The Impact of Financial Advice Certification on Investment Choices

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The purpose of this study is to investigate whether a professional designation affects consumer choice behavior within the area of investment decision making. Forty-six participants were endowed with real money and received hypothetical investment advice from a certified financial planner (CFP) Professional and a stockbroker. Among low-income households, advice from a CFP altered investor choice behavior within hypothetical education and retirement savings accounts. When participants made investment decisions using education funds and received advice from a CFP, the mean expected value of their investment choices was $43,913, compared to $25,870 given advice from a stockbroker. When investment decisions were made using retirement funds, the average expected value given advice from a CFP and a stockbroker was $53,424 and $33,207, respectively. If an investor was risk-neutral or risk-seeking, investment choices were improved when advice was rendered by a CFP relative to a stockbroker.

Keywords: certification, certified financial planner, fiduciary, financial advice, investments, stockbroker

The dominant model of regulation in the United States for financial advice is disclosure and unrestricted choice (Willis, 2008). Campbell (2006) documented numerous examples of suboptimal financial decisions by households, including not holding equity investments, paying high rates of interest on credit cards, and missing opportunities to refinance their mortgages. As financial products have become more complex, the need for financial advice has become increasingly apparent (Willis, 2008). Purchasing financial advice from professionals is one way for consumers to improve financial outcomes.

Individuals who pay for financial advice were more likely to be female, older, wealthier, and college-educated (Finke, Huston, & Winchester, 2011). In addition, people who sought financial help from professional sources tended to have higher levels of financial risk tolerance and exhibited better financial behaviors (Grable & Joo, 2001). Consistent with this finding that financial advice may have a positive impact on consumer behavior, research by Xiao and Porto (2016) suggest that investment and tax advice may contribute to consumer financial well-being. However, does financial advice influence choice behavior? Working with a financial advisor was related to several important financial planning activities, including setting goals, accumulation of emergency savings, retirement needs analysis, investment diversification, and retirement confidence (Marsden, Zick, & Mayer, 2011). People who relied on financial advice were more likely to plan for retirement and saved more than those who had no plan or were self-planners (Martin & Finke, 2014). Within the domain of life insurance, people who relied primarily on financial planners were more likely to have adequate life insurance coverage, whereas the use of a broker was not related to optimal levels of life insurance holdings (Finke, Huston, & Waller, 2009). Related to the demand for human capital protection, Scott and Finke (2013) found that the demand for disability insurance increased with the use of a financial planner. As it pertains to investments, clients of brokers had significantly riskier retirement portfolios than self-directed investors, and they also underperformed target-date fund benchmarks (Chalmers & Reuter, 2012).

Clients who knew their financial planner had the certified financial planner (CFP) designation were less likely to second

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guess their planner's recommendations, compared to working with a noncredentialed planner (James, 2013). However, whether CFP Professionals influence choice behavior within different financial planning topic areas remains an unanswered question. Given the breadth of products and services provided within the financial services industry, it is important for consumers and policymakers to understand the advantages and disadvantages of professional certification. In this study, we explore whether CFP Professionals influence consumer choice behavior within the area of investment decision making.

Literature Review and Hypothesis

Relevant Literature and Concepts

Financial advice is a credence service, which means that it is difficult for consumers to ascertain the value of advice even after the advice has been rendered (Bluethgen, Meyer, & Hackethal, 2008).The financial advisor (agent) has greater specific human capital within the domain of personal finance than the client (principal) in the principal–agent relationship. When there is a high degree of information asymmetry, agency costs rise for the principal (Jensen & Meckling, 1979). Agency costs include, but are not limited to, bonding and monitoring costs (Jensen & Meckling, 1979). Bonding costs are the expenses incurred by having to align the interests of the principal and agent. Monitoring involves the cost a principal incurs for having to make sure the agent is working in his or her best interest.

Absent a bonding mechanism, agents should seek to increase their personal wealth to maximize utility. The preferences of the agent may be in direct conflict with the principal. As utility maximizers, agents are interested in transferring wealth to the principal only to the extent that it generates utility for themselves. A principal who is unable to assess the differences between the agent's utility maximizing recommendation and an optimal recommendation is susceptible to rent extraction by the agent. An example of rent extraction might include an agent selling a financial product to a principal that increases the wealth of the agent, even though the product is not needed by the principal.

Agency problems in a customer relationship involving a credence service can be resolved through bonding mechanisms, which can serve as a signal (Mishra, Heide, & Cort, 1998). Certification is an example of a signal of quality (Dewally & Ederington, 2006) that provides value within the market for financial advice. For example, the Certified Financial Planner Board of Standards (2013) requires in Section 1.4 of the Rules of Conduct that all CFP Professionals "at all times place the interest of the client ahead of his or her own" (p. 15). Trust can be beneficial to both parties in a relationship because it helps to reduce agency problems. However, increased trust may also exacerbate agency problems by providing an opportunity for the planner to extract rents from the client.

The concept of trust is cross-disciplinary, incorporating ideas from economics, marketing, sociology, psychology, organization behavior, and information and decision sciences (Mukherjee & Nath, 2003). Exploring the idea of trust is relevant to the study of financial services because it has a significant effect on consumer behavior (Schurr & Ozanne, 1985). Economic transactions involve both risk (Humphrey & Schmitz, 1998) and complexity of services (Crosby, Evans, & Cowles, 1990). Gaining the trust of the consumer is particularly important in the field of investment advising because uncertainty and risk are inherent and contracts and warranties are often absent (Schlenker, Helm, & Tedeschi, 1973). Drawing on literature in social psychology and marketing, trust may be defined as perceived credibility and benevolence (Doney & Cannon, 1997). Credibility is the expectation that the exchange partner's word or written statement can be relied on (Lindskold, 1978), and benevolence is the extent to which one partner is genuinely interested in the other partner's welfare (Doney & Cannon, 1997).

Included in our conceptual framework are two theory-based methodologies to increase consumer trust—portal affiliation and expertise. Portal affiliation is based on the idea of trust transference (Lim, Sia, Lee, & Benbasat, 2006). For example, a newly established financial professional can be affiliated with a well-known portal, such as Merrill Lynch or UBS, through showing the logo of the portal conspicuously, when advertising their services through various marketing avenues. The theoretical foundation for portal affiliation is provided by Stewart (2003) where it is stated that trust can be transferred from a trusted entity to another unknown entity if the unknown entity is believed to be affiliated with the trusted entity. In short, a financial adviser without an established reputation can gain trust by aligning themselves with recognized, trusted third parties. In this research, we are using the CFP Board, the issuer of the CFP designation, as the known affiliate.

Trust that is based on the expertise of a transactional counterpart is built on the reliance of an agent's word or written statement (Lindskold, 1978). Previous marketing literature has suggested that individuals view partners with higher levels of perceived expert power as more trustworthy (Busch & Wilson, 1976). As it pertains to the financial services industry, Crosby et al. (1990) found that the perceived expertise of an insurance salesperson is a significant predictor of consumer trust. For this research, we use the CFP certification as a signal of financial planning expertise.

Conceptual Framework and Hypothesis

When investors are faced with decisions under uncertainty, the curvature of their utility function determines whether they prefer an uncertain outcome or a certain outcome. Within an expected utility framework, a risk-neutral investor is indifferent between two outcomes with equivalent expected values. An investor with a concave utility function is risk averse, and therefore, he or she will prefer a certain investment option over an uncertain investment option, given equivalent expected values. If trust differs between relationships with advisors (i.e., a broker or a CFP), it may lead to differences in investor choice behavior. An investor may be more willing to take investment risk if advice is rendered by a professional who is perceived to be more trustworthy.

Figure 1 illustrates the conceptual framework for this analysis. Portal affiliation and expertise should increase consumer trust for a CFP. We hypothesize that consumers' investment choices will be altered when they are offered hypothetical investment advice from a CFP Professional compared to a stockbroker.

Method

Experimental Design

Participants were recruited for this study using the Craigslist online classified posting service during the month of August 2014. The posted classified ad identified the study as a "risk assessment experiment at the University of Missouri" and listed the requirements to participate as being at least 30 years of age and currently living in the local area. There were no household income guidelines or restrictions stated in the ad or retroactively applied to the participants who responded to the posting and/or completed the study. The recruitment advertisement stated that participants would be asked to complete computer tasks and answer questions over a period of approximately 1 hour on a university campus. The Craigslist ad stated that payment for participation in this research study would range from $23 to $60.

When participants arrived for the experiment, they were first asked to read and sign an informed consent form. If they agreed to continue, they were offered a voluntary opportunity to fill out a questionnaire so that basic demographic and socioeconomic information could be obtained. All participants voluntarily provided this information.

To begin the experiment, the researcher guided the participant into a plainly decorated office. Participants were first endowed with $25 in cash and instructed to keep the money in their purse or pocket for the duration of the experiment. A one-page informational sheet was handed to the participant, and they were instructed to follow along as the researcher read it aloud. The informational sheet stated that "for each question, you will be shown investment options that are either for a retirement savings account or an education savings account. The investment options are recommended by a CFP or a stockbroker." Participants were asked 48 investment questions that were split into four sessions of 12 questions. The order of the four sessions was selected at random for each participant:

1. A retirement savings account with investment options being presented by a stockbroker
2. A retirement savings account with investment options being presented by a CFP

Figure 1. Conceptual framework.

3. An education savings account with investment options being presented by a stockbroker
4. An education savings account with investment options being presented by a CFP

The reason for differing accounts was that a different study, using the same data, may be conducted to investigate the potential impact of mental accounting on investment decisions. The investment horizon for every session was kept constant at 15 years. Before the start of each session, the participant was reminded about the scenario and assumptions. Figure 2 provides an example of the instructions when investment advice was provided by a stockbroker. Figure 3 shows the instructions when investment advice was given by a CFP.

E-Prime 2.0, software for computerized experimental design, data collection, and analysis, was used to program and run the experiment on a laptop computer. Participants were instructed to select either a certain investment option (no gain or loss) or an uncertain investment option, given investment advice from a stockbroker (Figure 4) or a CFP (Figure 5). Every uncertain investment option had a 50% chance of a gain and a 50% chance of a loss. All of the uncertain investment options had a positive expected value, and the investment choices ranged in monetary values from −$30,000 to $60,000. If the participant chose to accept the uncertain investment option, the E-Prime 2.0 software program randomly selected either a positive monetary outcome or a negative monetary outcome. The expected values (outcomes) of the investment choices were not disclosed to the participants until after the experiment had concluded.

Once the experiment was completed, one of participant's four sessions was chosen at random. The participant's mean expected value of choices for the randomly selected session was multiplied by a common factor (0.00006565) to arrive at their total dollar payout. A common factor was used because of funding limitations and this specific number was chosen to maximize the available funding. The potential payouts ranged from a low of $13 to a high of $50, in addition to a $10 participation fee.

Sample Demographics
Forty-six total participants, 22 males and 24 females, were all currently living in the same U.S. state. The average

Figure 2. Example of instructions with advice from a stockbroker.

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- Please read the instructions carefully -

You will be shown a series of investment options for your
child or relative's EDUCATION SAVINGS ACCOUNT. Assume that
you have money saved in this account and that your child or
relative will not need the money for 15 years.

You will be asked whether you would invest the EDUCATION
SAVINGS ACCOUNT money in different investment options. Each
investment option has a 50% chance of a gain and a 50%
chance of a loss.

You are receiving investment advice from a STOCKBROKER. A
STOCKBROKER does NOT have a fiduciary duty to put your
interests ahead of their own.

Your cash payout at the end of the experiment may depend on
whether you accept or reject the EDUCATION SAVINGS ACCOUNT
investment options. You could earn as much as $50 or lose
money.

Press the SPACE BAR to begin.
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Figure 3. Example of instructions with advice from a certified financial planner professional.

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- Please read the instructions carefully -

You will be shown a series of investment options for your child
or relative's EDUCATION SAVINGS ACCOUNT. Assume that you have
money saved in this account and that your child or relative will
              not need the money for 15 years.

You will be asked whether you would invest the EDUCATION SAVINGS
ACCOUNT money in different investment options. Each investment
  option has a 50% chance of a gain and a 50% chance of a loss.

You are receiving investment advice from a CERTIFIED FINANCIAL
PLANNER(TM). A CERTIFIED FINANCIAL PLANNER(TM) has a fiduciary
           duty to put your interests ahead of their own.

Your cash payout at the end of the experiment may depend on
whether you accept or reject the EDUCATION SAVINGS ACCOUNT
investment options. You could earn as much as $50 or lose money.

                Press the SPACE BAR to begin.
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Figure 4. Example of investment options with advice from a stockbroker.


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This investment is for your child or relative's EDUCATION SAVINGS
                        ACCOUNT.
You are receiving investment advice from a STOCKBROKER. Using the
        keyboard, select which option you prefer.
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$50,000

$0

-$20,000

A = Do Not Accept
Investment

B = Accept
Investment (50/50
Outcome)

Figure 5. Example of investment options with advice from a certified financial planner professional.

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This investment is for your child or relative's EDUCATION SAVINGS
                          ACCOUNT.
You are receiveing investment advice from a CERTIFIED FINANCIAL
PLANNER(TM). Using the keyboard, select which option you prefer.
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                                              $50,000

        $0

                                             -$20,000


   A = Do Not Accept                     B = Accept
      Investment                     Investment (50/50
                                         Outcome)
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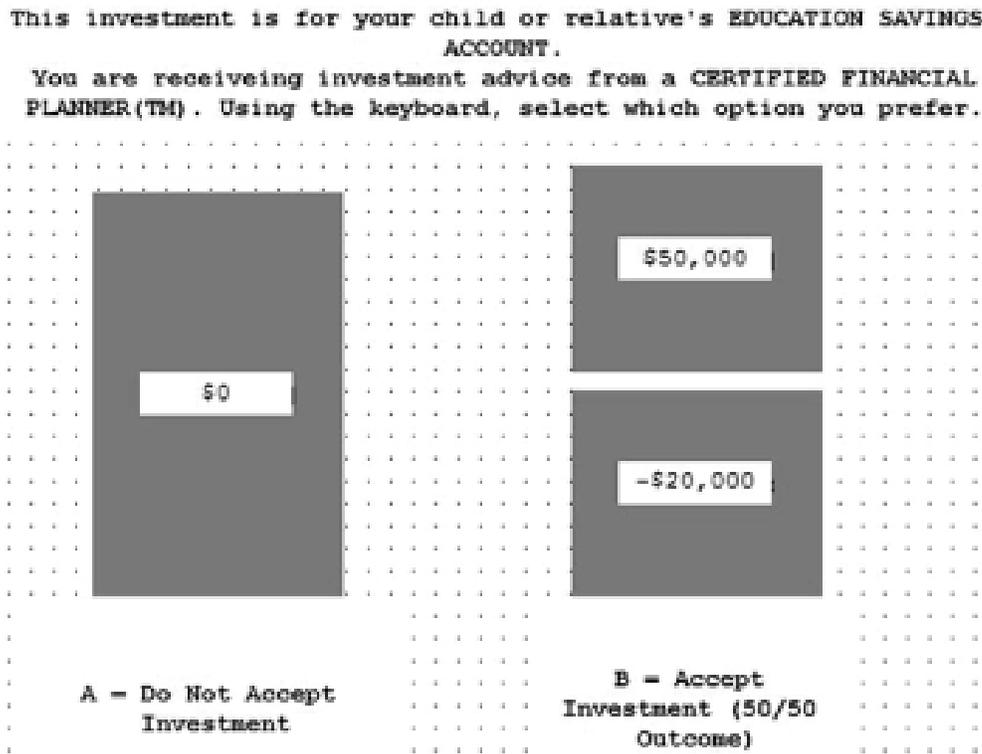
age of the participants was 41 years old with a standard deviation of 12 years. The oldest participant was 81 years old, and the youngest was 28 years old. The mean before-tax annual working income was $23,560 with a standard deviation of $24,687. The highest and lowest incomes reported were $130,000 and $0, respectively. The classification of "low-income" is used in this study as the median individual income the participants was $20,000, which was below the median income amount of a nonfamily household in 2013 (DeNavas-Walt & Proctor, 2014) Participants were also asked how much money they had saved, in total, for retirement. The average amount of retirement savings was $38,261 with a standard deviation of $95,539. The maximum and minimum amounts of retirement savings reported were $450,000 and $0, respectively.

Statistical Analysis

It is important to understand whether the data being analyzed are not normally distributed, because this would invalidate many of the interpretations and inferences derived from the use of common statistical procedures such as *t* tests or analysis of variance. Shapiro and Wilk (1965) developed the Shapiro–Wilk test to detect departures from normality. The test statistic, *W*, is obtained by dividing the square of an appropriate linear combination of the sample order statistics by the estimate of variance. The null hypothesis of the Shapiro–Wilk test is that the population is normally distributed. If the *p* value is less than our chosen alpha level of .05, then the null hypothesis is rejected and there is evidence that the data tested are not from a normally distributed population. We additionally chose to use the Shapiro–Wilk test because it was originally developed for use with a small sample size (Shapiro & Wilk, 1965). Among four common tests of normality (Shapiro–Wilk, Kolmogorov–Smirnov, Lilliefors, and Anderson–Darling), Razali and Wah (2011) showed that the Shapiro–Wilk test was the most powerful when experimenting on 10,000 samples of various sample sizes of alternative symmetric and asymmetric distributions.

For this study, the frequency of uncertain investment choices was first summed for each participant and a Shapiro–Wilk test was ran to determine whether the sample was normally distributed. An additional Shapiro–Wilk test was ran on the mean expected values of participants' investment choices. In both instances, the null hypothesis of a normal distribution was rejected at an alpha level of .05.

We did not use the well-established Wilcoxon Mann–Whitney test (U statistic) because it assumes that all observations from both groups are independent of each other (Mann & Whitney, 1947). This test would be inappropriate given that our data would be better classified as matched pairs. We further determined that it would be improper to use other paired difference tests, such as the student's t test or t test for matched pairs, because they assume there are no violations of normality (Ruxton, 2006; Zimmerman, 1997).

The non-parametric Wilcoxon signed-rank test may be utilized to determine if the average ranks of matched pairs differ significantly (Siegel, 1956). The critical z-value for the Wilcoxon signed-rank test was computed in the manner outlined by Berenson, Levine, & Krehbiel (2012). A set of difference scores, D_i, between each of the n-paired values of responses from the stockbroker set of questions and the CFP® Professional set of questions was determined:

$$D_i = X_{1i} - X_{2i}$$

where

$$i = 1, 2, \ldots, n$$
$$i = \text{individual } i$$
$$X_1 = \text{stockbroker}$$
$$X_2 = \text{CFP® Professional}$$

We then calculated the sum of the positive ranks to define the Wilcoxon test statistic, W:

$$W = \sum_{i=1}^{n'} R_i^{(+)}$$

As we are interested in exploring if there is a difference between the participant responses derived from the stockbroker and CFP® Professional question blocks. The null and alternative hypotheses for the Wilcoxon signed-rank test take the form of

$$H_o: M_D = 0$$
$$H_1: M_D \neq 0$$

where

$$M_D = \text{mean difference score}$$

As described in Berenson, Levine, and Krehbiel (2012), "because the sum of the first n' integers (1,2 . . . ,n') equals $n'(n' + 1)/2$, W ranges from a minimum of 0 (where all the difference scores are negative) to a maximum of $n'(n' + 1)/2$ (where all the difference scores are positive)." If the null hypothesis is not rejected, W is expected to be close to its mean, $\mu_w = n'(n' + 1)/4$. For this study, we incorporated an additional step given our sample size ($n = 46$). The large-sample ($n > 20$) Wilcoxon signed-ranks Z_{STAT} test statistic was derived from the following equation:

$$Z_{STAT} = \frac{W - \dfrac{n'(n' + 1)}{4}}{\sqrt{\dfrac{n'(n' + 1)(2n' + 1)}{24}}}$$

The null hypothesis was rejected if the Z_{STAT} test statistic falls within the 0.05 alpha level for a two-tailed test. A separate Z_{STAT} test statistic was calculated for the retirement accounts and education savings accounts.

Results

When investment choices were made using an education savings account, the mean, median, and standard deviation for the number of 50/50 investment choices selected were 3.5870, 3, and 2.9708 for the stockbroker group compared to 5.7609, 6, and 3.0491 for the CFP group, respectively. In comparison, the average, median, and standard deviation for the number of 50/50 investment choices selected for a retirement savings account were 4.1957, 4, and 2.8645 for the stockbroker group and 7, 6, and 3.2339 for the CFP group. When an education savings account was held constant, advice from a CFP Professional resulted in a mean expected value that was $18,043 or 69.74% higher compared to advice provided by a stockbroker. Advice from a CFP Professional

TABLE 1. Frequency of Investment Choices

Advice	Account	Mean	Median	σ	Z_{STAT}
Stockbroker	Education	3.5870	3.00	2.9708	−3.79[a]*
CFP Professional	Education	5.7609	6.00	3.0491	—
Stockbroker	Retirement	4.1957	4.00	2.8645	−4.89[b]*
CFP Professional	Retirement	7.0000	6.00	3.2339	—

Note. $n = 46$. CFP = certified financial planner.

[a]The Z_{STAT} is comparing advice between a stockbroker and CFP Professional, holding education constant.

[b]The Z_{STAT} is comparing advice between a stockbroker and CFP Professional, holding retirement constant.

*$p < .01$.

resulted in an average expected value that was $20,217 or 60.88% higher compared to advice rendered by a stockbroker in a retirement savings account. The means, medians, standard deviations, Z_{STAT}, and p values for the frequency and expected value of investment choices are provided in Tables 1 and 2, respectively.

This research was guided by the conceptual framework that portal affiliation and expertise enhance consumer trust for CFPs, which in turn may influence investors' choice behavior. The results of this study indicate that hypothetical advice from a CFP Professional, as compared to hypothetical advice from a stockbroker, alters investor choice behavior among low-income households. This suggests that a CFP Professional may be able to influence consumer choice behavior within the area of investment decision making.

Limitations and Future Research

Limitations of this study include the saliency of the CFP certification signal and a small sample size that is biased toward lower income households. In practice, the standard of care to which a financial professional is held is not always clear. Therefore, the results of this study only pertain to a situation in which the consumer is made aware of CFP certification. The small sample size of this study creates the need to investigate whether these results would be replicated with a larger number of participants. Because the participants responded to an advertisement to participant in a risk assessment study, self-selection bias is present. The relatively low mean income of participants provides an opportunity to explore whether the results of this study apply to higher income households. In addition, it may be advantageous to explicitly state that the financial professionals who

TABLE 2. Expected Value of Investment Choices

Advice	Account	Mean	Median	σ	Z_{STAT}
Stockbroker	Education	$25,870	$20,000	$24,716	−3.84[a]*
CFP Professional	Education	$43,913	$45,000	$26,080	—
Stockbroker	Retirement	$33,207	$30,000	$24,248	−4.76[b]*
CFP Professional	Retirement	$53,424	$50,000	$29,751	—

Note. $n = 46$. CFP = certified financial planner.

[a]The Z_{STAT} is comparing advice between a stockbroker and CFP Professional, holding education constant.

[b]The Z_{STAT} is comparing advice between a stockbroker and CFP Professional, holding retirement constant.

*$p < .01$.

are rendering advice receive the same compensation in future studies.

Participants' risk preferences were not measured during the experiment, so we are unable to determine whether their investment decisions improved. We may only conclude that their investment decisions were altered. Only if the participant is risk-neutral or risk-seeking may we say that their investment decisions were improved as measured by the increased expected value of their choices. Future research in this area should focus on whether a client who is receiving financial advice from a certified professional will be more likely to act on the advice given a negative expected outcome. In short, does the increased trust in the planner–client relationship fostered by certification increase the likelihood of clients acting on bad or incorrect advice? Individual participants may have conflicting perceptions of stockbrokers or individuals who hold the CFP designation. These views may have altered participants' investment choices and influenced the results of the study.

Berenson, Levine, and Krehbiel (2012) additionally define the Wilcoxon test statistic by stating "because the sum of the first n′ integers (1,2,…,n′) equals $n'(n' + 1)/2$, *W* ranges from a minimum of 0 (where all the difference scores are negative) to a maximum of $n'(n' + 1)/2$ (where all the difference scores are positive)." If the null hypothesis is true, the test statistic W is expected to take on a value close to its mean, $\mu_w = n' (n' + 1)/4$."

Structuring future research studies which isolate the effect that the fiduciary standard or other designations have on financial planning decisions may yield important results. There may be merit in focusing future research efforts around the effect that a fiduciary standard has on financial decision making. Structuring an experiment where financial advice is offered from either a financial planner or a financial planner who is held to a fiduciary standard would isolate the effect that a fiduciary standard has on consumer choice patterns. This study specifically uses CFP certification as a signal. However, other designations may induce similar effects on clients' financial decisions. For example, a study which arranges for investment options to be presented by either a financial planner or a financial planner who is a Chartered Financial Analyst

(CFA Charterholder) would allow for the isolation of the effect that the CFA Charterholder designation has on the choice patterns of investors. Designing a research project where advice is offered from either a financial planner or a financial planner who is an Accredited Financial Counselor (AFC) could help determine whether a change in consumer choice behavior is induced by the signal of the AFC.

Implications
The U.S. Department of Labor recently announced a fiduciary rule for financial advisors who offer retirement advice. Financial advisors now have to act in the best interest of clients, as opposed to doing what is suitable, when offering guidance on 401(k) assets, individual retirement arrangements or other qualified retirement assets. In the past, one of the main reasons for comprehensive financial planners and counselors to seek CFP certification was to signal to consumers that they were held to a fiduciary standard. CFP Professionals will now have to focus on marketing efforts other than the best interest standard to differentiate themselves from financial planners and counselors who do not hold the designation.

The new regulatory environment still allows anyone to call him or herself a financial planner or counselor, which can make it difficult for consumers to differentiate between advisors' competency levels. The CFP Board recently released commercials that focus on competency as opposed to the level of care that is required by CFP Professionals. The commercials highlight the fact that an advisor who calls him or herself a financial planner or counselor may actually have no financial experience whatsoever. Therefore, it is important (and rational) for consumers to seek advice from a financial planner or counselor who at least has a minimal level of competency.

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