.4 | 75.9 | 20.7 | 100 |
| Column Percent | 100 | 68.8 | 33.3 | 56.9 |
| Total | | | | |
| Frequency | 1 | 32 | 18 | 51 |
| Percent | 2 | 62.7 | 35.5 | 100 |
| Row Percent | 2 | 62.7 | 35.3 | 100 |
| Column Percent | 100 | 100 | 100 | 100 |

| Statistic | DF | Value | Prob |
|------------|----|-------|------|
| Chi-Square | 3 | -.345 | .013 |

The final significant relationship identified between the investing behavior, and demographics was between learning about investment fraud and age. For statistical validity, age was combined into two categories, a group under age 55 and group over age 55. Chi-square tests revealed a positive relationship at $\alpha = .01$, with a significance of .321 and a p-value of .022. This relationship is shown in Table 10. The positive relationship suggests that that after participating in *Investing For Your Future* (O’Neill et al., 2000), respondents over 56 are most likely to be in the action or maintenance stage of learning about investment fraud. It also implies that respondents under 55, are not in as advanced stages of learning about investment fraud as those 56 and over. Respondents 56 years and older might be concerned about investment fraud because they are approaching or are retired and depend on their investments to support them through retirement.

Table 10

Chi-Square Analysis of Transtheoretical Model of Change (TTM) (Prochaska, 1979) stages for learning more about investment fraud by age (N=51)

| TTM Stage for learning about investment fraud | Age | | | Total |
|--|-----------|------------|-----------|-------|
| | No answer | 55 & under | 56 & over | |
| Precontemplation | | | | |
| Frequency | 0 | 6 | 1 | 7 |
| Percent | 0 | 11.8 | 2 | 13.7 |
| Row Percent | 0 | 85.7 | 14.3 | 100 |
| Column Percent | 0 | 19.4 | 5.3 | 13.7 |

Contemplation/Preparation

| | | | | |
|----------------|------|------|------|------|
| Frequency | 1 | 7 | 1 | 9 |
| Percent | 2 | 13.7 | 2 | 17.6 |
| Row Percent | 11.1 | 77.8 | 11.1 | 100 |
| Column Percent | 100 | 22.6 | 5.3 | 17.6 |

Action/Maintenance

| | | | | |
|----------------|---|------|------|------|
| Frequency | 0 | 18 | 17 | 35 |
| Percent | 0 | 35.3 | 33.3 | 68.6 |
| Row Percent | 0 | 51.4 | 89.5 | 100 |
| Column Percent | 0 | 58.1 | 33.3 | 68.6 |

Total

| | | | | |
|----------------|-----|------|------|-----|
| Frequency | 1 | 31 | 19 | 51 |
| Percent | 2 | 60.8 | 37.3 | 100 |
| Row Percent | 2 | 60.8 | 37.3 | 100 |
| Column Percent | 100 | 100 | 100 | 100 |

| Statistic | DF | Value | Prob |
|------------|----|-------|------|
| Chi-Square | 4 | .321 | .022 |

Course feedback and suggestions

The survey gathered course feedback and suggestions (Appendix K) from respondents through open-ended questions. A summary of the survey responses follows.

One respondent noted that with Social Security under attack and the fact that current actions of airline companies in regard to pensions may trickle down to other industries, it is up to each individual to finance his or her retirement. They suggest that each individual must decide how they want to live after they retire and provide the financing needed to achieve the desired lifestyle.

Many comments (Appendix K) were positive statements about the course itself, suggesting it was a nice program and good read for novice investors. Respondents stated that the course was fun and easy to follow, and ranged from basic to very detailed and more complicated. One respondent did, however, find the website to be cumbersome at times. Bonds were emphasized as a strong point, since they are often misunderstood.

Multiple respondents (Appendix K) noted that they wished they had known the information they learned at an earlier age. It was noted that the website is an excellent reference, especially since it is online, free, and updated annually. Respondents also indicated that having the website made it easy to follow the course at their own pace. Another strong point was the pyramid in the first unit, showing the financial building blocks. This visual made it easier to understand. Overall respondents praised the course with comments like informative, clear and concise.

Suggestions (Appendix K) from the respondents included a desire for more information about making selling decisions and making it slightly stronger in content. It was suggested that since it is such a good resource that it be advertised so more people know it is available. Other suggestions include: listing Black Enterprise as an option to obtain a wealth of knowledge, adding a discussion of index funds and the importance of keeping investment expenses low. One respondent suggested that there should be more

advice specific to older consumers, while another respondent suggested that there be advice specifically for younger people. Lastly it was suggested that the course be updated, since they feel the buy and hold strategy is no longer effective.

Hypotheses

Hypothesis One

The first hypothesis, which stated that *Investing for Your Future* (O'Neill et al., 2000) course participants will have obtained high education levels and earn high-level incomes in comparison to the average American adult, was supported. Respondents reported that they were predominately well educated. Ninety-eight percent had completed at least some college, and every respondent had at least completed high school. The highest percentage, 39.2%, had completed an advanced degree. In comparison, only 52.5% of the American population over age 25 has obtained at least some college, and only 84.6% of Americans over 25 have a high school degree (Stoops, 2004). The respondents' household incomes were predominately upper-middle to upper income, with over half, 54.9% earning more than \$65,001, 43.1% of the sample earns more than \$80,001 and 19.6 earning more than \$100,001. In contrast, the average American household income is \$56,644 (U.S. Census Bureau, 2000).

Hypothesis Two

The second hypothesis, which stated that results from this study will show that *Investing for Your Future* (O'Neill et al., 2000) course participants found the study to be valuable, was supported. In fact, the majority of course participants rated the course positively: 37.7% rated the course 'very valuable' and 47.1% rated the course as 'valuable.' Only 15.7% rated the course as somewhat valuable.

Hypothesis Three

The third hypothesis stated that *Investing for Your Future* (O'Neill et al., 2000) course participants would have increased their savings. This hypothesis was also supported. Over half of the respondents, 62.7% said that they have increased their savings as a result of course participation. This was not however, as high as the responses from the previous course evaluation where 70% reported saving or investing (O'Neill, 2003)

Hypothesis Four

The final hypothesis stated that as a result of participation in *Investing for Your Future* (O'Neill et al., 2000), course participants would have improved their personal investing behavior based on the Transtheoretical Model of Change (Prochaska, 1979). This hypothesis was also supported since on average, respondents were in the action or maintenance stage for fourteen of the fifteen investing behaviors, after participation in the course.

Summary

This results chapter summarized survey data analyses and reported on all of the studies objectives and hypotheses. It gave in depth analysis of statistical relationships between variables and reported percentages of pertinent data. These results effectively, supported the findings of the previous study. As a result of completing the home study course *Investing For Your Future* (O'Neill et al., 2000), consumers improved their personal financial behaviors, based on the Transtheoretical Model of Change (Prochaska, 1979). The final chapter will draw conclusions and implications from these results.

Chapter 5

Summary, Implications and Conclusions

Introduction

Today, more than ever, it is important for consumers to invest wisely to prepare for long-term financial security. Among reported motivations for saving, saving for investments has declined from 7.6% in 1992 to only 1% in 2001, according to the Federal Reserve Board's Survey of Consumer Finances (Aizcorbe, et al. 2003). This moderately rapid decline is grounds for serious concern. Also startling, over half of the 2005 Retirement Confidence Survey respondents report having less than \$50,000 in total savings and investments, while over half also report they need to accumulate at least \$250,000 for retirement, not taking into consideration other long-term financial goals (Employee Benefit Research Institute & Matthew Greenwald & Associates, Inc., 2005).

Increasing life expectancy is another reason consumers should prepare for long-term financial security. With the traditional age of retirement of 65 years old, this also means a longer retirement horizon. In 2002, the life expectancy of an American male, aged 65 was 81.6 years of age, with 16.6 potential years in retirement; a 65 year old female is expected to live to 84.5 years of age, with 19.5 potential years in retirement (Kochanek & Smith, 2004).

In 2000, Social Security started gradually increasing the age at which full retirement benefits can be paid out from 65 to 67 by the year 2022 (Social Security Administration, n.d.). Because of the large number of "Baby Boomers" set to start retiring soon and the smaller number of workers who will be financially supporting their retirement, some people say that the age at which full retirement benefits can be paid will

have to increase again. There is also speculation that future retirees will not receive the same proportion of retirement income from Social Security that current retirees get.

Further, large companies in several industries have recently dropped or significantly reduced their pension plans. United Airlines has been allowed to terminate its employee pension plans, creating the largest pension default in corporate history through bankruptcy proceedings to allow the company to continue operating (Maynard, 2005). Many Enron employees lost their retirement savings when the company failed because they had only invested in company stock (Behr & Pearlstein, 2001). Companies are also changing from pension plans to defined contribution plans, some of which are only funded by the employee contributions, others where the employer may match all or part of the employee contribution (Stone, 2005).

Retirement is the number one financial issue about which Americans worry, according to Gallup's annual Personal Finance Poll (Jones, 2005). The poll revealed that most non-retirees say they are looking forward to retirement, however, only half think they will be able to live comfortably when they retire. The expectations of retirement by those not yet retired differ from the actual experience of current retirees in a few respects. On average, those not yet retired expect to retire four years later than the average age when current retirees stopped working. Respondents to the poll also indicated that current retirees rely more on Social Security income than non-retirees anticipate relying on Social Security.

Many workers today frequently switch jobs, often taking their retirement funds with them. Unfortunately, it is not atypical for these funds to be used for goals other than retirement when consumers experience financial crunches. Also, if workers do not pay

attention to the investment tools, economic changes, etc. they may not invest their funds so they have the funding necessary in retirement years.

Since today people change careers several times during a working life, education is very important for success in today's world and, there is an on-going need for education. However, public support for higher education has declined and direct support has been replaced with greater availability of loans. Students with heavy loan repayments may have trouble setting money aside for their own retirements during the early years of their working lives, when those investments have the greatest impact due to the time value of money. Parents who want to help their children avoid extensive weight of loans at the same time that they need to invest for their own retirement may have difficulty meeting both goals.

Due to the unknown funding and increasing retirement horizon, there is a rising trend for consumers to take greater responsibility for financing their own retirement. Despite the need for long-term financial security and the potential responsibility of financing retirement and/or disability income, there has been only a slight increase in investing among Americans. The sooner consumers to begin preparing for their long-term financial security through investing, the better off they will be.

In order for consumers to prepare for long-term financial security through investing, they must be knowledgeable about investing. However, barriers keep consumers from furthering their financial education, and prevent consumers from making financial behavior changes. Barriers include lack of resources, such as time, money or inconvenience. These are just a few reasons educators are emphasizing actions to help consumers learn to better manage their finances through financial education resources.

Among these resources is the home study course, *Investing For Your Future* (O'Neill et al., 2000).

The home study course is available both online and in print, free of charge to any consumer. It was written by a consortium of six land-grant universities (Rutgers University, Cornell University, Clemson University, Virginia Tech, Michigan State University, and the University of Idaho), the U.S. Department of Agriculture Cooperative State Research, Education, and Extension Service, and the U.S. Securities and Exchange Commission. Rutgers Cooperative Extension, New Brunswick, NJ, sponsored the course with cash and/or in-kind support from participating universities and federal agencies.

The course consists of eleven main units:

12. Basic Building Blocks of Successful Financial Management
13. Investing Basics
14. Finding Money to Invest
15. Equity Investing
16. Fixed-Income Investing
17. Investing in Mutual Funds
18. Tax-Deferred Investing
19. Investing With Small Dollar Amounts
20. Getting Help: Investing Resources
21. Selecting Your Team of Financial Professionals
22. Investment Fraud

The purpose of this study was to evaluate this course, to determine if it was positively affecting the financial behavior of participants. Since the United States Department of Agriculture Cooperative State Research, Education, and Extension Service (USDA CSREES, 2004) set a major educational goal of helping people to improve their personal finance behaviors, leading to financial security in later life, this course was evaluated to see that the program contributes to fulfilling it.

The study was based on the Transtheoretical Model of Change (Prochaska, 1979), including five different stages of behavior. This study investigated at what stage of change course participants are in for certain investing behaviors since completing *Investing For Your Future* (O'Neill et al., 2000). The stages of behavior are: *precontemplation, contemplation, preparation, action* and *maintenance*. The desired stage was either the *action* or *maintenance* stage, which indicated that the investing behavior has been established.

The stages of behavior are defined as follows. A person in the *precontemplation stage* is not thinking of future needs, and not taking any actions to prepare for investing. Someone in the *contemplation stage* has set investing goals, but is not otherwise preparing to do the investing behavior. Someone in the *preparation stage* has both set goals and actively sought information about the investing behavior. An individual in the *action stage*, has not only done the preparatory actions, but has also engaged in an investing behavior. Finally, an individual in the *maintenance stage* has met the investing behavior action over an ongoing period of time.

Methodology

The quantitative survey design of this study was adapted from Dillman's *Mail and Internet Surveys* (2002). A survey questionnaire was created online (Appendix A), using multiple choice and open-ended questions. The survey was sent to the sample as a link in an email message. The population consisted of *Investing For Your Future* (O'Neill et al., 2000) online course participants from April 1, 2001 through April 11, 2005. The initial sample consisted of 1,123 people, however at least 415 members of the sample never received the survey, reducing the sample to 708 people. Upon sending out the email, many error reports were received stating that the recipient did not receive the email. Response rates for the survey were very low, and can be attributed to multiple problems.

According to a report conducted by Assurance Systems, Inc. (2002), at least 12% of emails are not properly delivered because they were identified incorrectly as unsolicited email, also known as spam. The report identified two primary causes for the non-delivery of valid emails, transient technical problems and false positives. Transient technical problems can occur during peak usage hours when email infrastructures are too overwhelmed. False positives are when the email is incorrectly identified as spam, when it is run through anti-spam filters intended to block spam. Internet service providers estimate that up to 50% of email sent today is spam and both service providers and consumers actively seek to reduce the number of spam messages received. Thus, it is unfortunately likely that many participants did not receive the email message for this reason.

Follow-up emails were sent, integrating different methods to increase response rates. Despite efforts, and an extended survey deadline, only 51 responses were obtained. This was only a 7.2% response rate.

If participants chose not to respond to the survey, they were asked to reply to the email with explanations. Two respondents said they did not recall participating in the course. Another two explained that they had not yet completed the course. One said she had intentions of going through the course but did not have time, and one that reported that she looked at the website years ago and did not remember enough to answer.

Results

The objectives of this study were:

5. Identify demographics of course participants, including age, educational level, gender, ethnicity, marital status and household income.
6. Explore the usefulness of eleven-unit course, participants' previous experience with investing and overall assessment of the course.
7. Identify course participant's behavior stage after participating in *Investing For Your Future* (O'Neill et al., 2000), and any relationships between demographic variables.
8. Examine participants' feedback regarding what features to be deleted or added and to determine the overall usefulness of the course.

The average respondent was between ages 45 to 65, and therefore approaching retirement. The largest groups of respondents have advanced education, are married with dependent children, are likely to be white and female, have some investing experience

and earn a higher than median income between \$80,000 and \$100,000. These demographic variables are similar to those of the O'Neill (2003) study.

The majority of course participants rated the course positively, 37.7% rated the course 'very valuable' and 47.1% rated the course as 'valuable.' Of the 51 respondents, the most frequently reported assessment of the level of the content of the course was 'basic (some new information)' representing 68.6% of the sample. Another 27.5% of respondents evaluated the course as 'somewhat advanced (did not understand some topics).' Over half of the respondents reported having a little or some prior experience with investing. A significant negative relationship was identified between course assessment level and prior investing experience, indicating that participants with more previous investing experience tended to rate the course assessment level as very basic.

The results indicate that the majority of respondents were in the desired stages of change, either the *action* or *maintenance* stage, which indicates that investing behavior has been established. This shows that application of the Transtheoretical Model of Change (Prochaska, 1979) can be adapted to investing behaviors.

To improve the course, respondents suggested adding more information about making selling decisions, listing Black Enterprise as a resource, providing information on index funds, and emphasizing the importance of minimizing investment expenses. There were also requests for more age targeted information, specific to those with and without debt, and suggestions to advertise the course more widely so that more consumers would know that this resource is available.

Implications and Recommendations

For Consumers

Consumer educational programs like this that are based on the Transtheoretical Model of Change (Prochaska, 1979) have potential for helping consumers change their behavior.

The average consumer might benefit more from educational resources that have shown that they can encourage specific stage changes through the Transtheoretical Model of Change (Prochaska, 1979) versus resources that have not.

Consumers should seek educational programs, such as *Investing For Your Future* (O'Neill et al., 2000), that have documented results.

For Educators

The home study course, *Investing For Your Future* (O'Neill et al., 2000) leads to behavior change. It should be promoted so that more consumers can take advantage of it.

The Transtheoretical Model of Change (Prochaska, 1979) is useful with encouraging investing behaviors, and should be used with other investing educational resources.

Spam complicates the use of on-line program evaluations, especially when the evaluation is conducted months or years after a consumer participated in an educational program. If the evaluation is intended to evaluate long-term effects, it may be helpful to maintain continuing communication with the sample so that email addresses are current and the participants maintain awareness of the program.

Similarities between demographic characteristics in the previous course evaluation also suggest that the financial education program must be marketed and made more accessible to a broader audience.

For Policy Makers

Before consumers are given more responsibility for securing their own retirement and long-term financial security, policy makers should determine the stages Americans are in for specific investing behaviors, such as saving for retirement and other long-term goals. This information should be used to determine the types of education and incentives are needed to encourage Americans to progress towards the desired stage of action or maintenance of investing behavior.

For Researchers

Advancements in technology make conducting research online very appealing for convenience, costs and other reasons. Despite literature suggesting that online survey methods offer higher response rates, this may not necessarily be true across all disciplines. Email addresses change frequently and are not portable as consumers change service providers. Spam blockers make it difficult to reach consumers. Thus, solely relying on online research methods may not be the most effective. A fellow graduate student researcher recently sent her survey to a sample of 2,000 via mail, including the option to fill out the survey online. She received 257 responses from the mailed surveys, and not a single online response. It may be best to use mixed methods of online surveys, mail and/or telephone surveys.

Evaluations should be completed shortly after the end of the educational program, instead of trying to gather the data at a much later date. If long term evaluations are

required, efforts should be undertaken to establish and maintain regular contact with participants between the end of the educational program and the time of the evaluation.

When applying the Transtheoretical Model of Change (Prochaska, 1979) to investing behavior, consider determining the stage of behavior before participation in the program, and then also determine the stage of behavior upon completion.

As DiClemente (2005) recently suggested, further testing of the Transtheoretical Model of Change is needed to validate the utility of the model and to better understand the phenomenon of intentional behavior change.

Recently de Vet, Brug, de Nooijer, Dijkstra, & de Vries, 2004 noted the need to examine stage-transition determinants. Investing behaviors should be used as a content area for this study.

A recent commentary even suggested that research be conducted to determine if there really are distinct stages, or instead an underlying continuum (Brug, et al., 2005). Research could be conducted to determine if individuals can distinguish between distinct stages of investment behavior.

Financial Professionals

Those interested in helping consumers invest should consider these findings and the stages their clientele are in to effectively advise consumers.

Summary

This chapter drew conclusions about the results, and offered implications based on the analysis of the results and course feedback. This study evaluated the home study course, *Investing For Your Future* (O'Neill et al., 2000), and determined that theoretical predictions of the Transtheoretical Model of Change (Prochaska, 1979) are applicable to

empirical evidence found from changes in investment behavior of *Investing for Your Future* (O'Neill et al., 2000) course participants. The results of this study are valuable to educators and financial professionals as they strive to help consumers learn and make financial decisions. Policy makers should consider these findings as they determine future retirement policy. Researchers should consider them in future research.

References

- Aizcorbe, A., Bledsoe, R., Fries, G., Kennickell, A., Moore, K., Wells, B. (2003, January). *Recent Changes in U.S. Family Finances: Evidence from the 1998 and 2001 Survey of Consumer Finances*. Retrieved May 14, 2005 from <http://www.federalreserve.gov/pubs/oss/oss2/2001/bull0103.pdf>.
- The American Heritage®. (2000). *Dictionary of the English Language* (4th ed.). Houghton Mifflin Company.
- Assurance Systems, Inc. (2002, October). *An Assurance Systems Brief: Avoid the Spam Filter Trap*. Retrieved May 1, 2005 from <http://www.assurancesys.com/f/avoid-spam-filter-trap.pdf>
- Axinn, N., Hall, O., & Paolucci, B. (1977). *Family Decision Making: An Ecosystem Approach*. New York, NY: John Wiley & Sons, Inc.
- Bachmann, D., Elfrink, J., & Vazzana, G. (2000). E-mail and snail mail face off in rematch. *Marketing Research*, 11(4), 10-15.
- Behr, P. & Pearlstein, S. (2001, December 2). At Enron, the Fall Came Quickly: Complexity, Partnerships Kept Problems From Public View. *The Washington Post*. p. A01. Retrieved online December 8, 2004 from <http://www.washingtonpost.com/ac2/wp-dyn/A44063-2001Dec1>.
- Brug, J., Conner, M., Harre, N., Kremers, S., McKellar, S. & Whitelaw, S. (2005). The Transtheoretical Model and stages of change: a critique; Observations by five Commentators on the paper by Adams, J. and White, M. (2004) Why don't stage-

- based activity promotion interventions work?. *Health Education Research*. 20, 2:244-258.
- Consumer's Union of U.S., Inc. (2003). E-mail spam: How to stop it from stalking you. *ConsumerReports.org*. Retrieved April 18, 2005, from http://www.consumerreports.org/main/detailv2.jsp?CONTENT%3C%3Ecnt_id=322715&FOLDER%3C%3Efolder_id=162693.
- Crandall, E., Gross, I., & Knoll, M. (1973). *Management for Modern Families (3rd ed.)*. Englewood Cliffs, NJ: Prentice-Hall, Inc.
- Cude, B., Gutter, M., Lawrence, F., & Lyons, A. (2005, June). Conducting Research Online: Challenges Facing Researchers in Family and Consumer Sciences. *Family and Consumer Sciences Research Journal*, 33(4), 341-356.
- Deacon, R. & Firebauch, F. (1988). *Family Resource Management: Principle and Applications (2nd ed.)*. Needham Heights, MA. Allyn & Bacon, Inc.
- DeBaise, C. (2005, April 20). Family Finance: When Investing, Women Tend to Err Less Often Than Men. *The Wall Street Journal*, p. D2
- de Vet, E., Brug, J., de Nooijer, J. Dijkstra, A. and de Vries, N. (2004 August). Determinants of stage transactions: a Delphi study. *Health Education Research*, 10.
- DiClemente, C.C. (2005). Conceptual Models and Applied Research: The Ongoing Contribution of the Transtheoretical Model. *Journal of Addictions Nursing*. 16, 5-12.
- Dillman, D. A. (2000). *Mail and Internet Surveys: The Tailored Design Method (2nd ed.)*. New York: John Wiley & Sons, Inc.

- Dynan, K., Skinner, J., & Zeldes, S. (2004, April). Do the Rich Save More?. *Journal of Political Economy*. 112, 397-444.
- Employee Benefit Research Institute, & Mathew Greenwald & Associates, Inc. (2005). *2005 Retirement Confidence Survey Findings*. Retrieved May 15, 2005 from <http://ebri.mxredesign.matrixgroup.net/pdf/briefspdf/0405ib.pdf>.
- Garman, E., Grable, J. & Leech, I. (1996). The Negative Impact of Employee Poor Personal Financial Behaviors on Employers. *Financial Counseling and Planning: The Journal of the Association for Financial Counseling and Planning Education*. 7, 157-168.
- Gibson, C. C., Boelter, L. A., Boyce, L. J., & LeFebvre, J. E. (1992). Teaching Consumer Credit at Home. *Journal of Extension*, 30(3), Retrieved September 19, 2004, from <http://www.joe.org/joe/1992fall/a3.html>.
- Janis, I., & Mann, L. (1977). *Decision Making*. New York: Free Press.
- Jones, L., (2002, September). Affluent Use Internet as a Resource. *Advisor Today*, 97(9), 35.
- Jones, J. M. (2005, May). Retirement Expectations, Reality Not Entirely Consistent *Retirement continues to be public's greatest financial concern*. The Gallup Organization. Retrieved May 2, 2005, from <http://www.gallup.com/poll/content/login.aspx?ci=16087>.
- Kerkman, B.C. (1998) Motivation and stages of change in financial counseling: an application of a transtheoretical model from counseling psychology. *Financial Counseling and Planning*, 9 (1), 13-20.

- Kochanek, K., & Smith B. (2004). *Deaths: Preliminary Data for 2002. National vital statistics reports; 52, 13*. Hyattsville, Maryland: National Center for Health Statistics. Retrieved online May 2, 2005, from http://www.cdc.gov/nchs/data/nvsr/nvsr52/nvsr52_13.pdf.
- Maynard, M. (2005, May 10). United Air Wins Right to Default on Its Pensions. *The New York Times*. p.A1.
- McDonald, H., & Adam, S. (2003). A comparison of online and postal data collection methods in marketing research. *Marketing Intelligence & Planning, 21(2)*, 85-95.
- O'Neill, B., Brennan, P., Christenbury, J., Fox, L., Kratzer, C., Leech, I., Philipp, K., Porter, N., Schuchardt, J., Witter, J. (2000). *Investing For Your Future: A Cooperative Extension System Basic Investing Home Study Course*. Retrieved October 1, 2004 from <http://www.investing.rutgers.edu>.
- O'Neill, B. (2001). *MONEY 2000TM Program Impact Report*. Retrieved November 10, 2004, from <http://www.rce.rutgers.edu/money/pdfs/programimpactreport.pdf>.
- O'Neill, B. (2003, June). Investing For Your Future: Feedback from and impact Upon Learners. *Journal of Extension, 41(3)*. Retrieved September 19, 2004, from <http://www.joe.org/joe/2003june/rb6.shtml>.
- Prochaska, J. O. (1979) *Systems of Psychotherapy: A Transtheoretical Analysis*. Homewood, IL: The Dorsey Press.
- Prochaska, J.O., DiClemente, C.C. & Norcross, J.C. (1992). In search of how people change: Applications to addictive behaviors. *American Psychologist, 47*, 1102-1114.

- Prochaska, J.O., Norcross, J.C. & DiClemente, C.C. (1994). *Changing for good*. New York: Avon Books.
- Prochaska, J.O., & Velicer, W.F. (1997). The transtheoretical model of health behavior change. *American Journal of Health Promotion*. 12(1), 38-48.
- Shrier, K. and Tobe, E. (n.d.). Getting Ready to Save: Applying Stages of Change Theory to Financial Education for Families with Low Income. *National Endowment for Financial Education*. Retrieved May 16, 2005 from <http://www.nefe.org/pages/shirerww.html>.
- Shockey, S S. and Seiling, S. B. (2004). Moving Into Action: Application of the Transtheoretical Model of Behavior Change to Financial Education. *Financial Counseling and Planning*, 15(1), 41-52.
- Social Security Administration. (2004, August). Fast Facts and Figures about Social Security, *Social Security Administration, Office of the Chief Actuary*. Washington, D.C. Retrieved May 17, 2005 from http://www.ssa.gov/policy/docs/chartbooks/fast_facts/2004/.
- Social Security Administration. (n.d.). *A Glossary of Social Security Terms: Full Retirement Age*. Retrieved May 23, 2005 from <http://www.ssa.gov/glossary.htm#F>.
- Spencer, S. (2004, February). *Watch Your Language!: Top Email Deliverability Tips*. *netconcepts®*. Retrieved online April 11, 2005 at <http://www.netconcepts.com/emai deliverability.htm>.
- SPSS, Inc. (2001). SPSS. (Version 11.0) [Computer software]. Chicago, IL.

- Stone, V. (2005, May 15). The Retirement You Weren't Banking On. *The Washington Post*. p. B02.
- Stoops, N. (June, 2004). *Educational Attainment in the United States: 2003*. (No. P20-550). Washington, D.C.: U.S. Census. Retrieved May 16, 2005 from <http://www.census.gov/prod/2004pubs/p20-550.pdf>.
- U.S. Census Bureau. (1999). *Income Distribution in 1999 of Households and Families: 2000*. (No. QT-P32). Washington, D.C.: Census 2000 Summary File 3, Matrices P52, P53, P54, P79, P80, P81, PCT38, PCT40, and PCT41.
- U.S. Census Bureau. (2000). *Profile of Selected Social Characteristics: 2000*. (No. DP-2). Washington, D.C.: Census 2000 Summary File 3, Matrices P52, P53, P54, P79, P80, P81, PCT38, PCT40, and PCT41.
- United States Department of Agriculture: Cooperative State Research, Education, and Extension Service (USDA CSREES). (2004). *Financial Security in Later Life: A Cooperative Extension Initiative*. Retrieved online January 20, 2005 at <http://www.csrees.usda.gov/nea/economics/fsl/fsl.html>
- Velicer, W.F., Prochaska, J.O., Fava, J.L., Norman, G.L., & Redding, C.A. (1998). Smoking cessation and stress management: Applications of the Transtheoretical Model of Behavior Change. *Homeostasis*, 38, 216-233.
- Waldrop, S. (n.d.). *Marketing Your Business Through Email: Spam Filter Words: Trigger Words That Filter Emails*. Retrieved on April 11, 2005 from http://www.internetbasedmoms.com/ezine-publishing/avoid_spam_filters.html.

Weber, E., Blais, A., & Betz, N. (2002, August). A Domain-specific Risk-attitude Scale: Measuring Risk Perceptions and Risk Behaviors. *Journal of Behavioral Decision Making*, 15, 263-290.

Xiao, J., O'Neill, B., Prochaska, J. M., Kerbel, C. M. Brennan, P., & Bristow, B. J. (2004, January). A consumer education programme based on the Transtheoretical Model of Change. *International Journal of Consumer Studies*, 28 (1), 55-65.

Xiao, J., O'Neill, B., Prochaska, J. M., Kerbel, C. M. Brennan, P., & Bristow, B. J. (2001). Application of the Transtheoretical Model of Change To Financial Behavior. *Consumer Interests Annual*, 47.

Investing For Your Future

Investing For Your Future Course Evaluation

First Name:

Last Name:

Email Address:

1.) Select your overall rating of Investing For Your Future to you personally:

- Very valuable
- Valuable
- Somewhat valuable
- Not valuable at all

2. Which best describes your assessment of the level of the content of the course:

- Very basic (very little new information)
- Basic (some new information)
- Somewhat advanced (did not understand some topics)
- Very advanced (did not understand very much)

3. Describe your prior experience with investing:

- A lot
- Some
- A little
- None

4. Please complete the following sentence: The most important investment advice I would share with a friend is ...

5. Please make any additional comments about Investing For Your Future below:

6. We would like to get to know our course participants better. Please tell us a little about yourself:

Age:

- Under 25 25-34 35-44 45-54 55-64 65-74 75 and over

Educational Level:

- Less than high school
 Completed high school
 Some college
 Post-secondary trade school
 Two year college degree
 Four year college degree
 Advanced degree

Gender:

- Male Female

Marital Status:

- Single with no dependent children
 Single with dependent children
 Married with no dependent children
 Married with dependent children

Ethnicity:

- White Hispanic African-American Asian Native American
 Other

Household Income:

- Under \$15,000
- \$15,001 - \$30,000
- \$30,001 - \$45,000
- \$45,001 - \$65,000
- \$65,001 - \$80,000
- \$80,001 - \$100,000
- Over \$100,000

7. Have you increased your savings since completing Investing For Your Future?

- Yes No

8. Please select the best choice for each of the following actions taken *after participating in the course*:

Reduced expenses to “find” money to invest

- Did before the course
- Did within the past 6 months
- Did more than 6 months ago
- Plan to do within 1 month
- Plan to do within 6 months
- Don't plan to do

Established an emergency reserve fund

- Did before the course
- Did within the past 6 months
- Did more than 6 months ago
- Plan to do within 1 month
- Plan to do within 6 months
- Don't plan to do

Calculated personal net worth and/or cash flow

- Did before the course
- Did within the past 6 months
- Did more than 6 months ago

- Plan to do within 1 month
- Plan to do within 6 months
- Don't plan to do

Set specific financial goals (with a date and cost)

- Did before the course
- Did within the past 6 months
- Did more than 6 months ago
- Plan to do within 1 month
- Plan to do within 6 months
- Don't plan to do

Determined amount of money needed to achieve goals

- Did before the course
- Did within the past 6 months
- Did more than 6 months ago
- Plan to do within 1 month
- Plan to do within 6 months
- Don't plan to do

Established a dollar-cost averaging investment plan

- Did before the course
- Did within the past 6 months
- Did more than 6 months ago
- Plan to do within 1 month
- Plan to do within 6 months
- Don't plan to do

Increased the amount of money invested monthly

- Did before the course
- Did within the past 6 months
- Did more than 6 months ago
- Plan to do within 1 month
- Plan to do within 6 months
- Don't plan to do

Investigated specific investments (e.g., prospectus)

- Did before the course
- Did within the past 6 months
- Did more than 6 months ago
- Plan to do within 1 month
- Plan to do within 6 months
- Don't plan to do

Purchased one or more new investments

- Did before the course
- Did within the past 6 months
- Did more than 6 months ago
- Plan to do within 1 month
- Plan to do within 6 months
- Don't plan to do

Investigated investments available through employer

- Did before the course
- Did within the past 6 months
- Did more than 6 months ago
- Plan to do within 1 month
- Plan to do within 6 months
- Don't plan to do

Determined my federal marginal tax bracket

- Did before the course
- Did within the past 6 months
- Did more than 6 months ago
- Plan to do within 1 month
- Plan to do within 6 months
- Don't plan to do

Used one or more new investor resources (e.g., books, magazine, websites)

- Did before the course
- Did within the past 6 months

- Did more than 6 months ago
- Plan to do within 1 month
- Plan to do within 6 months
- Don't plan to do

Joined or started an investment club

- Did before the course
- Did within the past 6 months
- Did more than 6 months ago
- Plan to do within 1 month
- Plan to do within 6 months
- Don't plan to do

Consulted one or more financial professionals

- Did before the course
- Did within the past 6 months
- Did more than 6 months ago
- Plan to do within 1 month
- Plan to do within 6 months
- Don't plan to do

Learned more about investment fraud

- Did before the course
- Did within the past 6 months
- Did more than 6 months ago
- Plan to do within 1 month
- Plan to do within 6 months
- Don't plan to do

9. Are your investment transactions completed (check all that apply):

- Through your employer
- Individually without the assistance of a financial advisor
- Individually with the assistance of a financial advisor

Submit

Appendix B




Institutional Review Board

Dr. David M. Moore
IRB (Human Subjects) Chair
Assistant Vice President for Research Compliance
CVM Phase II - Duckpond Dr., Blacksburg, VA 24061-0442
Office: 540/231-4991; FAX: 540/231-6033
email: moored@vt.edu

DATE: March 11, 2005

MEMORANDUM

TO: Irene E. Leech Apparel, Housing & Resource Mgt 0410
Amber Shahan

FROM: David Moore 

SUBJECT: **IRB Exempt Approval:** "Investigating for your future" IRB # 05-186

I have reviewed your request to the IRB for exemption for the above referenced project. I concur that the research falls within the exempt status. Approval is granted effective as of March 10, 2005.

Virginia Tech has an approved Federal Wide Assurance (FWA00000572, exp. 7/20/07) on file with OHRP, and its IRB Registration Number is IRB00000667.

cc: File

Department Reviewer: LuAnn R. Gaskill
OSP 0170

*A Land-Grant University - Putting Knowledge to Work
An Equal Opportunity/Affirmative Action Institution*

Appendix C

Date Sent: Friday, April 01, 2005 8:23 PM

From: ashahan@VT.EDU

To: INVESTINGFORYOURFUTURE <INVESTINGFORYOURFUTURE@LISTSERV.VT.EDU>

Urgent
Status: New

Subject: Investing For Your Future Course Evaluation

Message: Dear Investing For Your Future Course Participant:

Within the past three years you registered for the Cooperative Extension home study course Investing For Your Future. We request your participation in a brief online survey found at <https://survey.vt.edu/survey/entry.jsp?id=1112113571036> to evaluate the course.

All respondents who submit their survey results by the deadline of Monday, April 18, 2005 8:00 AM EST will be eligible for the random drawing of ten \$50.00 gift certificates for Amazon.com. Recipients of the awards will be informed and receive their gift certificate via email.

Please only respond to the survey one time. However, if two participants share the same email address, both should complete the survey.

Below is some specific information about this study:

1. This survey involves research about investing behavior and evaluation of the home study course, <http://www.investing.rutgers.edu/>. It is estimated that participation in this study will take approximately 15 minutes.
2. The results of this study will be used to improve the delivery of financial education throughout the Cooperative Extension System. I will also use the results to complete the thesis requirement for my Master's Degree at Virginia Tech.
3. No individual respondent will be identified by name in any report. Your responses will remain strictly confidential. The survey has no identification number and your name will never be associated with either the responses or the results.
4. Participation in the survey is strictly voluntary. By completing this questionnaire and returning it, you acknowledge your voluntary agreement to participate in this study, and you give consent for your responses to be used in data analysis.

Please answer the survey online by Monday, April 18, 2005 8:00 AM EST at <https://survey.vt.edu/survey/entry.jsp?id=1112113571036>. If you have any questions regarding this research, please feel free to call me at (540)226-2408 or send an e-mail message to ashahan@vt.edu. You may also contact my advisor, Dr. Irene Leech at (540)231-4191 or ileech@vt.edu.

Sincerely,

Amber Shahan
Virginia Tech Master's Candidate

Appendix D

Date Sent: *Friday, April 01, 2005 8:23 PM*

From: "L-Soft list server at LISTSERV.VT.EDU (1.8e)" <LISTSERV@listserv.vt.edu>

To: ashahan <ashahan@VT.EDU>

Urgent

Status: New

Subject: **INVESTINGFORYOURFUTURE: error report from CHERRY.EASE.LSOFT.COM**

Message: The enclosed message, found in the INVESTINGFORYOURFUTURE mailbox and shown under the spool ID 6390996 in the system log, has been identified as a possible delivery error notice for the following reason: "Message/Delivery-Status" body part found in the message body.

----- Forwarded Message -----

From: postmaster@cherry.ease.lsoft.com

To: owner-investingforyourfuture <owner-investingforyourfuture@LISTSERV.VT.EDU>

Subject: Undelivered mail

An error was detected while processing the enclosed message. A list of the affected recipient follows. This list is in a special format that allows software like **LISTSERV** to automatically take action on incorrect addresses; you can safely ignore the numeric codes.

--> Error description:

Error-for: 74372.466@COMPUSERVE.COM

Error-Code: 3

Error-Text: Mailer mail.mx5.COMPUSERVE.COM said:

"550 5.1.1 <74372.466@COMPUSERVE.COM>... Mailbox not found"

Error-End: One error reported.

----- Original message -----

Received: from vms.dc.lsoft.com (209.119.0.2) by cherry.ease.lsoft.com (LSMTP for Digital Unix v1.1b) with SMTP id <23.00FFB424@cherry.ease.lsoft.com>; Fri, 1 Apr 2005 20:23:05 -0500

Received: from LISTSERV.VT.EDU by LISTSERV.VT.EDU (LISTSERV-TCP/IP release 1.8e) with spool id 6390989 for

INVESTINGFORYOURFUTURE@LISTSERV.VT.EDU; Fri, 1 Apr 2005 20:23:04 -0500

Received: from zidane.cc.vt.edu (IDENT:mirapoint@zidane.cc.vt.edu [198.82.161.184]) by listserv.vt.edu (8.12.10/8.12.10/LISTSERV) with ESMTP id j321N31Q993314 for <INVESTINGFORYOURFUTURE@listserv.vt.edu>; Fri, 1 Apr 2005 20:23:03 -0500

Received: from zathras (zathras.cc.vt.edu [198.82.162.117]) by zidane.cc.vt.edu (MOS 3.5.7-GR) with ESMTP id CWO19094; Fri, 1 Apr 2005 20:23:00 -0500 (EST)

X-WebMail-UserID: ashahan

X-EXP32-SerialNo: 00002216

Mime-Version: 1.0

Content-Type: text/plain; charset="ISO-8859-1"

Content-Transfer-Encoding: 7bit

X-Mailer: Infinite Mobile Delivery (Hydra) SMTP v3.62.01

X-Junkmail-Status: score=0/50, host=zidane.cc.vt.edu

Message-ID: <432D4F5F@zathras>

Date: Fri, 1 Apr 2005 20:23:00 -0500

Reply-To: ashahan@VT.EDU

Sender: InvestingForYourFuture Discussion List

<INVESTINGFORYOURFUTURE@LISTSERV.VT.EDU>

From: ashahan <ashahan@VT.EDU>

Subject: Investing For Your Future Course Evaluation

To: INVESTINGFORYOURFUTURE@LISTSERV.VT.EDU

Precedence: list

Dear Investing For Your Future Course Participant:

Within the past three years you registered for the Cooperative Extension home study course Investing For Your Future. We request your participation in a brief online survey found at <https://survey.vt.edu/survey/entry.jsp?id=1112113571036> to evaluate the course.

All respondents who submit their survey results by the deadline of Monday, April 18, 2005 8:00 AM EST will be eligible for the random drawing of ten \$50.00 gift certificates for Amazon.com. Recipients of the awards will be informed and receive their gift certificate via email.

Please only respond to the survey one time. However, if two participants share the same email address, both should complete the survey.

Below is some specific information about this study:

1. This survey involves research about investing behavior and evaluation of the home study course, <http://www.investing.rutgers.edu/>. It is estimated that participation in this study will take approximately 15 minutes.
2. The results of this study will be used to improve the delivery of financial education throughout the Cooperative Extension System. I will also use the results to complete the thesis requirement for my Master's Degree at Virginia Tech.
3. No individual respondent will be identified by name in any report. Your responses will remain strictly confidential. The survey has no identification number and your name will never be associated with either the responses or the results.
4. Participation in the survey is strictly voluntary. By completing this questionnaire and returning it, you acknowledge your voluntary agreement to participate in this study, and you give consent for your responses to be used in data analysis.

Please answer the survey online by Monday, April 18, 2005 8:00 AM EST at <https://survey.vt.edu/survey/entry.jsp?id=1112113571036>. If you have any questions regarding this research, please feel free to call me at (540)226-2408 or send an e-mail message to ashahan@vt.edu. You may also contact my advisor, Dr. Irene Leech at (540)231-4191 or ileech@vt.edu.

Sincerely,

Amber Shahan
Virginia Tech Master's Candidate

Appendix E

Date Sent: Tuesday, April 12, 2005 4:41 PM

From: Investing For Your Future <ashahan@vt.edu>

To: ashahan <ashahan@vt.edu>

Urgent

Status:

New

Subject: Investing For Your Future Course Evaluation

Message: Dear Investing For Your Future Course Participant:

Within the past three years you registered for the Cooperative Extension home study course Investing For Your Future. We request your participation in a brief online survey found at <https://survey.vt.edu/survey/entry.jsp?id=1112113571036> to evaluate the course.

All respondents who submit their survey results by the deadline of Monday, April 18, 2005 8:00 AM EST will be eligible for the random drawing of ten \$50.00 gift certificates for Amazon.com. Recipients of the awards will be informed and receive their gift certificate via email.

Please only respond to the survey one time. However, if two participants share the same email address, both should complete the survey.

Below is some specific information about this study:

1. This survey involves research about investing behavior and evaluation of the home study course, <http://www.investing.rutgers.edu/>. It is estimated that participation in this study will take approximately 15 minutes.
2. The results of this study will be used to improve the delivery of financial education throughout the Cooperative Extension System. I will also use the results to complete the thesis requirement for my Master's Degree at Virginia Tech.
3. No individual respondent will be identified by name in any report. Your responses will remain strictly confidential. The survey has no identification number and your name will never be associated with either the responses or the results.
4. Participation in the survey is strictly voluntary. By completing this questionnaire and returning it, you acknowledge your voluntary agreement to participate in this study, and you give consent for your responses to be used in data analysis.

Please answer the survey online by Monday, April 18, 2005 8:00 AM EST at <https://survey.vt.edu/survey/entry.jsp?id=1112113571036>. If you have any questions regarding this research, please feel free to call me at (540)226-2408 or send an e-mail message to ashahan@vt.edu. You may also contact my advisor, Dr. Irene Leech at (540)231-4191 or ileech@vt.edu.

Sincerely,

Amber Shahan
Virginia Tech Master's Candidate

Appendix F

Date Sent: Sunday, April 17, 2005 6:23 PM

From: ashahan@VT.EDU

To: INVESTINGFORYOURFUTURE <INVESTINGFORYOURFUTURE@LISTSERV.VT.EDU>

Urgent
Status: New

Subject: IFYF Survey - Your help is needed

Message: Anyone who has participated in any part of IFYF can help! Your responses to the Investing For Your Future Course Evaluation survey will benefit you through future Cooperative Extension programs and make you eligible for the random drawing of ten \$50.00 gift certificates for Amazon.com. If you haven't responded yet, please help by taking few minutes now to complete the survey at:

<https://survey.vt.edu/survey/entry.jsp?id=1112113571036>

The deadline has been extended to Monday, April 25, 2005 8:00 AM EST. All respondents who submit their survey results by the deadline will be eligible for the random drawing of ten \$50.00 gift certificates for Amazon.com. Recipients of the awards will be informed and receive their gift certificate via email.

If you choose not to participate in the survey, please reply to this email. Your response (which will only be seen by me), will help my thesis research if I have a better understanding of why people do not participate.

Please only respond to the survey one time. However, if two participants share the same email address, both should complete the survey.

Below is some specific information about this study:

1. This survey involves research about investing behavior and evaluation of the home study course, <http://www.investing.rutgers.edu/>. It is estimated that participation in this study will take approximately 15 minutes.
2. The results of this study will be used to improve the delivery of financial education throughout the Cooperative Extension System. Amber Shahan will also use the results to complete the thesis requirement for her Master's Degree at Virginia Tech.
3. No individual respondent will be identified by name in any report. Your responses will remain strictly confidential. The survey has no identification number and your name will never be associated with either the responses or the results.
4. Participation in the survey is strictly voluntary. By completing this questionnaire and returning it, you acknowledge your voluntary agreement to participate in this study, and you give consent for your responses to be used in data analysis.

Please answer the survey online by Monday, April 25, 2005 8:00 AM EST at <https://survey.vt.edu/survey/entry.jsp?id=1112113571036>. If you have any questions regarding this research, please feel free to call Amber Shahan at (540)226-2408 or send an e-mail message to ashahan@vt.edu. You may also contact, Dr. Irene Leech at (540)231-4191 or ileech@vt.edu.

Thanks for your help!

Sincerely,

**Amber Shahan
Virginia Tech Master's Candidate**

Appendix G

Date Sent: Monday, April 18, 2005 11:32 AM

From: Problem Report PR00229103 <4help@vt.edu>

To: ashahan <ashahan@vt.edu>

Urgent

Status:

New

Subject: RE: Problem Report PR00229103

Message: Dear Amber,

I went through the errors messages that you sent us and it looks like most of the problems are end-user problems. For example, lines 2 and 3 are problems that can only be fixed by the user themselves. "Mailbox would exceed quota" means that their mailbox is full and cannot accept anymore emails. "Mailbox temporarily disabled" means that this specific email account has been disabled. Lines like 16,17,20 and 21 are errors that indicate that the email account is not valid or does not exist anymore.

Another example are lines 7,8,9 and 10 indicate that there is a program installed on their mail server that flags messages that are similar to yours as spam and filters them out.

The only problem that indicates that some sort of email blocking is going on is line 52. That particular problem may indicate that your specific email account is being blocked. You could send an email to the people with that email address and try to contact them to see why you are being blocked.

Good luck with your thesis and have a great afternoon!!

--

Jason Blount
4Help Computer Consulting

<http://4help.vt.edu/>

Appendix H

Date Sent: Friday, April 22, 2005 8:22 AM

From: Barbara O'Neill <ashahan@VT.EDU>

To: INVESTINGFORYOURFUTURE <INVESTINGFORYOURFUTURE@LISTSERV.VT.EDU>

Urgent

Status:

New

Subject: Author Reminder - IFYF Deadline Monday April 25, 2005

Message: As Principal Author and Investigator of Investing For Your Future, I would like to thank you if you've taken the time to complete the Investing For Your Future Evaluation survey. Your responses will benefit future Cooperative Extension programs like this one. If you haven't responded yet, I encourage you to take a few minutes now to complete the survey at: <https://survey.vt.edu/survey/entry.jsp?id=1112113571036>

All respondents who submit their survey results by the deadline of Monday, April 25, 2005 8:00 AM EST will be eligible for the random drawing of ten \$50.00 gift certificates for Amazon.com. Recipients of the awards will be informed and receive their gift certificate via email.

Please only respond to the survey one time. However, if two participants share the same email address, both should complete the survey.

Below is some specific information about this study:

1. This survey involves research about investing behavior and evaluation of the home study course, <http://www.investing.rutgers.edu/>. It is estimated that participation in this study will take approximately 15 minutes.
2. The results of this study will be used to improve the delivery of financial education throughout the Cooperative Extension System. Amber Shahan will also use the results to complete the thesis requirement for her Master's Degree at Virginia Tech.
3. No individual respondent will be identified by name in any report. Your responses will remain strictly confidential. The survey has no identification number and your name will never be associated with either the responses or the results.
4. Participation in the survey is strictly voluntary. By completing this questionnaire and returning it, you acknowledge your voluntary agreement to participate in this study, and you give consent for your responses to be used in data analysis.

Please answer the survey online by Monday, April 25, 2005 8:00 AM EST at <https://survey.vt.edu/survey/entry.jsp?id=1112113571036>. If you have any questions regarding this research, please feel free to call Amber Shahan at (540)226-2408 or send an e-mail message to ashahan@vt.edu. You may also contact, Dr. Irene Leech at (540)231-4191 or ileech@vt.edu.

Sincerely,

Barbara O'Neill, Ph.D., CFP, CRPC, AFC, CHC, CFCS
Extension Specialist in Financial Resource Management
Professor II
Rutgers Cooperative Research and Extension
Cook College Office Building Room 107

**55 Dudley Road
New Brunswick, NJ 08901**

E-mail: oneill@aesop.rutgers.edu

Internet: <http://www.rce.rutgers.edu/money2000>

<http://www.investing.rutgers.edu>

Appendix I

Date Sent: Sunday, April 24, 2005 10:32 AM

From: ashahan@VT.EDU

To: INVESTINGFORYOURFUTURE <INVESTINGFORYOURFUTURE@LISTSERV.VT.EDU>

Status: Urgent
 New

Subject: Deadline tomorrow Monday April 25, 2005 8:00 AM EST - Final chance to help IFYF

Message: Please take this final opportunity to help IFYF and enter the drawing of ten \$50.00 gift certificates for Amazon.com. The deadline is tomorrow, Monday April 25, 2005 8:00 AM EST. If you have looked at ANY part of IFYF, you are eligible to participate. Your responses will benefit future Cooperative Extension programs like this one and help me graduate. If you haven't responded yet, please take a few minutes now to complete the survey at: <https://survey.vt.edu/survey/entry.jsp?id=1112113571036>

I cannot thank you enough for your completion of this survey! Your contributions will aid in research which will shape future financial educational resources and allow me to complete my degree at Virginia Tech. This final reminder is the last email to all participants, however winners of the gift certificates will be notified by email so please look out for your possible notification.

All respondents who submit their survey results by the deadline of Monday, April 25, 2005 8:00 AM EST will be eligible for the random drawing of ten \$50.00 gift certificates for Amazon.com. Recipients of the awards will be informed and receive their gift certificate via email.

Please only respond to the survey one time. However, if two participants share the same email address, both should complete the survey.

Below is some specific information about this study:

1. This survey involves research about investing behavior and evaluation of the home study course, <http://www.investing.rutgers.edu/>. It is estimated that participation in this study will take approximately 15 minutes.
2. The results of this study will be used to improve the delivery of financial education throughout the Cooperative Extension System. I will also use the results to complete the thesis requirement for my Master's Degree at Virginia Tech.
3. No individual respondent will be identified by name in any report. Your responses will remain strictly confidential. The survey has no identification number and your name will never be associated with either the responses or the results.
4. Participation in the survey is strictly voluntary. By completing this questionnaire and returning it, you acknowledge your voluntary agreement to participate in this study, and you give consent for your responses to be used in data analysis.

Please answer the survey online by Monday, April 25, 2005 8:00 AM EST at <https://survey.vt.edu/survey/entry.jsp?id=1112113571036>. If you have any questions regarding this research, please feel free to call me at (540)226-2408 or send an e-mail message to ashahan@vt.edu. You may also

contact, Dr. Irene Leech at (540)231-4191 or ileech@vt.edu.

Thank you,

Amber Shahan, Virginia Tech

Appendix J

1.) **Select your overall rating of Investing For Your Future to you personally:**

- Very valuable - 4
- Valuable - 3
- Somewhat valuable - 2
- Not valuable at all - 1
- no answer - 0

2. **Which best describes your assessment of the level of the content of the course:**

- Very basic (very little new information) - 1
- Basic (some new information) - 2
- Somewhat advanced (did not understand some topics) - 3
- Very advanced (did not understand very much) - 4
- no answer - 0

3. **Describe your prior experience with investing:**

- A lot - 4
- Some - 3
- A little - 2
- None - 1
- no answer - 0

6. **We would like to get to know our course participants better. Please tell us a little about yourself:**

Age:

- Under 25 - 1
- 25-34 - 2
- 35-44 - 3
- 45-54 - 4
- 55-64 - 5
- 65-74 - 6
- 75 and over - 7

no answer - 0

Educational Level:

- Less than high school - 1
- Completed high school - 2
- Some college - 3
- Post-secondary trade school - 4
- Two year college degree - 5
- Four year college degree - 6
- Advanced degree - 7

no answer - 0

Gender:

- Male - 1
- Female - 2

no answer - 0

Marital Status:

- Single with no dependent children - 1
- Single with dependent children - 2
- Married with no dependent children - 3
- Married with dependent children - 4

no answer - 0

Ethnicity:

- White - 1
- Hispanic - 2
- African-American - 3
- Asian - 4
- Native American - 5
- Other - 6

no answer - 0

Household Income:

- Under \$15,000 - 1
- \$15,001 - \$30,000 - 2
- \$30,001 - \$45,000 - 3
- \$45,001 - \$65,000 - 4
- \$65,001 - \$80,000 - 5
- \$80,001 - \$100,000 - 6
- Over \$100,000 - 7
- no answer - 0

7. Have you increased your savings since completing Investing For Your Future?

- Yes - 1
- No - 2

no answer - 0

8. Please select the best choice for each of the following actions taken *after participating in the course*:

Reduced expenses to "find" money to invest

- Did before the course
- Did within the past 6 months
- Did more than 6 months ago
- Plan to do within 1 month
- Plan to do within 6 months
- Don't plan to do

Established an emergency reserve fund

- Did before the course
- Did within the past 6 months
- Did more than 6 months ago
- Plan to do within 1 month
- Plan to do within 6 months
- Don't plan to do

Calculated personal net worth and/or cash flow

- Did before the course
- Did within the past 6 months
- Did more than 6 months ago
- Plan to do within 1 month
- Plan to do within 6 months
- Don't plan to do

Set specific financial goals (with a date and cost)

- Did before the course
- Did within the past 6 months
- Did more than 6 months ago
- Plan to do within 1 month
- Plan to do within 6 months
- Don't plan to do

Determined amount of money needed to achieve goals

- Did before the course
- Did within the past 6 months
- Did more than 6 months ago
- Plan to do within 1 month
- Plan to do within 6 months
- Don't plan to do

Established a dollar-cost averaging investment plan

- Did before the course
- Did within the past 6 months
- Did more than 6 months ago
- Plan to do within 1 month
- Plan to do within 6 months
- Don't plan to do

Increased the amount of money invested monthly

- Did before the course
- Did within the past 6 months
- Did more than 6 months ago
- Plan to do within 1 month
- Plan to do within 6 months
- Don't plan to do

Investigated specific investments (e.g., prospectus)

- Did before the course
- Did within the past 6 months
- Did more than 6 months ago
- Plan to do within 1 month
- Plan to do within 6 months
- Don't plan to do

Purchased one or more new investments

- Did before the course
- Did within the past 6 months
- Did more than 6 months ago
- Plan to do within 1 month
- Plan to do within 6 months
- Don't plan to do

Investigated investments available through employer

- Did before the course
- Did within the past 6 months
- Did more than 6 months ago
- Plan to do within 1 month
- Plan to do within 6 months
- Don't plan to do

Determined my federal marginal tax bracket

- Did before the course
- Did within the past 6 months
- Did more than 6 months ago
- Plan to do within 1 month
- Plan to do within 6 months
- Don't plan to do

Used one or more new investor resources (e.g., books, magazines Websites)

- Did before the course
- Did within the past 6 months
- Did more than 6 months ago
- Plan to do within 1 month
- Plan to do within 6 months
- Don't plan to do

Joined or started an investment club

- Did before the course
- Did within the past 6 months
- Did more than 6 months ago
- Plan to do within 1 month
- Plan to do within 6 months
- Don't plan to do

Consulted one or more financial professionals

- Did before the course
- Did within the past 6 months
- Did more than 6 months ago
- Plan to do within 1 month
- Plan to do within 6 months
- Don't plan to do

Learned more about investment fraud

- Did before the course
- Did within the past 6 months
- Did more than 6 months ago
- Plan to do within 1 month
- Plan to do within 6 months
- Don't plan to do

9. Are your investment transactions completed (check all that apply):

- Through your employer
- Individually without the assistance of a financial advisor
- Individually with the assistance of a financial advisor

Appendix K

Survey Respondents Comments about Investing For Your Future below:

[#2: 2005-04-02 08:15:42](#)

I seemed unable to finish the course, either due to my own time constraints or a general apprehension about the whole subject of finances

[#3: 2005-04-02 18:19:52](#)

How about more discussion about when to sell. Factors to consider when trying to make a sell decision.

[#5: 2005-04-03 00:09:41](#)

I didn't finish the entire course. I intend to get back to it eventually.

[#6: 2005-04-03 15:20:31](#)

I had it would be a little stronger in content, but I think it is a valuable tool. I think it could be advertised to the community better.

[#7: 2005-04-03 15:21:20](#)

Nice program for financial novices. I found the website to be cumbersome at times.

[#9: 2005-04-03 22:52:22](#)

A must read for all new investors.

[#12: 2005-04-05 15:02:50](#)

IT STARTS QUITE BASIC BUT DOES GO INTO DETAIL. BONDS ARE OFTEN MISUNDERSTOOD. SOME GOOD EXPLANATIONS HERE.

[#13: 2005-04-05 16:51:49](#)

It was fun and easy to follow.

[#15: 2005-04-08 01:29:09](#)

Wish I knew this earlier, at a younger age.

[#16: 2005-04-11 07:13:53](#)

no comments.

[#18: 2005-04-11 09:17:00](#)

Some things were very basic to me, while the investing part (money markets, stocks, bonds) were difficult for me. The course gave me the basic knowledge that I needed before advancing. I am now signed up for the Rutgers financial courses. Thank you!

[#21: 2005-04-11 19:09:01](#)

Although I have only looked it over, I love having it as a reference. I will be completing the course this year.

[#22: 2005-04-12 18:04:53](#)

With Social Security under attack by President Bush and his cronies, the current actions of airlines companies in regard to pensions, which may trickle down to other industries, it is up to each individual to finance his or her retirement. Each of us must decide how we want to live after we retire and provide the financing we will need to achieve the desired lifestyle.

[#25: 2005-04-17 20:22:49](#)

I thought this was a great service, and was very pleased to be able to enroll in the course at no cost. Thank you!

[#26: 2005-04-17 20:48:33](#)

Black Enterprise is not listed as an option to obtain a wealth of knowledge.

[#28: 2005-04-17 21:09:34](#)

The Investing For Your Future course is great. The information presented was clear and many useful links for additional research.

[#30: 2005-04-17 22:42:12](#)

Very well written.

[#34: 2005-04-18 10:52:18](#)

I am a CFP and work for a retirement system. I'll looking for materials that I can refer employees to that provides a good solid base of knowledge.

[#36: 2005-04-18 12:24:36](#)

I thought the pyramid showing the building blocks was great! Prior to reading IFYF, I had become aware of all the blocks illustrated in the pyramid but was unable to make sense of it all until I visualized the pyramid. Seeing where and what order to place each block made it come together for me. As a 40 something adult who in the past has made some poor financial decisions just because I did not know better and for which I am still trying to correct. I would like to state that I understand the importance of educating young people to save for their future earlier; however, there should be more advice for folks who at ages 30, 40, or 50. Who have accumulated bad debt (non-convertible to assets), have limited income, and no assets. I would like to see more solutions for folks in more realistic scenarios.

[#38: 2005-04-19 11:31:25](#)

Great course.

[#39: 2005-04-19 12:11:52](#)

I was not able to complete the course. I retired last year and found that the material was way beyond what I could digest and use.

[#40: 2005-04-22 12:45:30](#)

Investing helps everyone to improve their finances.

[#41: 2005-04-22 13:51:20](#)

It is a very valuable resource that I share with program participants. It's wonderful that it is available online and updated with the new tax tables annually.

[#43: 2005-04-22 14:37:54](#)

No discussion of index funds and the importance of keeping investment expenses low.

[#44: 2005-04-22 16:38:16](#)

Keep current - buy and hold won't work anymore

[#46: 2005-04-24 11:43:36](#)

Should be continued and should be offered to younger and younger people.

[#47: 2005-04-24 12:36:32](#)

IFYF is an excellent way for a person to become familiar with the rudiments of investing. The program is clear, concise, and coherent.

[#48: 2005-04-24 16:15:43](#)

do not rush

[#49: 2005-04-25 06:22:04](#)

I loved the website - it was very informative and I felt free to browse it without being drawn in to pay some outrageous fee.

[#51: 2005-04-25 16:19:00](#)

I printed it out a few chapters at a time to read over at home... I haven't gotten around to printing out the whole package yet

Vita

Amber Nicole Shahan was born on December 8, 1982 in Richmond, Virginia. She grew up in King George, Virginia and graduated from King George High School in 2000.

Amber graduated from Virginia Polytechnic Institute and State University in December of 2003 with her Bachelor's of Science in Housing, Interior Design and Resource Management with an emphasis on Consumer Studies and a Minor in Business. She received the Settle scholarship and the Caudill Award. She was employed at a software corporation and did an internship with the Federal Citizen's Information Center in 2003. Amber entered the Master's program in January of 2004. Through her graduate teaching assistantship assignments with Dr. Irene Leech, she supported AHRM 2404 Consumer Rights, AHRM 4404 Consumer Protection and AHRM 4415 Professionalism in Consumer Affairs. As a research assistant she worked with Dr. Celia Hayhoe, Extension Specialist. In 2004 she had an internship with the Federal Trade Commission.

While at Virginia Tech, Amber was actively involved with the American Association of Family and Consumer Sciences, American Council on Consumer Interests, the Apparel, Housing and Resource Management Graduate Council, the Graduate Student Assembly, Kappa Kappa Gamma Fraternity, Kappa Omicron Nu Honor Society, Phi Kappa Phi Honor Society, Special Olympics, Student Athlete Academic Support Services and the Virginia Tech Consumer Interest Organization.