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Abstract

This paper attempts to add to the understanding of what makes consumers more likely to become victims of fraud. More specifically, we sought to identify personal characteristics that were correlated with being more likely to become a victim. To do this, we conducted a survey using members of an Internet panel. Participants were shown two of six mock print advertisements that advertised products in one of three different product categories. The claims in three of the ads – one each for a weight-loss product, an employment opportunity, and a Caribbean vacation – were sufficiently outrageous that they would likely only be found in advertising for a fraudulent offering. The other three ads, which were for the same three products, contained only more-plausible claims for the products.

Focusing on the likely-fraudulent ads, we identified several characteristics that were correlated with a person being susceptible to consumer fraud, which was defined as being very likely to purchase the likely-fraudulent product if the ad was real or finding the likely-fraudulent ad to be very credible. These characteristics included consumer literacy, skepticism, overconfidence, taking time to think about the answer to a question rather than accepting the immediate – but actually incorrect – answer, and willingness to take risks. We also found that many of the characteristics that affect consumers' evaluations of a likely-fraudulent ad also affect their evaluations of a more-plausible ad.

It ain't what you don't know that gets you into trouble. It's what you know for sure that just ain't so.

--- *Mark Twain*[1]

Nothing is new about the problems of scams by confidence tricksters except for the scale of the problem and the ease by which international criminals and their customers can communicate.

--- *Ian Angell*[2]

As recently as the 1980s, the problem of frauds and scams was largely a local problem or one that involved the mails. Perpetrators located their victims by going door to door, mechanics misrepresented the need for repairs at the local auto repair shop, and hucksters sold their bogus goods at the county fair or sent their bogus promises through the mail. Today, fraudsters peddle mass-market frauds in a nationwide or even international market where they contact potential victims via telemarketing, infomercials on late night television, or the Internet.[3] Fraudsters located in India tell consumers who have sought out technical support on the web that their computers have 133 problems, which they can fix remotely if you will just pay their fees. Rather than being limited to going door-to-door or using the U.S. mail, purveyors of a host of bogus products can run infomercials on late night television, advertise their wares on the Internet, or place computer-generated telemarketing calls to millions of consumers in a couple of minutes.

Along with the changes in the operation of fraudsters that have been made possible by the vast improvements in communications and transport has come increased attention by law enforcement at the federal level. Starting in the 1980s, the Federal Trade Commission ("FTC") devoted significant resources to investigating and stopping those who were operating fraudulent mass-market scams. The FTC has subsequently brought hundreds of cases against such fraudsters and has devoted substantial resources to consumer education efforts designed to help consumers avoid falling victim to such scams.

Scholars have also paid increasing attention to this type of crime. This paper seeks to add to this literature and to add to our knowledge of the characteristics of consumers who are more likely to become victims of fraudulent offerings. Are consumers who are more "consumer literate" – those who have a better understanding of the working of markets and market institutions – less likely to fall victim to fraudulent offerings? Are those who are more overconfident or more willing to take risks more likely to fall victim?

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[1] http://marktwainperforms.com/quotes.html

[2] As quoted in Office of Fair Trading, United Kingdom, "Research on the Impact of Mass Marketed Scams: A Summary of Research Into the Impact of Scams on UK Consumers," OFT883, December 2006.

[3] For a discussion of scams and how they have changed over time, see Kristy Holtfreter, Shanna Van Slyke, and Thomas G. Bloomberg, "Sociolegal Change to Consumer Fraud: From Victim-Offender Interactions to Global Networks," *Crime, Law and Social Change*, 44 (October 2005), pp. 251-275. See also, Office of Fair Trading (2006).

We report on a survey of consumers who were asked to rate three measures of the credibility of mock print advertisements – the believability, truthfulness, and deceptiveness of the ads. They were also asked how likely it was that they would buy the product if they actually saw such an ad. Some of the ads used in the study were designed to be likely fraudulent while others were designed to be more plausible. Perceiving a likely-fraudulent ad as highly credible or indicating that one would be highly likely to purchase such a product are both likely precursors to becoming a victim of fraud. After evaluating the advertisements, participants were asked about several personal characteristics that might be related to becoming a victim of fraud. We assess whether these characteristics are correlated with participants' stated likelihood of purchasing the item as well as their evaluation of the credibility of the advertisement. (Because our analysis is limited to determining whether correlations are found, it important to note that the existence of such correlations does not establish that differences in the characteristic are causally related to the evaluation of the ads.)

The next section of this paper reviews previous literature on consumer fraud. Section 2 describes the survey conducted as part of the current research, while Section 3 describes the mechanics of the data collection. Section 4 provides a discussion of the participants' evaluation of the advertisements. Sections 5 and 6 describe the results of our analysis of whether the personal characteristics about which we asked are, in fact, correlated with participants' stated likelihood of purchase and their evaluation of the ads credibility. The paper concludes with a summary in Section 7.

1. Previous Literature

Research on mass-market consumer fraud can be divided into two groups. Some researchers have sought to get a better picture of the prevalence of the problem of fraud by conducting surveys that ask a random sample of consumers whether they have been a victim of fraud. Others have tried to identify consumer characteristics that are correlated with being more likely to become a victim of fraud.

The Prevalence of Fraud. Since 1990, numerous surveys have been conducted aimed at measuring the extent of consumer fraud in the United States. [4]

The first national survey of consumer fraud in the U.S. was conducted for the National Institute of Justice in 1991.[5] Asking about 21 different kinds of fraud – some that were mass-marketed and some that were more local in nature, plus a catch-all "anything else" – the survey found that 31 percent of those interviewed reported that someone had attempted to victimize them with a fraudulent offer at least once in the previous year. Thirteen percent reported that

[4] The types of frauds covered and the specific questions asked vary from survey to survey making it difficult to compare the results across surveys. In an attempt to reduce this problem, the Financial Fraud Research Center at the Stanford Center on Longevity and the FINRA Investor Education Foundation have recently undertaken a project to develop a common taxonomy of fraud and questions that can be used to measure their prevalence. See Michaela Beals, Marguerite DeLiema, and Martha Deevy, "Framework for a Taxonomy of Fraud," Stanford Center on Longevity, July 2015.

[5] See Richard M. Titus, Fred Heinzelmann, and John M. Boyle, "Victimization of Persons by Fraud," *Crime and Delinquency*, 41 (January 1995), pp. 54-72.

they had lost money as a result of being victimized by one or more of the frauds covered by the survey during the same period.

The FTC has subsequently sponsored three national surveys of fraud victimization – the first asking about consumer experiences during 2002-2003, a second covering 2007, and the most recent covering 2011.[6] These surveys focused on the types of mass-marketed consumer frauds against which the FTC brings legal actions and, more specifically, those about which it receives the greatest number of consumer complaints. Frauds covered by the surveys ranged from promoting pills that promise – but do not deliver – weight loss without diet or exercise, to promising to negotiate reductions in consumers' debts, to guaranteeing that consumers will receive a credit card if they pay an advance fee. Asking about 15 specific types of fraud and two more general types, the most recent FTC survey estimated that 10.8 percent of Americans age 18 and over had been victims of at least one of these frauds during 2011.

Another recent survey sought to measure the extent of investment fraud in the United States. This study, sponsored by the FINRA Investor Education Foundation, found that 11 percent of surveyed consumers, who were all over the age of 40, reported ever having lost a substantial amount of money from participating in one or more of the 11 types of potentially fraudulent activities about which this survey asked.[7] [8]

The United States is not the only country where the issue of the prevalence of consumer fraud has been examined. Surveys have also been conducted in Canada,[9] Australia,[10] the Netherlands,[11] and the UK.[12] Finally, a limited number of questions related to consumer fraud

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[6] Keith B. Anderson, "Consumer Fraud in the United States: An FTC Survey," Federal Trade Commission Staff Report, August 2004; Keith B. Anderson, "Consumer Fraud in the United States: The Second FTC Survey," Federal Trade Commission Staff Report, October 2007; and Keith B. Anderson, "Consumer Fraud in the United States, 2011: The Third FTC Survey," Staff Report of the Bureau of Economics, Federal Trade Commission, April 2013.

[7] FINRA Investor Education Foundation, "Financial Fraud and Fraud Susceptibility in the United States: Research Report from a 2012 National Survey," September 2013.

[8] In addition to surveys of U.S. national prevalence, surveys have examined the prevalence of fraud in specific areas of the country. In 1994, Van Wyk and Benson conducted a survey of 400 residents of Knox County, Tennessee (Judy Van Wyk and Michael Benson, "Fraud Victimization: Risky Business or Just Bad Luck?," *American Journal of Criminal Justice*, 21 (March 1997), pp. 163-179). Similarly, Holtfreter, Reisig, and Blomberg conducted a survey about fraud experiences among consumers in Florida in December 2004 and January 2005 (Kristy Holtfreter, Michael D. Reisig, and Thomas G. Blomberg, "Consumer Fraud Victimization in Florida: An Empirical Study," *St. Thomas Law Review*, 18 (2006), pp. 761-789).

[9] Competition Bureau Canada, "2007 Canadian Consumer Mass Marketing Fraud Study," Prepared by Environics Research Group, February 2008.

[10] Australian Bureau of Statistics, "4528.0 – Personal Fraud, 2007" (http://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/4528.0Explanatory%20Notes12007?OpenDocument) and "4528.0 – Personal Fraud, 2010-2011" (http://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/4528.0Explanatory%20Notes12010-2011?OpenDocument).

[11] Netherlands Consumer Authority, "Unfair Commercial Practices (UCPs) in the Netherlands: Survey Report," Prepared by Intomart Gfk, November 2008.

have been included in the International Crime Victimization Survey ("ICVS"), which involved surveys in more than 30, largely European, countries using a common survey instrument.[13]

Characteristics of Victims of Fraud. In addition to estimating the number of victims of fraud, researchers have also sought to identify characteristics that are correlated with being a victim of consumer fraud or of being susceptible to such frauds.

In some cases, these issues have been addressed by the same research that developed estimated the extent of the problem. In their initial survey of fraud, Titus, et al., found that, of the demographic characteristics they examined, only age and education were significantly correlated with the likelihood of being a victim. Victimization declined with age, and those with the lowest and highest levels of educational attainment – had not graduated from high school or had earned a graduate degree – were least likely to be victims.

Each of the FTC surveys has also examined the correlation between fraud victimization and a variety of consumer characteristics. The most recent survey found that those who were more willing to take risks – particularly those who had engaged in risky purchasing behaviors – were more likely to have been a victim of fraud. Those who had recently experienced a serious negative life event – such as a divorce, a death in the family, or a loss of a job – were more likely to have been victims, while those who described themselves as being relatively patient had experienced less fraud. Frauds were also more likely to be experienced by those with limited numeric skills and those who reported having more debt than they could comfortably handle. The study also found that racial minorities – African Americans and Latino Americans – were more likely to be victims.

All three of the FTC surveys have shown that older consumers were less likely to have been a victim of one or more of the frauds included in the survey than were younger consumers. The most recent survey found that, while an estimated 14.3 percent of U.S. consumers between 45 and 54 were victims of one or more of the frauds included in the FTC survey in 2011, the prevalence among those over 55 is lower – 9.1 percent for those between 55 and 64, 7.3 percent for those between 65 and 74, and 6.5 percent for those 75 and over.[14]

Holtfreter, Reisig, and Pratt examined the effect of self-control and purchase practices on the likelihood of being targeted by a fraudster and on becoming a victim.[15] They found that those with less self-control – which they measured by willingness to take risks in financial

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[12] Office of Fair Trading, United Kingdom, "Research on the Impact of Mass Marketed Scams: A Summary of Research Into the Impact of Scams on UK Consumers," OFT883, December 2006.

[13] Jan van Dijk, John van Kesteren, and Paul Smit, "Criminal Victimization in International Perspective: Key Findings from the 2004-2005 ICVS and EU ICS, produced in cooperation with the United Nations Office on Drugs and Crime (UNODC) and the United Nations Interregional Crime and Justice Research Institute (UNICRI), 2007.

[14] The differences between the prevalence for each of the three older age groups and that of 45 to 54 year olds are all statistically significant at the 1 percent level or better.

[15] Kristy Holtfreter, Michael D. Reisig, and Travis Pratt, "Low Self-Control, Routine Activities, and Fraud Victimization," *Criminology* 46 (February 2008), pp. 189-230.

matters – were more likely to be victims of fraud. They also found that those who engaged in more "remote purchasing" were more likely to be victims.[16] Males and younger consumers were also significantly more likely to be victims of fraud. Similarly, studies both by Van Wyk and Benson and by Shoepfer and Piquero found that the risk of victimization increased with a person's willingness to take risks and decreased with age.[17]

A recent study by DeLiema used data from the Health and Retirement Study ("HRS"), a sample of individuals over the age of 50, to explore differences between those who answered "Yes" to a question about whether they had been a victim of fraud anytime in the past five years and those who answered "No."[18] As have others, DeLiema found that the risk of being victimized declined with age. Those with higher levels of education – some college or more – were also more likely to report having been victimized, as were those with higher levels of income and those who were widowed. Women were less likely to report having been a victim than men. Somewhat surprisingly, those who scored higher on a test of cognitive functioning were more, not less, likely to report having been a victim.[19]

Another recent study, by McAlvanah, Anderson, Letzler, and Mountjoy at the FTC, sought to examine whether certain neoclassical and behavioral economic concepts were correlated with being susceptible to a fraud.[20] Rather than analyzing actual fraud victims, this study was based on participants' evaluation of the credibility of mock print advertisements that were created to be likely-fraudulent, in the belief that finding a fraudulent ad to be credible is a likely precursor to actually falling for fraud. Using a convenience sample of university students who were willing to participate in the project, the authors found that those who were more overconfident tended to rate the likely-fraudulent ads as more credible, possibly indicating that they were more likely to fall victim to frauds. Those who were either more consumer literate or more skeptical tended to rate such ads as less credible. While these results seem consistent with our *a priori* expectations, the study also unexpectedly found that those who either exhibited

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[16] The "remote purchasing" variable in the study is equal to the number of the following purchasing practices in which the participant had engaged in previous 12 months: (i) responded to a telemarketer who represented a company with whom the consumer had not previously done business, (ii) purchased something from an Internet website, (iii) ordered a product after seeing a television advertisement or infomercial, and (iv) ordered a product after receiving an unsolicited mailing from a company with whom the consumer had not previously done business.

[17] Judy Van Wyk and Michael Benson, "Fraud Victimization: Risky Business or Just Bad Luck?," *American Journal of Criminal Justice*, 21 (March 1997), pp. 163-179 and Andrea Schoepfer and Nicole Leeper Piquerro, "Studying the Correlates of Fraud Victimization and Reporting," *Journal of Criminal Justice*, 37 (March – April 2009), pp. 209-215.

[18] Marguerite DeLiema, "Using Mixed Methods to Identify the Characteristics of Older Fraud Victims," PhD Dissertation, University of Southern California, May 2015. One possible shortcoming of this study is that participants in the HRS were left free to interpret what it meant to be a victim of fraud. This is unlike many of the other studies discussed here in which the researcher asked if the participant had specific types of experiences.

[19] The measure of cognitive function was the score from the Telephone Interview for Cognitive Status ("TICS"), which was designed to detect cognitive impairment or dementia and is administered as part of the Health and Retirement Study.

[20] Patrick McAlvanah, Keith Anderson, Robert Letzler, and Jack Mountjoy, "Fraudulent Advertising Susceptibility: An Experimental Approach," Bureau of Economics, Federal Trade Commission, Working Paper 325, April 2015.

greater cognitive reflection or had greater numeric skills tended to rate the likely-fraudulent ads as more credible.

Two other studies focused specifically on financial or investment fraud. The FINRA study found that males and consumers who were 65 or over were more likely to have lost a substantial amount of money by investing in one of 11 potentially fraudulent financial opportunities. The likelihood of having lost a substantial amount of money was highest for those with incomes between $75,000 and $100,000 and lowest for those with incomes of under $25,000. The likelihood of having lost money also increased with additional education. Looking at personality characteristics, the FINRA study found that those who lost money self-rated themselves as being more open to new aesthetic, cultural or intellectual experiences. However, differences between those who lost money and those who did not were limited in regard to how extroverted, agreeable, conscientious, or emotionally stable a person was.

The second study focused specifically on financial fraud examined fraud victimization among a generally older group of consumers – the average age of those included in this study was over 80.[21] One of the unique features of this study was that all participants received annual testing of their cognitive abilities. The authors' analysis showed that, among those whose scores on the cognitive tests declined over time, a faster rate of decline was correlated with a greater likelihood of reporting being a victim of financial fraud. In addition, the likelihood of being a victim was higher for those with higher levels of overconfidence about their financial knowledge.[22]

While different studies have looked at different characteristics that might be correlated with being a victim of fraud, age is a variable that has been included in the vast majority of these studies. Most of the studies have found that older consumers have a lower risk of becoming a victim of fraud.[23] However, there are exceptions to this general finding when one examines some specific types of fraud. Looking just at fraudulent prize promotions, including bogus foreign lotteries, the 2011 FTC survey found that those between 65 and 74 were significantly more likely to have been victims of this type of fraud than those who were younger. In addition,

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[21] Keith Jack Gamble, Patricia Boyle, Lei Yu, and David Bennett, "The Causes and Consequences of Financial Fraud Among Older Americans," Center for Retirement Research at Boston College, Working Paper CRR WP 2015-13, November 2014.

The effect of age on the likelihood of being a victim is somewhat ambiguous in this study. The authors perform separate analyses using data for different sets of individuals in analyzing the effect of cognitive decline and of overconfidence. If age is included in the analysis of the effect of cognitive decline, the result is a negative relationship between age and victimization. However, if age is included in the analysis of overconfidence, the likelihood of being a victim increases with age.

[22] The authors' measure of overconfidence is based on responses to six questions about financial knowledge. After each question, participants were asked how confident they were about the answer they had just given. The measure of overconfidence is the sum of the level of confidence about answers that were, in fact, incorrect. As a result, the measure reflects both consumers' level of knowledge and their ability to recognize when they do not know the answer to a question.

[23] In addition to the results reported in the text, Holtfreter, Reisig and Bloomberg, and the surveys in Australia, Canada and the UK also found that older consumers are less likely to have been victims.

the recent FINRA study of investment fraud found that those who were 65 and over were more likely to have lost a substantial amount of money as a result of participating in one or more of the 11 questionable investment activities included in the survey than were those who were between 40 and 64 years of age (16 percent v. 10 percent).[24]

Looking at the prevalence of the specific frauds included in the British survey by age shows similar results. While those 65 and over constituted 19 percent of the population of the UK in 2006, this age group accounted for 30 percent of those victimized by a foreign lottery scam and 36 percent of those who were victims of high risk investment scams. At the other end of the spectrum, those 65 and over were seriously under-represented in scams that involve promised returns in exchange for the victim's labor – 9 percent of victims of property investor scams, 11 percent of work-at-home scams, and 11 percent of career opportunity scams – and of scams that involve the use of the Internet – 9 percent of Internet dialer scams and 11 percent of victims of matrix scams.[25]

DeLiema found that there were two distinct populations of fraud victims in her data from the Health and Retirement Survey. She found that one group, which accounted for over 80 percent of all victims, had an average age of 59 years, was more likely to be married or living with a significant other, to have education that included at least some college, and to have relatively high incomes. The other group, accounting for just over 15 percent of fraud victims, had an average age of 75.[26] The victims in this group were often widowed, female, had not attended college, and had relatively low incomes.

In a study of fraud victims identified from lists of known victims obtained from law enforcement authorities, Pak and Shadel report similar findings.[27] The average age of victims of investment fraud was 69 years, while victims of lottery fraud had an average age of 72. In contrast, victims of business opportunity fraud had an average age of 54 and victims of advance-fee-loan fraud had an average age of 45, much closer to the average age of 47 in the general population. Pak and Shadel also found heterogeneity between victims of different frauds and the general population in other demographic dimensions. Victims of investment and business opportunity frauds tended to be more educated than the population as a whole, while lottery fraud victims had lower levels of education. Investment fraud victims were also more likely to be male, to be married or living with a significant other, and to have higher incomes than the

[24] Because the FINRA survey asked if the participant had ever been a victim, rather than asking about being a victim in a fixed period of time, such as the last year, it is possible that the finding that older consumers are more likely to have been a victim just reflects the fact that older consumers have had more time to be victimized.

[25] The data on age distributions by type of fraud is presented in Table 10.3 of the Office of Fair Trade (2006). A matrix scheme is described as an online version of a chain letter.

[26] Again, the HRS data only include consumers who are at least 50 years of age. The average age of those in DeLiema's sample was 64.5, the average age of those reporting being victims was 61.7 while non-victims had an average age of 64.6.

[27] Karla Pak and Doug Shadel, "AARP Foundation National Fraud Victim Study," AARP Research and Strategic Analysis, 2011.

population in general, while victims of lottery fraud were more likely to be single, widowed, or divorced and to have lower incomes.

2. Study Methodology

The primary focus of the present study is whether any of the personal characteristics we examine are correlated with the likelihood of falling victim to consumer fraud. The methodology we use is similar to that used by McAlvanah, et al. Fraud victimization is not directly measured. Rather, study participants were shown mock-ups of print advertisements, drawn from the set of ads created for the earlier study. They were then asked to evaluate the credibility of the ad and were also asked how likely they would be to purchase the product if the ad they viewed was an actual ad.

Mock Advertisements. The mock advertisements used in this study were based on claims that have been the focus of previous FTC cases and consumer education efforts. We used ads for three types of products – a diet product, an employment opportunity, and a vacation. For each product type, two ads were used, one that was likely fraudulent and one that was more plausible. (Copies of the six advertisements are found in Figures 1 through 6.)

The claims in the likely-fraudulent ads were ones that the FTC has previously warned consumers and the media are likely to be false or fraudulent or have been the subject of law enforcement actions by the Commission. For example, the mock ad for a likely-fraudulent weight loss pill (Figure 1) included the "too good to be true" claims that consumers would "LOSE UP TO 10 POUNDS PER WEEK," that the pill contained a "breakthrough ingredient," and that the product was "guaranteed to deliver permanent weight loss for everyone."[28] The likely-fraudulent employment-opportunity ad (Figure 3) claimed that you could earn $300 a day working part time from home by filing medical bills with insurers,[29] while the likely-fraudulent

[28] See, *e.g.*, "Gut Check: A Reference Guide for Media on Spotting False Weight Loss Claims," Federal Trade Commission, available at http://www.ftc.gov/tips-advice/business-center/guidance/gut-check-reference-guide-media-spotting-false-weight-loss (visited 12 February 2015) ("To make it easier to spot false weight loss representations … the FTC has compiled a list of seven statements in ads that experts say simply can't be true." "1. causes weight loss of two pounds or more a week for a month or more without diet or exercise; 2. Causes substantial weight loss no matter what or how much the consumer eats; 3. Causes permanent weight loss even after the consumer stops using product ….") See also Direct Marketing Association, the Federal Trade Commission, U.S. Postal Inspection Service, "Screening Advertisements: A Guide for the Media" ("Screening Advertisements"), available at http://www.ftc.gov/tips-advice/business-center/guidance/screening-advertisements-guide-media (visited 11 February 2015), p. 7 ("Despite claims to the contrary, there are no magic bullets or effortless ways to burn off fat. The only way to lose weight is to lower caloric intake and increase physical activity. **Claims for diet products or programs that promise weight loss without sacrifice or effort are bogus. And some can even be dangerous.**"

Weight loss cases have included *FTC v. Genesis Today, Inc., et al.*, No. 1:15-cv-62 (W.D. Texas, Settlement January 2015), *FTC v. Kevin Wright, HCG Platinum, LLC, et al.*, No. 2:14-cv-00258-CS (D. Utah, Settlement December 2014), and *FTC v. Sensa Products, LLC, et al.*, No. 14-cv-00072 (E.D. Illinois, Settlement January 2014.

[29] FTC cases in this area have included *FTC v. Medical Billers Network, Inc., et al*., No. 05 CV 2014 (S.D. New York, Settlement May 2009) and FTC v. *Mazzoni & Son, Inc., d/b/a EDI Healthclaims Network*, No. 06-15766 (E.D. Michigan, Settlement February 2008), while consumer education is offered at "At-Home Medical Billing Businesses," Federal Trade Commission, available at www.ftc.gov/tips-advice/business-center/guidance/home-medical-billing-businesses (visited 11 February 2015). See also "Screening Advertisements", p. 5 (Identified types of get-rich-quick schemes include medical billing services).

ad for a Cancun vacation (Figure 5) promised that consumers could "Enjoy a 4-Day, 3-Night Complimentary Luxury Resort Getaway FREE at Beautiful Regal Queen Resort" and repeats "Oh Yes! IT'S FREE."[30]

The more-plausible ads did not contain such "too good to be true" claims. For example, the more-plausible advertisement for the diet product (Figure 2) did not promise guaranteed weight loss but simply advertised foods that "help you feel full longer." The more-plausible version of the employment opportunity ad (Figure 4) just advertised a part-time job at a coffee shop paying $8 per hour, while the more-plausible vacation ad (Figure 6) eliminated the "free" claim and instead stated a plausible room rate. Including the more-plausible ads permitted us to examine whether any characteristics that are found to be correlated with participants' evaluation of the likely-fraudulent ads are similarly related to their evaluation of more-plausible ads. That is, if participants with certain characteristics view a likely-fraudulent ad unfavorably, is this because they view all ads – at least for that type of product – unfavorably, or do they recognize something in particular about the likely-fraudulent one?

Each participant viewed two of the six ads. Because we were principally interested in reactions to the likely-fraudulent ads, two-thirds of participants were randomly assigned to first view a likely-fraudulent ad while the remaining one-third first viewed a more-plausible ad. In each case, the specific ad was selected randomly from among the three likely-fraudulent or three more-plausible ads. Those who first were shown one of the more-plausible ads were shown a likely-fraudulent ad the second time around. Those who were first shown a likely-fraudulent ad had a 50-50 chance of seeing another likely-fraudulent ad or a more-plausible ad as their second one. In either case, the product in the second ad they saw was randomly selected from among the two products that had not been seen the first time. As a result, we had twice as many observations for each of the likely-fraudulent ads as for the more-plausible ones. Each participant viewed at least one likely-fraudulent ad and did not view two ads for the same product. Equal numbers of participants were shown ads for each of the three product types.

Susceptibility to Fraud: Purchase Intention and Ad Credibility. After viewing one of the six advertisements, participants were asked how much they agreed or disagreed with the following three statements – "I think the ad is believable," "I think the ad is truthful," and "I think the ad is deceptive." Participants rated the degree to which they agreed or disagreed with the statements using a 7-point Likert scale ranging from "Strongly Agree" to "Strongly Disagree." Participants were also asked how likely they would be to purchase the advertised product if they received the ad as an email or saw it as a flyer and they were interested in what the ad offered. Again, a 7-

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[30] See, *e.g.*, consumer education in : "Tripping: Free Travel Offers to Anywhere Could Take You Nowhere Fast," Federal Trade Commission Consumer Information, available at www.consumer.ftc.gov/blog/tripping-free-travel-offers-anywhere-could-take-you-nowhere-fast-0 (visited 11 February 2015) and media advice in "Screening Advertisements," p. 13 ("Fraudulent travel ads usually offer exciting opportunities at unrealistically low prices…. But ads for these 'free' or bargain-priced vacations often fail to disclose expensive 'catches' or restrictions that may render the deals worthless." Watch out for "A vacation offer accompanied by a certificate for free or very low cost travel.")

point scale, ranging from "Extremely Likely" to "Extremely Unlikely" was used for the responses.[31] [32]

Because an indication that one would purchase the product is closer to the decision that may result in being defrauded, our principal focus is on the responses to the question about the likelihood that the participant would purchase the product. Since we are most interested in those who face a significant risk of being defrauded, the principal dependent variable used in the reported analyses is a "0-1" dummy variable which is equal to "1" for those who indicated that it was very likely that they would purchase the product – *i.e.*, they rated the likelihood of buying the product at "1" or "2," on the 7-point scale, where "1" was labeled "Extremely Likely" to purchase. Because the ads were for hypothetical products and participants had been told that they would be considering "hypothetical print advertisements," the question about likelihood of purchase asked about the likelihood of making the purchase if the participant "actually received the ad as an email or saw it as a flyer."

Of course, the likelihood that consumers will purchase a product does not depend only on whether they find the advertisement credible and non-deceptive. It will also depend on, among other things, whether they have an underlying interest in what the product claims to offer and whether they have the money to pay for it – that is, their underlying demand for the product. Consumers who do not want to lose weight are not going to buy a diet product, no matter how legitimate it appears to be. If not interested in a trip to the Caribbean or if they have no funds to pay for a vacation, they are not going to respond to an ad for a hotel in Cancun.

In an attempt to, at least partially, separate the ad-evaluation effects from other effects, such as underlying demand for the product, the question about likelihood of purchase was qualified so that, in answering the question, participants were asked to assume that they were interested in what the product allegedly offered. For example, consumers who viewed the likely-fraudulent diet product ad – the FatFoe ad – were asked "How likely would you be to try FatFoe

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[31] A copy of the questionnaire can be found in the Appendix.

Participants were also asked how likely they would be to recommend the product to a friend who was interested in what the product claimed to provide. We make less use of the responses to this question. While responses to the purchase intention and recommendation questions are highly correlated – $r = 0.84$ – it is less clear why and how some of the variables we examine should affect the likelihood of recommending the product. For example, why should a person who is willing to take risks be more likely to recommend a product to a friend? Rather, it would seem that the friend's risk tolerance would be what might matter.

[32] As part of the process of litigating allegations that an advertisement is deceptive under Section 5 of the FTC Act, either the Commission or a defendant may conduct a copy test to help determine the meaning, within the context of the overall ad, of a specific phrase that the Commission is challenging. In order to determine the meaning of a specific claim, such a copy test will often compare consumer interpretation of an ad that contains the claim being challenged with consumer interpretation of an ad that is as much the same as possible, but does not contain the challenged claim.

However, the task in this study was not to determine the meaning consumers take from a specific phrase or claim. Rather, we were interested in examining consumers overall perception of an ad and how that overall perception differed between likely-fraudulent and more-plausible ads. For this purpose, we did not believe it was necessary or particularly desirable to attempt to construct ads that only differed in the presence or absence of a single claim.

if you wanted to lose weight?" Those who were shown either of the employment-opportunity ads were asked how likely they would be to try and get a job with the company doing the advertising if they "wanted some additional income," while those who saw one of the vacation ads were asked how likely they would be to book a room at the advertised hotel if they "wanted a Caribbean vacation."

While this wording was used to avoid measuring participants underlying demand for the product, it is unclear whether it actually succeeded in solving the problem. We have no way of knowing whether participants actually focused on the instruction to assume they were interested in the product. In addition, even if they saw the instruction, we do not know whether they were able to put themselves in the requested state of mind. It is also unclear how the lack of money to pay for, say, "a Caribbean vacation" would impact one's answer.

In order to focus more clearly on differences in how consumers are viewing the advertisements, in addition to looking at whether consumers were very likely to purchase a product, we also considered how credible participants found the ad to be as a secondary measure of the likelihood of being susceptible to fraud. While an evaluation of the credibility of an advertisement is further from the actual purchase that causes one to be a victim, it should be less affected by underlying demand.

Our measure of ad credibility is the average of a participant's ratings on the truthfulness, believability, and deceptiveness of the ad. On all three of these questions, a response of "1" on the 7-point scale indicated that the participant "Strongly Agree[d]" that the ad was truthful, believable, or deceptive, respectively. Of course, agreeing that an advertisement is truthful or believable is saying that the ad is credible while agreeing that the ad is deceptive is to say that it is not credible. Ratings on deceptive were therefore reverse coded before the average of the three responses was calculated. Again, because we are most interested in those who find the fraudulent advertisement to be very credible, we use a "0-1" dummy variable that takes on a value of "1" if the ad is rated as being very credible – a rating that rounds to a "2" or below on our 7 point scale.

Explanatory Variables. Study participants were asked a number of questions designed to measure a variety of personal characteristics, and these were used to construct various explanatory variables used in the analysis. Each of these is described below. Table 1 identifies, the predicted effect of each explanatory variable on the likelihood of purchasing the product or finding the ad very credible.

*Consumer Literacy***.** Consumers who have a better understanding of various marketplace situations may be less susceptible to fraudulent or deceptive advertising. We hypothesize that consumers with greater consumer literacy will deem fraudulent advertisements as less credible than individuals with less consumer literacy and will be less likely to purchase the advertised product.

As discussed above, McAlvanah, et al., found evidence that those with greater consumer literacy were less susceptible to fraud. A recent review paper by Lusardi and Mitchell discusses research that has found that financial literacy affects consumer behavior in a wide variety of financial areas. These include the likelihood of participating in financial markets and investing

in stocks, doing retirement planning, and refinancing mortgages when doing so would result in reduced costs.[33] Stango and Zinman found that those who were less able to understand compound interest – one component of being financially literate – tended to borrow more and save less,[34] while Allgood and Walstad found that those who had lower levels of financial literacy were more likely to carry credit card balances, make only minimum payments, and pay late fees.[35] Another recent study by Brown, Kapteyn, Luttmer, and Mitchell found that while consumers in general appeared to have significant problems in valuing annuities, those with greater consumer literacy, greater numeric skills, and more education were somewhat better at doing so.[36]

Seven questions related to consumer literacy were included in the survey instrument. Four of the seven questions were drawn from the National Financial Capability Study conducted by the FINRA Investor Education Foundation in both 2009 and 2012. These questions deal with the effects of compound interest, inflation, lengthening the term of a mortgage, and diversification on portfolio risk.[37] The remaining three questions – what is a consumer's liability if his or her credit card is misused, what payment mechanism offers the greatest protection, and what is the effect of missed payment on a previous loan – were drawn from questions used in McAlvanah, et al., and from FTC staff's general knowledge of consumer protection issues.

The primary consumer literacy variable used in this analysis is just the number of the seven questions that a participant answered correctly. Participants were also permitted to answer that they did not know the answer to each of the consumer literacy questions. A second consumer literacy variable is equal to the number of questions for which the participant indicated that they did not know the answer.[38]

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[33] Annmaria Lusardi and Olivia S. Mitchell, "The Economic Importance of Financial Literacy: Theory and Evidence," *Journal of Economic Literature*, 52 (March 2014), pp. 5-44.

[34] Victor Stango and Jonathan Zinman, "Exponential Growth Bias and Household Finance," *The Journal of Finance*, 64 (December 2009), pp. 2807-2849.

[35] Sam Allgood and William Walstad, "Financial Literacy and Credit Card Behavior: A Cross-Sectional Analysis by Age," *Numeracy: Advancing Education in Quantitative Literacy*, 6 (2013). In addition to finding that actual consumer literacy affects the likelihood of carrying balances on credit card accounts, etc., Allgood and Walstad report that these likelihoods are affected by a consumer's perception of his or her financial knowledge – those who perceive themselves to be more knowledgeable are less likely to carry balances or pay late fees, etc. A problem with this finding, however, may well be that consumers interpret the fact that they pay off their credit card balances and do not pay late fees, etc., as evidence that they are relatively knowledgeable about financial matters.

[36] Jeffrey R. Brown, Arie Kapteyn, Erzo F.P. Luttmer, Olivia S. Mitchell, "Cognitive Constraints on Valuing Annuities, February 27, 2015.

[37] The 2012 FINRA study and its results are discussed in FINRA, "Financial Capability in the United States: Report of Findings from the 2012 National Financial Capability Study," May 2013, available at http://www.usfinancialcapability.org/downloads/NFCS_2012_Report_Natl_Findings.pdf. The questionnaire is available at http://www.usfinancialcapability.org/downloads/NFCS_2012_State_by_State_Qre.pdf.

[38] As discussed below, in some cases, the consumer literacy variables were further disaggregated into those from the National Financial Capability Study and those developed by FTC staff.

Numerical Skills. The ability to solve basic math problems may aid consumers in various marketplace decisions, including assessing the plausibility of claims made in advertisements. Some literature links cognitive skills, including numerical skills, to better workplace outcomes, increased household wealth, and fewer decision-making biases.[39] Gerardi et al., for example, surveyed mortgage borrowers' numerical skills and found that individuals with poorer numerical skills were more likely to be delinquent or default on their mortgages.[40] This negative correlation between numerical skills and mortgage delinquency persisted even after controlling for socio-demographic variables and mortgage characteristics.

We employed the same five-question numeracy measure used in Gerardi et al. and Banks and Oldfield.[41] Participants were grouped into four levels of mathematical skills based on the their answers to these five questions using the classification scheme suggested by Banks and Oldfield. In addition, we included the question about the likely gains or losses from a gamble where there is a chance of winning and a chance of losing money that was used in McAlvanah, et al.

Cognitive Reflection / Cognitive Impulsivity. To measure cognitive reflection or impulsivity, the study used three questions first proposed by Frederick, which are designed to distinguish people who give an obvious, intuitive, but wrong, answer to a question from those who deliberate enough to find the correct answer.[42] Those who give the quick, but wrong, answers may be more vulnerable to fraud and deception because they may not take sufficient time to evaluate whether offers are too good to be true, when further reflection may reveal the offers to be suspect. Our cognitive reflection variable is the number of these three questions that the participant answered correctly.

Overconfidence. A significant literature reports that many people overestimate both the accuracy of their performance on various tasks (absolute overconfidence) and the probability that their performance is above average (social or relative overconfidence).[43] We hypothesize that consumers who are overconfident may be more susceptible to falling victim to fraudulent offers.

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[39] S. Burks, J. Carpenter, L. Goette, and A. Rustichini. "Cognitive Skills Affect Economic Preferences, Social Awareness, and Job Attachment," *Proceedings of the National Academy of Sciences.* 106 (May 12, 2009), pp. 7745-7750 and J. McArdle, J. Smith, and R. Willis. "Cognition and Economic Outcomes in the Health and Retirement Survey," National Bureau of Economics Working Paper 15266 (August 2009).

[40] K. Gerardi, L. Goette, S. Meier. "Financial Literacy and Subprime Mortgage Delinquency: Evidence from a Survey Matched to Administrative Data," Working Paper (2010).

[41] J. Banks and Z. Oldfield. "Understanding Pensions: Cognitive Function, Numerical Ability and Retirement Saving," *Fiscal Studies*, 28 (June 2007), pp. 143-170.

[42] S. Frederick. "Cognitive Reflection and Decision Making." *Journal of Economic Perspectives*, 19 (Fall 2005), pp. 25-42.

[43] See, e.g., J. Klayman, J. Soll, C. Gonzalez Vallejo, and S. Barlas, "Overconfidence: It Depends on How, What, and Whom You Ask," *Organizational Behavior and Human Decision Processes*, 79 (September 1999), pp. 216-247 and D. Dunning, D. Griffin, J. Milojkovic, and L. Ross, "The Overconfidence Effect in Social Prediction," *Journal of Personality and Social Psychology* 58 (April 1990), pp. 568 581.

Our measures of overconfidence are based on participants' answers to the six numeric skill questions discussed above – the five questions used by Banks and Oldfield plus the question about the expected value from a gamble. After answering these six questions, study participants were asked to estimate how many they had answered correctly.[44] Participants were also asked to estimate how they performed on the numeric skills questions relative to others who participated in the survey. This was done by asking participants to indicate into which quartile of survey participants they fell based on the number of questions they had answered correctly. The measure of absolute overconfidence is the difference between the number of questions participants said that they had answered correctly and the actual number answered correctly. The measure of relative overconfidence is the difference between the quartile in which the person placed themselves and the actual quartile in which they fell.[45]

General Willingness to Take Risks / Risk Aversion. Consumers who are risk-averse may be less susceptible to fraud because they are less willing to take a chance on whether a product will work as promised. Consumers who are more willing to take risks may be more willing to take chances on unknown products and may therefore be more susceptible to fraudulent advertising.

We measure risk aversion by asking participants to rate their willingness to take risks on a seven-point Likert scale. This simple question has been shown to be highly predictive of risk-taking behavior across a wide variety of contexts.[46]

Impatience. Consumers who are more impatient may also be more likely to fall victim to a fraud since they may discount or ignore potential costs from the fraud if they will only be

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[44] In asking participants to estimate the number of questions they have answered correctly, we are following an approach used by Gigerenzer, et al. (G. Gigerenzer, U. Hoffrange, and H. Kleinbolting, "Probabilistic Mental Models: A Brunswikian Theory of Confidence," *Psychological Review*, 98 (October 1991), pp. 506-528.) These authors find that consumers do a better job of estimating the number of questions they have answered correctly than the probability that they have answered questions correctly. Similarly, work by Kahneman and Tversky has found that consumers do much better when asked to estimate the number of people who satisfy a condition than when asked to estimate the percentage of people who satisfy the condition. See, ***e.g.***, A. Tversky and D. Kahneman, "Extensional Versus Intuitive Reasoning: The Conjunction Fallacy in Probability Judgment," *Psychological Review*, 90 (October 1983), pp. 293 – 315 and D. Kahneman, *Thinking, Fast and Slow*.

Participants who indicated that they did not know the answer to one or more of the six questions were asked how many of the questions for which they had provided answers they thought they had answered correctly.

[45] Because our measures of overconfidence are based on participants' responses to the six questions measuring numeric skills, our measure cannot capture any overconfidence that those who answered all six of the numeric skills correctly questions or who were in the highest quartile of the distribution may have. The measure can also only capture a limited amount of overconfidence for those who answered five of the six questions correctly. Similarly, the measure has limited ability to capture underconfidence on the part of those answered none or one of the questions correctly.

[46] T. Dohmen, A. Falk, D. Huffman, U. Sunde, J. Schupp and G. Wagner, "Individual Risk Attitudes: New Evidence from a Large, Representative, Experimentally-Validated Survey," *Journal of the European Economic Association*, 9 (June 2011), pp. 522-550. Following Dohmen, et al., participants were also asked to rate their willingness to take risks in five specific areas – financial matters, health, career, driving, and sports or leisure activities.

incurred in the future. They may also be less willing than those who are less impatient to undertake something – *e.g.*, a weight-loss program or an employment plan that will only provide returns in the future – preferring a plan that promises immediate rewards. Impatience was measured by asking participants how well "impatient" would describe them using the same 7-point scale used in answering other questions.

Skepticism. We hypothesize that consumers who are less skeptical may be more susceptible to fraud because they, inappropriately, trust the honesty of the seller. Those who are more skeptical may be protected simply because they discount the claims made by the seller of the fraudulent offer.

The work of Yamagishi and Yamagishi points to the existence of two separate aspects of trust. First, people differ in the degree to which they generally trust others. Second, people differ in the extent to which they are able to distinguish specific situations where such skepticism is warranted and they should be on their guard. Those who are skeptical in specific settings are often generally trusting.[47]

This suggests that there may well be two alternative approaches to using skepticism to protect oneself from bogus claims made by fraudulent sellers. If one has the knowledge and ability to exercise caution in appropriate circumstances, this may provide sufficient protection and it may not be necessary to be skeptical of all advertising. On the other hand, if one lacks the skills to recognize situations in which advertising claims are more likely to be questionable, it may be necessary to be generally skeptical of all advertising.

Given this framework, we considered two separate aspects of skepticism – situation-specific skepticism and general skepticism about advertising. In attempting to measure skepticism in specific situations, we described a variety of possible marketing situations. Participants were then asked how likely they thought it was that the described claim was true using a 7-point Likert scale that ranged from "Very Likely to Be True" to "Very Unlikely to Be True." Some of these situations included signals that might be seen as justifying increased skepticism. Examples of such situations include that the product is being advertised in an infomercial aired on late night television, that an offer is only available if you act today, or that the product is offered by a company of which you have not previously heard. Other situations that were included would seem to warrant less skepticism, such as if your local grocery store advertises that it has a product on sale and is a good value. In order to measure the extent to which participants can differentiate the scenarios where extra skepticism is warranted from those where it is not necessary, the measure of specific skepticism is equal to the difference between the average rating on the five scenarios where more skepticism is warranted and the average on the five scenarios where less skepticism is needed.

To measure general skepticism toward advertising, we used eight of a series of nine questions developed and validated by Obermiller and Spangenberg to measure consumer

[47] See, *e.g.*, Toshio Yamagishi and Midori Yamagishi, "Trust and Commitment in the United States and Japan," *Motivation and Emotion*, 18 (June 1994), pp. 129-166.

skepticism of advertising in general.[48] Participants were asked to indicate how much they agreed or disagreed with statements such as "We can depend on getting the truth in most advertising," "Advertising is a reliable source of information about the quality and performance of products," and "Most advertising provides consumers with essential information." Each question was rated on a 7 point scale ranging from strong agreement to strong disagreement. Similar to Obermiller and Spangenberg, we average the responses to the eight questions into a single skepticism measure.

In order to capture the notion that general skepticism is only needed where consumers lack the ability to differentiate between cases where skepticism is needed and where it is not, our measure of general skepticism is equal to the value of general skepticism for those whose who scored poorly on the specific skepticism questions – their score was 1.5 or less, which was true for about 30 percent of participants. For those who scored higher on the specific measure, their value for general skepticism was set equal to 0.

Impulsivity and Resisting Temptation. In a paper exploring consumer impulsivity and how different consumers will react to different messages about engaging in risky behavior, Puri proposes a 12-item scale to measure impulsivity.[49] We included this set of questions in our survey. Participants were asked to indicate how well a set of adjectives – adjectives such as careless, self-controlled, responsible, and rational – described them using a seven-point response scale ranging from "Would almost always describe me" to "Almost never would describe me."[50] Responses to individual items are included as separate variables in our analysis. We would expect that consumers who rated themselves high on some of these characteristics – *e.g.*, "Impulsive," "Extravagant," "Easily tempted," or "Enjoy spending money" – would be more likely to be willing to purchase a fraudulent product. On the other hand, those with other characteristics – *e.g.*, "Self-controlled," "Plan for the future," "Responsible," "Restrained," or "Methodical" – would be less likely to become a victim of a fraudulent offer.

*Product Interest***.** How interested a consumer is in a type of product will affect how likely someone would be to purchase a product independently of whether the consumer finds the offering likely to be fraudulent. If someone is not interested in losing weight, he or she is not going to purchase a weight-loss product regardless of how credible the product may be. We attempted to control for this in the way we phrased the question about the likelihood of making a purchase. Participants were asked how likely they would be to purchase the product if they were interested in what the product claimed to be offering – lose weight, some additional income, or a

[48] C. Obermiller and E. Spangenberg. "Development of a Scale to Measure Consumer Skepticism towards Advertising," *Journal of Consumer Psychology*, 7 (1998), pp. 159-186. (The ninth item in the Obermiller and Spangenberg scale – "I believe advertising is informative" – was inadvertently omitted from the questionnaire.)

[49] Radhika Puri, "Measuring and Modifying Consumer Impulsiveness: A Cost-Benefit Accessibility Framework," *Journal of Consumer Psychology*, 5 (1996), pp. 87-113.

[50] One of the items in Puri's set of adjectives is "Farsighted." We were concerned that participants would interpret this as referring to their vision and therefore substituted "Plan for the future" for "Farsighted." In the survey instrument, a value of 1 was described as "Almost always would describe me" and 7 as "Almost never would describe me." These codings were reversed in the analysis so that a higher value is associated with an adjective more accurately describing someone.

Caribbean vacation. In addition, questions were included to measure participants' interest in each of the three product areas for which advertisements were included in our study.

Demographics and Background. We also collected demographic information from the subjects, including their age, race and ethnicity, gender, education level, size of household, and household income. Participants were also asked whether they had experienced a serious negative life event, such as a divorce, the death of a family member or close friend, a serious injury or illness, or the loss of a job, in the last two years and whether they had more debt than they could handle financially, two of the factors that were found to be predictive of fraud victimization in the latest FTC fraud survey.

3. Data Collection

Data were collected from 5,016 U.S. consumers age 18 and over who were participants in an opt-in Internet panel maintained by a commercial survey research firm.[51] Data were collected between January 3 and January 21, 2014. As is true with all opt-in Internet panels, the resulting sample does not constitute a random sample of U.S. consumers. However, we believe that our convenience sample is fully adequate for the purposes of the current study where our goal is to conduct an exploratory examination of possible differences among participants who differ in particular characteristics, and not to project to the population as a whole.

While we believe that a convenience sample is adequate for the questions we seek to address, our results are more likely to be at least suggestive of what one would find in the population as a whole if the sample includes individuals who cover the spectrum of demographic characteristics found in the U.S. population. To achieve this goal, those who were invited to participate in the project were selected to be as representative as possible of the U.S. population of adults age 18 and over in terms of age, gender, income, education, household size, presence of children in the household, region and city size.[52]

The median amount of time to complete the survey was 21 minutes.[53]

[51] Consistent with the contractor's normal procedures, participants earned "points" worth approximately $0.90 for participating in this survey and were entered into a monthly sweepstakes drawing with prizes worth up to $5,000. Members of the Internet panel can redeem the points they earn for a gift card after they accumulate 1,000 points.

[52] On most dimensions, the sample was reasonably representative of the U.S. population. However, minorities, those with low levels of education, and those with very high incomes – over $100,000 per year – or with very low incomes – under $20,000 per year – were significantly under-represented in our sample.

[53] Some participants completed the survey in a surprisingly short period of time. One person completed the task in less than 7 minutes. For others, the time that elapsed between when they started and when they completed was surprisingly long – almost 50 participants had an elapsed time that exceeded 24 hours. In most, if not all, of the later cases, the participant likely started the survey at one time and then came back and completed it later. However, to make sure that our results are not being driven by those who completed the survey unreasonably quickly or took an unreasonably long period of time, we limit our analysis to those who took between 10 and 60 minutes to complete the survey. This resulted in dropping 279 of the 5,016 observations in our dataset. This had no significant effect on the results of our analysis.

4. Evaluation of the Advertisements

The first task survey participants were given was to evaluate two of the six advertisements. After examining an ad, participants were asked to answer three questions about the credibility of the ad and to indicate how likely they would be to purchase the product if they were interested in what the advertised product purported to offer and they actually received the ad as an email or saw it as a flyer.

While we use participant responses indicating a very-high likelihood of purchasing a likely-fraudulent product as our primary measure of being susceptible to becoming a victim of a fraud, our questionnaire also included a few questions drawn from the FTC's fraud surveys that provided some indication of whether a person may have been a victim of a weight-loss fraud in the recent past.[54] The responses to these questions indicated that those who said that they were very likely to purchase our likely-fraudulent weight loss product were significantly more likely to have previously purchased a weight-loss product that promised easy weight loss, but did not deliver on that promise – i.e., perhaps to have been victims in the recent past.[55] This provides some validation for our use of the very-likely-to-purchase measure as a proxy for being a likely victim.

Part A of Table 2 summarizes consumers' evaluations of the likelihood of purchasing the advertised product. The first column reports the percentage of those viewing each ad who indicated that they would be very likely to purchase the product – those who rated the likelihood of purchasing the product at 1 or 2 on the 7-point scale – while the second column reports the percentage who indicated that a purchase was very unlikely – those who gave a rating of 6 or 7. Figure 7 shows the percentage of those viewing each ad who indicated that they would be very likely to purchase the product.

In all cases, the percentage of participants who indicated that they would be very likely to purchase the product was quite small – particularly for the likely-fraudulent products. For two of these – the likely-fraudulent diet product and the likely-fraudulent vacation offer – the percentage very likely to purchase was between 7 and 9 percent. For the third product – the likely-fraudulent employment offer – it was 12 percent. For two of the three likely-fraudulent offers – the employment offer and the vacation – the percentage who were very unlikely to purchase was approximately 45 percent. For the likely-fraudulent diet product, it exceeded 60

[54] The fraud survey asks about participants' experiences in the last year prior to being interviewed. In addition, participants are only considered to be victims if they indicate that they actually lost money as a result of their experience. The questions included in this survey asked about experiences over a two year period and did not inquire about whether money was lost.

[55] $X^2(1) = 9.41$, $p<0.01$ The survey also asked about recent purchases of business opportunities or work-at-home offers that promised, but did not provide, promised assistance in establishing the business. Those who were shown the ad for the fraudulent employment opportunity and said that they were very likely to purchase it were also more likely to answer "Yes" to these questions about previous purchases of possibly-fraudulent business opportunity or work-at-home offers, though there were not enough participants who viewed the likely-fraudulent employment offer and indicated that they had purchased a possibly-problematic business opportunity or work-at-home scam to use a Chi-square test for testing for the significance of these differences.

percent. At least in the environment of our survey, only a small fraction of consumers appear to be susceptible to falling victim to the likely-fraudulent offers that were presented.[56]

When presented with a more-plausible advertisement, the percentage of consumers who indicated that they would be very likely to purchase the product increased, though it was still relatively low. The percentages ranged from less than 10 percent for the more-plausible diet product to more than 20 percent for the more-plausible employment offer.[57] Similarly, the percentage indicating that they would be very unlikely to purchase was lower – ranging from just over 20 percent to less than 45 percent.[58]

There was substantial cross-product variation in the percentage indicating that they would be very likely to purchase, both among the likely-fraudulent and the more-plausible products.[59] The very-likely-to-purchase percentage for the more-plausible diet product was significantly lower than for the other more-plausible products. Indeed, those who viewed the more-plausible diet ad were significantly less likely to indicate a high likelihood of purchase than were those who viewed the likely-fraudulent part-time employment ad. There was no significant difference between those who viewed the more-plausible diet ad and the likely-fraudulent vacation ad.

Similarly, the percentage indicating that it was very unlikely that they would purchase was significantly greater for the more-plausible diet product than for the other more-plausible products. Again, the responses to the more-plausible diet product look more like the figures for the likely-fraudulent products than for the other more-plausible products. There were no significant differences in the likelihood of being very unlikely to purchase the more-plausible diet product and the likely-fraudulent employment offer or the likely-fraudulent vacation. This may suggest that consumers were skeptical about all diet products, even those that are not overtly fraudulent.[60]

The second half of Table 2 and Figure 8 present similar figures for participants' ratings of the credibility of the ads they viewed. Interestingly, for each of the likely-fraudulent ads, the percentage of participants who indicate that they would be very likely to purchase the product is significantly greater than the percentage who find the ad to be very credible. While 7.3 percent of those who viewed the ad for the likely-fraudulent diet product said that they would be very likely to purchase the product, only 4.2 percent – less than 60 percent as many – found the ad to

[56] We do not, of course, know whether similar results would be found if the ads were encountered in more realistic sales situations.

[57] The differences between the percentage who would be very likely to purchase the likely-fraudulent product and those who would purchase the more-plausible product are significant – at the 1 percent level for the employment offer and the vacation and at the 5 percent level for the weight-loss products.

[58] For all three products, the differences in the percentage of participants indicating that they would be very unlikely to buy between the likely-fraudulent and more-plausible ads are significant at the 1 percent level.

[59] In both cases, an F-test for the joint significance of differences across products indicates significance at the 1 percent level.

[60] One must, of course, be careful about attempting to generalize here. The responses we observe may be merely the result of the specific ads used in our project. Using different ads could lead to different results.

be very credible. On the other hand, of those who viewed the more-plausible ads, the percentage who found the ads very credible is significantly greater than the percentage who indicated that they would be very likely to purchase the product – being at least twice as great for the more-plausible employment opportunity and vacation ads.

To further explore this relationship, Table 3 shows the percentage of participants who said that they would be very likely to purchase the product for different values of how credible the participant found the ad to be. Of those who gave a Very-High rating to the credibility of one of the likely-fraudulent ads, half indicated that they would be highly likely to purchase the product if it was available. On the other hand, just under one-third of those who gave a similar rating to a more-plausible ad said that they would be very likely to purchase the product. Among those who viewed a likely-fraudulent ad and rated the credibility of the ad as High-Moderate, 29 percent said that they would be very likely to purchase the product. This compares to 16 percent among those who viewed a more-plausible ad and rated the credibility as High-Moderate.

While fewer participants rated a likely-fraudulent ad as highly credible than a more-plausible one, those who found the ad very credible were more likely to indicate that they would purchase the product if it were available. This may reflect, at least in part, the more outlandish nature of the claims in the likely-fraudulent ads. Those who do not realize that the product is likely-fraudulent may find themselves more strongly drawn to the likely-fraudulent products because they claim to offer more than the relatively tame more-plausible products.

5. Characteristics Correlated with the Likelihood of Being Very Likely to Purchase the Likely-Fraudulent Product

We now turn to the main point of this paper, trying to identify differences between those who are more susceptible to becoming victims of a fraud and those who are less susceptible. More specifically, we look for differences between those who indicated that they would be very likely to purchase the product in the likely-fraudulent ad they viewed or found the ad to be very credible and those who were not very likely to make such a purchase or found the ad less than very credible.[61]

Our analysis of the relationship between susceptibility and both the likely-fraudulent and the more-plausible advertisements involves the probit regression

$$Pr(Susceptible_{i,j}) = f\left(Frd_i X_j,\ Frd_i Prod_i,\ Pls_i X_j,\ Pls_i Prod_i\right) \quad (1)$$

where $Susceptible_{i,j}$ is a measure of whether participant j was "susceptible" to advertisement i – as measured by either $Buy_{i,j}$ or $Credible_{i,j}$,

$Buy_{i,j} = 1$ if participant j indicated that he or she was very likely to purchase the product offered in advertisement i, and is equal to 0 otherwise,

[61] Again, we note that the purpose of this study was to identify characteristics that were correlated with the evaluation of advertisements. We do not claim that any correlations establish a causative relationship.

$Credible_{i,j}$ = 1 if participant j indicated that he or she found ad i to be very credible, and is equal to 0 otherwise,

Frd_i = 1 if advertisement i is likely-fraudulent, and 0 otherwise

Pls_i = 1 if advertisement i is more-plausible, and 0 otherwise

X_j are the set of characteristics of consumer j,[62] and

$Prod_i$ are dummy variables that identify the product in advertisement i.[63]

Standard errors are clustered by individual participant.[64]

The results of our regression analysis of the likelihood of purchasing one of the likely-fraudulent ads – the Frd_iX_j and Frd_iProd_i terms in equation (1) – are presented in the left-hand column of Table 4. Coefficients are presented as predicted changes in the percentage of participants who would be very likely to purchase the product given a small change in the right-hand variable. The results of the analysis of finding a likely-fraudulent ad to be very credible are presented in the left-hand column of Table 5.[65]

Consumer Literacy. We first consider whether consumers who performed better on our consumer literacy questions would be less likely to indicate that they would be very likely to purchase one of our likely-fraudulent products. As discussed above, consumer literacy is measured by participants' answers to seven questions – four of which are widely used consumer literacy questions drawn from National Financial Capability Study ("NFCS") conducted by the FINRA Investor Education Foundation and three are based on FTC staff's assessment of knowledge that should protect consumers in the marketplace. For each question, in addition to being able to choose an answer, participants were permitted to respond that they did not know the correct answer. We include two consumer literacy variables in our regressions – the number of the seven questions answered correctly and the number answered "Don't know."[66]

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[62] Summary statistics for the various consumer characteristics are provided in the Appendix Table.

[63] The employment-opportunity product is used as the excluded category for the set of dummy variables.

[64] As discussed above, we limit our analysis to those who took at least 10 minutes, but not more than 60 minutes, to complete our survey.

[65] The reported coefficients assume Frd_i is set equal to 1, Pls_i is set equal to 0, and all of the X variables are set equal to their means across all participants who are included in the probit regression.

A test of the joint significance of all variables, except for the fixed-effects of the individual ads, rejects the hypothesis that all variables are equal to zero ($X^2(54) = 507.63$, P=0.000).

[66] A variable equal to the number of questions answered correctly would, of course, have a positive expected value for any participant who just randomly answered the questions. In order to determine whether this was affecting our results, we also used a variable that adjusted for wrong answers so that the expected value for someone answering at random would be zero. The results were not affected by this change.

As shown in the top section of Table 4, an increase in the number of the consumer literacy questions answered correctly is correlated with a significant decrease in the likelihood that participants will say that they would be very likely to purchase the likely-fraudulent product. This is similar to what was earlier found in an experimental setting by McAlvanah, et al.[67] In addition, an increase in the number of questions to which the participant answered "Don't know" is also negatively correlated with the likelihood of being a very-likely purchaser.

Evaluated at the mean of all right-hand variables, an increase of one in the number of consumer literacy questions answered correctly is associated with a 0.9 percentage point reduction in the likelihood of being very likely to purchase the product, an effect that is statistically significant at the 1 percent level.[68] An increase of one in the number of consumer literacy questions for which participants said that they did not know the answer decreased the likelihood of being very likely to purchase by 1.3 percentage points, a figure that is also statistically significant at the 1 percent level but is not significantly different from the effect of answering an additional question correctly.[69]

If participants answered all seven questions incorrectly – that is they neither gave the correct answer nor indicated that they did not know the answer – the model suggests that they would, on average, be expected to have a 13.8 percent probability of being very likely to purchase a likely-fraudulent product.[70] However, if participants got none of the questions incorrect – *i.e.*, if they either answered each question correctly or answered that they did not know the answer – the model predicts an average likelihood of being very likely to purchase the product between a 3.3 percent and a 5.7 percent.[71]

As shown in Table 5, the likelihood of finding an ad to be very credible was not significantly correlated with either the number of consumer literacy questions answered correctly or the number for which the consumer acknowledged not knowing the answer. It is unclear why greater consumer literacy should be correlated with a reduced likelihood of being a very-likely purchaser, but not with a reduced likelihood of finding a likely-fraudulent at to be very credible.

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[67] There were some differences in the specific consumer-literacy questions asked and in the way the results were analyzed. The increased risk here is found in an increase in the likelihood of being a very-likely purchaser and not in the likelihood of finding the likely-fraudulent ad to be very credible. The earlier study only looked at the credibility of the likely-fraudulent ads. Furthermore, in McAlvanah, et al., the number of consumer literacy questions to which the participant answered "Don't know" did not have any effect on the likelihood of being a victim.

[68] Unless otherwise noted, all significance levels are for a two-tailed test.

[69] The coefficients on the number of questions answered correctly and the number answered "don't know" are jointly significant at the 1 percent level.

[70] These estimates assume that the person's other characteristics are equal to the average values for all participants included in the probit regression.

[71] Exactly where the number falls in this range depends on whether participants are assumed to have answered the questions correctly or indicated that they did not know the answer.

Additional insight into the effect of consumer literacy can be gained by looking separately at the effect of the questions taken from the NFCS and those that were FTC-staff questions. Substituting separate variables equal to the number of NFCS and FTC-staff questions answered correctly and the number for which the person indicated that they did not know the answer, we find that it was avoiding mistakes on the NFCS questions that was correlated with a reduced likelihood of being very likely to purchase the likely-fraudulent product. Answering one additional NFCS question correctly was estimated to be associated with a decline of 1.2 percentage points in the likelihood of being very likely to purchase. An increase in the number of NFCS questions answered "don't know" was associated with a decrease of 2.2 percentage points.[72] On the other hand, an increase in the number of FTC-staff questions answered correctly reduced the likelihood of being a very-likely purchaser by a statistically insignificant 0.3 percentage points, while an additional "don't know" on an FTC-staff question only reduced the risk by an insignificant 0.1 percentage points.

Further disaggregation of the literacy measures to the individual questions asked suggests that some basic understanding of compound interest is most associated with not falling for the likely-fraudulent product. Participants who correctly answered that if "you had $100 in a savings account and the interest rate was 2 percent per year," you would have more than $102 dollars in the account after five years were 3.2 percentage points less likely to say that they would be very likely to purchase a likely-fraudulent product than those who gave an incorrect answer.[73]

The other individual question that is correlated with a reduction in the likelihood of purchase asked about the effect of diversification of one's investment portfolio. Correctly answering that diversification decreases the risk one will "lose a substantial share of the total amount you invest" was associated with a 1.5 percentage point decline in the likelihood of being very likely to purchase a likely-fraudulent product – a difference that was significant at the 10 percent level. Answering that one did not know the answer to this question was associated with a 2.7 percentage point decline, which was significant at the 5 percent level. None of the other consumer literacy questions individually had a statistically significant relationship with the likelihood of being very likely to purchase.

Overconfidence. Overconfidence was correlated with a higher likelihood of being very likely to purchase a likely-fraudulent product. Two measures of overconfidence, based on participants' self-evaluation of how well they performed on six numeric skills questions, were included in the regressions. However, only one – participants' estimates of how well they had performed relative to others who participated in the study – was significantly correlated with the likelihood of being a very-likely purchaser of a likely-fraudulent product.

As has been found in many other studies, participants in our survey were generally overoptimistic about the number of the six math questions they had answered correctly. While

[72] Both of these coefficients are statistically significant at the 1 percent level. The two coefficients are not significantly different from each other.

[73] The coefficient is significant at the 5 percent level. The coefficient on answering that one did not know the answer to this question is 3.0 percentage points, but is statistically insignificant.

16 percent of participants underestimated the number of questions they answered correctly and 30 percent estimated correctly, 54 percent overestimated the number. On average, participants said that they had correctly answered 0.63 more of the six questions than they actually had. However, differences in the measure of absolute overconfidence – the difference between the number of questions a participant said they had answered correctly and the actual number correctly answered – had virtually no effect on the likelihood of being a very-likely purchaser. Overestimating the number of questions answered correctly by one additional question increased the likelihood of being very likely to purchase a likely-fraudulent product by a statistically insignificant 0.5 percentage points.

On the other hand, overestimating one's performance on the math skills questions relative to others who participated in our survey had a large and highly significant correlation with the likelihood of being a very likely purchaser of the likely-fraudulent product. Relative overconfidence was measured by asking participants in which quartile of the distribution of those who had participated in the survey their own performance lay. The difference between the quartile in which one estimated he or she fell and the actual quartile was the measure of relative overconfidence. While over half of all participants – 57 percent – correctly identified the quartile within which their performance fell, 41 percent said that they were in a higher quartile than they were. Only 2 percent indicated that they were in a lower quartile.

An increase of one in the number of quartiles by which participants overestimated their relative performance increased the risk of being a very-likely purchaser by 1.9 percentage points. If participants overestimated their relative performance by three quartiles – the maximum possible value – our model suggests that they would have had a 12.5 percent probability of being very-likely purchasers. If participants had correctly evaluated their performance relative to others who participated, only an estimated 5.4 percent would have been very likely to make the purchase, while the figure falls to only 2.8 percent if participants were "underconfident" and the estimated quartile into which one fell was underestimated by two – the minimum value observed in the data.[74]

Increased overconfidence does not appear to be affecting consumers' judgment about the credibility of the ads. There were no statistically significant correlations between either the absolute or the relative levels of overconfidence and the likelihood of finding an ad for a likely-fraudulent product to be very credible. Those who were more over-confident did not appear more likely to find a likely-fraudulent ad to be very credible. However, they were more likely to indicate that they would be very likely to buy the product anyway.

Skepticism. Not surprisingly, participants who were more skeptical were less likely to indicate that they would be very likely to purchase the likely-fraudulent product.

As discussed above, one of our measures of skepticism focuses on the ability of participants to differentiate between situations in which enhanced skepticism is warranted and situations where such skepticism may be less necessary. This measure, which we call "Situation Specific Skepticism" is defined as the difference between participants' average skepticism

[74] Increased overconfidence – particularly increased relative overconfidence – was also found to be correlated with an increased risk of being a victim of fraud in McAlvanah, et al. Again, however, the present study finds this in the likelihood of being very likely to purchase the likely-fraudulent product and not in ad credibility.

ratings on five scenarios in which enhanced skepticism appears to be warranted and their average ratings on five scenarios where less skepticism is needed. Each scenario was rated on a scale of "1" to "7." A "1" indicated that the claim being made was "Very Likely to Be True," – that is the participant was not skeptical about this scenario – while a "7" indicated that a claim was "Very Unlikely to Be True," and therefore that the person was very skeptical. The values of this variable could therefore range from -6 to 6, where someone who was very skeptical of all of the claims where enhanced skepticism was warranted and was not skeptical where enhanced skepticism was not needed would have a value of 6. Observed values ranged from -4 to 6.

Consumers who are unable to distinguish between situations where skepticism is needed and those where being skeptical is less important may be able to protect themselves from falling victim to unscrupulous sellers by being generally skeptical about all advertising. Participants' general skepticism toward advertising, which also ranged from "1" to "7," was therefore only included in our regression where the participant's responses to the specific situations suggested that they were unable to identify situations where the risks were relatively high.

Both measures of skepticism were significantly correlated with the likelihood of being a very-likely purchaser of a likely-fraudulent product. An increase of one in the situation-specific skepticism measure is associated with a 2.1 percentage point decline in the likelihood of being a very-likely purchaser of a likely-fraudulent product. And, for those who have low levels of situation-specific skepticism, an increase of one in general advertising skepticism is associated with a 1.2 percentage point decline in the likelihood of being a very-likely purchaser. Both coefficients are individually significant at the 1 percent level as are the two coefficients jointly.

A further picture of the impact of skepticism in our model can be obtained by comparing the likelihood of being very likely to make the purchase at low and high values of skepticism. The least skeptical participant in our study had a value of -4 on the situation specific skepticism variable and a value of 2.5 on the general advertising skepticism scale. For participants with this low level of skepticism, the model predicts a 26.6 percent probability of being a very-likely purchaser of a likely-fraudulent product. At the other end of the scale, if participants had exhibited a situation specific skepticism measure of 6, the model would predict that only 2.1 percent of participants would have been very-likely purchasers.

Not surprisingly, being more skeptical is negatively correlated with finding a likely-fraudulent advertisement very credible. Indeed, the questions that are used in measuring skepticism all deal with how the people view various forms of advertising and advertising claims. An increase of one in the situation specific skepticism variable is correlated with a decline of 0.9 percentage points in the likelihood of finding one of the likely-fraudulent advertisements very credible. For those with low situation-specific skepticism, an increase of one on the general advertising skepticism variable is correlated with a decrease of 0.7 percentage points. McAlvanah, et al., also found that increased skepticism was correlated with a lower probability of finding a likely-fraudulent ad to be credible.

General Willingness to Take Risks / Risk Aversion. As predicted, those who are more willing to take risks were more likely to say that they would be very likely to purchase a fraudulent product. An increase of one on the 7-point scale on the question asking about the participant's willingness to take risks was associated with an 0.5 percentage point increase in the likelihood of being a very-likely purchaser. The coefficient is significant at the 10 percent level. There is no significant relationship between willingness to take risks and finding a likely-fraudulent ad to be very credible.

Impatient. A higher level of impatience was significantly correlated with a lower likelihood of being very likely to make a likely-fraudulent purchase and also a lower likelihood of finding a likely-fraudulent ad to be very credible. An increase of one on the 7-point scale on the participant's self-rating of being impatient was associated with a decrease of 0.7 percentage points, an effect that is significant at the 1 percent level. In terms of the plausibility of the advertisement, an increase of one was associated with a decline of 0.6 percentage points in the likelihood of finding the ad to be very credible. These results are the reverse of what we expected to find.

Impulsivity and Resisting Temptation. Only two of the 12 characteristics suggested by Puri – being Impulsive and Extravagant – have a significant relationship with the likelihood of being a very-likely purchaser, with the relationship going in the expected direction. Participants self-rated themselves on each of these characteristics on a scale of "1" to "7," where "1" was defined as indicating the characteristics would "Almost Never" apply and "7" meant that the characteristic would "Almost Always" apply.

Not surprisingly, an increase of one on Impulsive was correlated with a 1.4 percentage point increase in the likelihood of saying that you would be very likely to purchase a likely-fraudulent product. An increase of one on Extravagant was related to a 0.7 percentage point increase. Both of these coefficients were significant at the 1 percent level.

One other measure – preparing for the future – had a statistically significant relationship with being very likely to make a purchase. However, the relationship here is the reverse of what we expected. Those who said that being prepared for the future was a more accurate description of them were more likely, not less likely, to indicate that they would be very likely to make a purchase.

Focusing on the likelihood of finding the likely-fraudulent ad to be very credible, we find positive signs on the Impulsive and Extravagant variables. However, neither relationship is statistically significant. Two other of the 12 characteristics – "Enjoy Spending Money" and "Prepare for the Future" – have significant positive correlations with finding the ad to be very credible.

Cognitive Reflection / Cognitive Impulsivity. We hypothesized that those who acted impulsively and did not think through the implications of what an advertisement was offering would be more likely to be a very-likely purchaser. To measure this concept, our survey included the three cognitive reflection questions developed by Shane Frederick – questions that appear to have intuitive, obvious answers, though further reflection shows that these answers are incorrect.

Our estimation shows that an increase of one in the number of these questions answered correctly is correlated with a decrease of 1.0 percentage points in the likelihood of being a very-likely purchaser of a likely-fraudulent product. The coefficient is significant at the 5 percent level. An increase in the number of questions answered correctly is also correlated with a decrease in the likelihood of finding the advertisement to be very credible. However, this relationship is not statistically significant.[75]

Amount of Debt. We included a question about how much debt a participant had because the FTC's fraud surveys have consistently found that those who said that they had more debt than they could handle were more likely to have been victims of fraud. Our results here are similar. Those who indicated that they had more debt than they could handle financially were 3.3 percentage points more likely to indicate that they would be very-likely purchasers than those who thought that they could handle more debt. The difference is statistically significant at the 5 percent level.

Somewhat more surprising, those reporting that they had no debt were 2.6 percentage points more likely to indicate that they would be very-likely purchasers than those who could handle additional debt. The explanation for this result is not clear, though perhaps those who carry no debt have less market experience and are therefore less experienced at judging advertisements.

A similar pattern is found in the analysis of whether the likely-fraudulent ad is very credible. Those with more debt than they can handle were 2.2 percentage points more likely to find a likely-fraudulent advertisement to be very credible than those who felt that they could handle more debt – a difference that was significant at the 5 percent level. And, those who had no debt were 2.0 percentage points more likely to find the ad very credible.

Numerical Skills. We expected that those lacking basic numeric skills would be more likely to fall victim to fraudulent offers. However, our results do not support this hypothesis. Looking at the measure of basic numerical skills suggested by Banks and Oldfield, we find that those with the greatest numerical skills – those who fall into Banks and Oldfield's category 4 – were significantly more, not less, likely to be very-likely purchasers. Looking at the expected value question, we found that those who answered the question correctly were less likely to be very-likely purchasers. However, this relationship was not statistically significant.[76] The results were reversed in the analysis of the credibility of the likely-fraudulent ad. Those with greater numeric skills were less likely to rate the ad as highly credible, though the differences were not statistically significant.[77]

[75] This result is contrary to that in McAlvanah, et al., where correctly answering additional cognitive reflection questions was correlated with an increase in the likelihood of being a victim of fraud.

[76] McAlvanah, et al., also found some unexpected evidence that those with greater numeric skills were more, not less, likely to become victims of fraud.

[77] As in the likely-buyer equation, those who answered the expected value question correctly were less likely to indicate that the likely-fraudulent ad was very credible, though the relationship was not statistically significant.

Experienced a Recent Negative Life Event. The percentage of participants who said that they would be very-likely to purchase a likely-fraudulent product did not differ depending on whether a person had experienced a recent negative life event – a divorce, a death of a family member or close friend, a serious injury or illness in the family or the loss of a job. This differs from the finding in the 2011 FTC fraud survey where those who had experienced such an event were more likely to have been victims of fraud. Those who had experienced a negative life event were somewhat less likely to find a likely-fraudulent ad to be very credible, though the relationship was only significant at the 10 percent level.

Demographics. We found few significant correlations between being a very-likely purchaser and the various demographic variables included in our regression. There were no significant correlations with age, education, level of income, or whether the person was the only adult in the household.[78]

Latino Americans were 3.6 percentage points more likely to say that they would be very-likely purchasers than were non-Latino whites. This difference is significant at the 5 percent level. African Americans and Asian Americans were also more likely to be very-likely purchasers than were non-Latino whites, though the differences here were not statistically significant.[79]

Women were 2.0 percentage points less likely to say that they would be very-likely purchasers than were men. They were also 1.5 percentage points less likely to find the likely-fraudulent advertisement to be very credible. Both of these differences were significant at the 5 percent level.

Interest in the Product. There was a significant correlation between participants' interest in a product and the likelihood of being a very-likely purchaser. Those indicating that they were "Extremely Interested" in what the likely-fraudulent product claimed to offer – e.g., losing weight or going on a Caribbean vacation – were 11.0 percentage points more likely to indicate that they would be very likely to purchase the product than those who were only "Somewhat Interested." Those who said that they were "Not Very Interested" or "Not at All Interested"

[78] The lack of correlation between age and being a very-likely purchaser may seem somewhat unexpected given that the FTC's fraud surveys have consistently found that older consumers are less likely to have been victims of fraud. However, the relationship between age and victimization in the fraud surveys is only significant overall in a univariate analysis. When other factors are added to the analysis, the overall relationship between age and victimization is not significant. If we look at the relationship between age and indicating that one would be a very-likely purchaser of a fraudulent product in the data from our current survey in a univariate regression, we again find a significant negative relationship. Whether done as a univariate or multivariate analysis, neither the current results nor the fraud survey results provide any support for the frequently-made claim that older consumers are more likely to be victims of fraud.

[79] The lack of a significant correlation between being African American and being a very-likely purchaser appears to differ with what was found in the fraud surveys. However, again, if one looks at the simple relationship between being a very-likely purchaser and race and ethnicity we find that African Americans are more likely to be very-likely purchasers when other characteristics are not included in the analysis. Being Latino American is correlated with being more likely to be a very-likely purchaser both with other factors included and in the univariate model. This is the same pattern as found in the latest fraud survey.

were 1.8 and 2.1 percentage points less likely to say that they would be very-likely purchasers than those who were "Somewhat Interested."[80]

This may hardly be surprising. After all, those who want to lose weight would be expected to be more likely to purchase a weight loss product. And, those interested in a Caribbean vacation would be more likely to book a room in a hotel in Cancun. However, the question about likelihood of purchase asked participants to assume that they were interested in what the advertised product claimed to offer. The reason for the relationship is therefore unclear. Did participants who were really not interested in what the product claimed to offer simply fail to assume, as the question asked, that they were interested when answering the question about likelihood of purchase? Or, were they just unable to assume that they were interested while answering the question? Alternatively, is there really some underlying difference between those who are extremely interested in a product and those who are less interested that is being captured in these coefficients?

Some insight into this question can be obtained from the analysis of whether the advertisement was judged to be very credible. As shown in Table 5, those who indicated that they were "Extremely Interested" in what the advertised item promised were 2.8 percentage points more likely to find the likely-fraudulent advertisement to be very credible than were those who were "Somewhat Interested," while those who were "Very Interested" were 1.6 percentage points more likely to do so.[81] While underlying demand for the product and what it promises to deliver may be impacting the likelihood of purchase, it also appears that those who have a considerable interest in the product rate the credibility of a likely-fraudulent ad higher than those with less interest.

Differences Across Ads. After controlling for all of the above factors, those who were shown the likely-fraudulent diet ad were 3.6 percentage points less likely to be very-likely purchasers than were those who saw the likely-fraudulent ad for the employment opportunity and were 1.6 percentage points less likely than those who saw the likely-fraudulent vacation ad. Those who were shown the likely-fraudulent vacation ad were 2.1 percentage points less likely to be very-likely purchasers than were those who saw the likely-fraudulent employment-opportunity ad.[82] Similarly, those who viewed the likely-fraudulent diet ad were 3.1 percentage points less likely to find the ad very credible than those who saw the likely-fraudulent employment opportunity ad and were 2.4 percentage points less likely than those who saw the likely-fraudulent vacation ad. Those who were shown the likely-fraudulent vacation ad were 0.7 percentage points less likely to find the ad very credible than were those who saw the likely-fraudulent employment-

[80] The difference between those who were "Extremely Interested" and those who were "Somewhat Interested" was significant at the 1 percent level, while the coefficients on "Not Very Interested" and "Not at All Interested" were each significant at the 5 percent level. Overall, the effect of interest in the product on the likelihood of being a very-likely purchaser is significant at the 1 percent level.

[81] The difference between those who were "Extremely Interested" and those who were only "Somewhat Interested" was significant at the 1 percent level, while the difference between being "Very Interested" and "Somewhat Interested" was significant at the 10 percent level. The differences across all of the categories of interest were jointly significant at the 1 percent level.

[82] The differences among the three likely-fraudulent ads were statistically significant at the 1 percent level.

opportunity ad.[83] In both cases, these patterns are very similar to what we saw when we looked at the ratings of the likely-fraudulent ads without controlling for other factors (see Table 2).

Summary. Focusing on the likely-fraudulent ads, we identified several characteristics that were correlated with a person being susceptible to consumer fraud – that is, indicating that they would be very likely to purchase the item advertised in a likely-fraudulent advertisement. Several of these characteristics are negatively correlated with indicating that one would be a very-likely purchaser of the product. This may suggest that consumers with these characteristics are better protected against becoming a victim of a fraudulent offer. Some of the negative correlations were expected, including answering more of our consumer literacy questions correctly and being more skeptical, either in situations calling for enhanced caution or in general. We also found, as expected, that those who took the time to think about something for a minute rather than just accepting the seemingly obvious, but actually incorrect, answer were less likely to be very-likely purchasers.

In other cases, we found negative relationships where we had no priors as to what, if any, relationship would be found. Women were less likely than men to say that they would be very-likely purchasers when shown one of our likely-fraudulent ads. In addition, and most interesting, was the negative relationship between answering that one did not know the answer to our consumer literacy questions and having a reduced likelihood of being a very-likely purchaser. This may suggest that consumers are at risk if they do not realize the limits of their knowledge. Admitting to yourself that you do not know may provide protection just as actually knowing the answer does.

Other characteristics were positively correlated with being a very-likely purchaser. Those who were more relatively overconfident were more likely to say that they would be very-likely purchasers. Those who described themselves as being generally more willing to take risks were also more likely to be very-likely purchasers, as were those who described themselves as impulsive or extravagant. Those who said that they had more debt than they could handle financially were also more likely to be very-likely purchasers.

More surprisingly, we found that those who described themselves as preparing for the future were more, rather than less, likely to identify themselves as very-likely purchasers, as were those with greater mathematical skills. Finally, we found that those who had no debt were more likely to be very-likely purchasers than were those who had debt but felt that they could handle more.

6. Ads for More-Plausible Products

The next question we examine is whether the characteristics that are correlated with being a very-likely purchaser of a likely-fraudulent product are also correlated with being a very-likely purchaser of a more-plausible product. That is, are these characteristics only related to the likelihood of purchasing a likely-fraudulent product or do they reflect a more general willingness to purchase a product after seeing an advertisement? We are more interested here in whether the relationships differ between more-plausible and likely-fraudulent ads. We are less interested in

[83] The differences among the three likely-fraudulent ads were statistically significant at the 1 percent level with the exception of the difference between the employment opportunity and vacation ads.

the specific relationships found for more-plausible ads because, in many cases, it is unclear what, if any, relationships should be expected.

To explore this question, we examine the marginal effects of the variables in equation (1) that involve the interaction of the more-plausible ad variable (Pls_i) and consumer characteristics (X_j).[84] The results of the analysis of being a very-likely purchaser when shown a more-plausible advertisement are also reported in Table 4. In addition, the right-most column of the table reports on the significance of the differences between the coefficients when a likely-fraudulent ad was viewed and when a more-plausible one was viewed – i.e., whether, for a particular x, the coefficient on $Frd_i x_j$ differs significantly from the coefficient on $Pls_i x_j$. The results of the analysis of finding a more-plausible ad to be very credible are in Table 5.

For most of the variables of interest, the correlation between the characteristic and the likelihood of saying one would be a very-likely purchaser or finding the ad to be very credible appear to be similar for the more-plausible and the likely-fraudulent advertisements.[85] This was clearly true for the consumer literacy variables. For both the likely-fraudulent and the more-plausible ads, the coefficients on both of the consumer literacy variables in the very-likely purchaser equation were negative and statistically significant. The two consumer literacy variables were jointly significant in both analyses, and the differences between the coefficients for the two types of ads were not statistically significant.[86] When we consider the likelihood of finding the two types of advertisements very credible, we find no relationship between consumer literacy and being very likely to find the ad to be credible with either the likely-fraudulent or the more-plausible ads.

The exact pattern of the overconfidence variables in the analysis of the more-plausible advertisements differed somewhat from the pattern we saw when considering the likely-

[84] The marginal effects here are evaluated with Pls_i set equal to 1, Frd_i set equal to 0, and, as before, the X_j's set equal to the average value across all participants included in the regression.

[85] While most of the individual coefficients do not differ substantially between the likely-fraudulent and more-plausible variables, overall the differences are statistically significant. A test of the joint significance of the differences in all variables, except for the fixed-effects of the individual ads, rejects the hypothesis that all variables are equal to zero in both the very-likely purchaser equation and the very credible equation ($X^2(54) = 108.12$ and $X^2(54) = 206.53$, respectively, both P=0.000).

[86] Including separate variables for the consumer literacy questions drawn from the NFCS and those developed by FTC staff resulted in some differences between the two sets of advertisements. For both the likely-fraudulent and the more-plausible ads, all four coefficients were negative. However, while the correlations were statistically significant for the NFCS variables when considering the likely-fraudulent advertisements, only the coefficient on the number of NFCS questions answered correctly was statistically significant in the more-plausible analysis, and this was only at the 10 percent level. However, the differences between the coefficients for the two types of ads were not statistically significant. The variables based on responses to the FTC staff-developed questions, which were not significantly correlated with being a very-likely purchaser in the analysis of the likely-fraudulent ads, were significant when considering the more-plausible ads. Correctly answering one more of the FTC staff-developed questions decreased the estimated likelihood of being a very-likely purchaser of a more-plausible product by 2.5 percentage points, while increasing the number of FTC questions for which the person said that they did not know the answer by one decreased the estimated likelihood by 3.5 percentage points. Both coefficients were significant at the 5 percent level. However, the coefficients were not significantly different from those in the likely-fraudulent analysis.

fraudulent ads. However, the differences were not statistically significant and the two overconfidence variables remained jointly significant at the 5 percent level or better. The likelihood of being a very-likely purchaser was much higher for those who were highly overconfident with both the likely-fraudulent and more-plausible ads. With both types of ads, the likelihood of finding the ad to be very credible is not correlated with overconfidence.

Whether considering the more-plausible or the likely-fraudulent ads, both of the skepticism variables were negatively correlated with being a likely-purchaser and were highly significant. However, the differences between the coefficients for the two types of advertisements were marginally significant (10 percent level). In more detail, the effect of a one unit difference in situation specific skepticism is smaller when considering the more-plausible advertisements – 1.6 percentage points rather than the 2.1 percentage points estimated when considering the likely-fraudulent ads. This difference is also statistically significant at the 10 percent level. On the other hand, a difference in the level of general advertising skepticism, among those with low situation specific skepticism, is larger when looking at the more-plausible ads, though the difference between the two types of ads is not statistically significant.

To get a better picture of the overall effect of these differences, we consider our model's prediction of the probability that a highly skeptical person will be very-likely to purchase either a likely-fraudulent product or a more-plausible one and the probability that someone with a low degree of skepticism will be a very-likely purchaser of the same products. For the more-plausible products, our equation predicts that someone with low skepticism (a value of -4 on situation specific skepticism and 2.5 on general advertising skepticism) will have a 20.7 percent probability of being a very-likely purchaser. For someone with a high degree of skepticism (6 on situation specific skepticism), the predicted value is 8.5 percent – a difference of 12.2 percentage points. As we discussed earlier, the corresponding predicted values for a likely-fraudulent product were 26.6 percent for a person with low skepticism and 2.1 percent for a person with high skepticism – a difference of 24.4 percentage points. The difference in the likelihood of purchase between the highly skeptical and those who are not skeptical is twice as great when looking at the likely-fraudulent advertisements as when looking at the more-plausible ones.

There are larger differences in the correlation between situation specific skepticism and the likelihood of finding an advertisement to be very credible. When considering the more-plausible advertisements, a one unit increase in situation specific skepticism is correlated with a 3.5 percentage point increase in the likelihood of finding the ad to be very credible. When considering the likely-fraudulent ads, the same one unit increase in situation specific skepticism is correlated with an 0.9 percentage point decline. Both of these coefficients are statistically significant, and the difference between them is significant at the 1 percent level. This difference is not surprising. Because consumers with high levels of situation specific skepticism are able to be skeptical when that is appropriate and not when skepticism is not needed, it is not surprising that someone who is more skeptical in appropriate circumstances would be less skeptical – and therefore might find an advertisement very credible – when the ad is more-plausible.

When considering general willingness to take risks, those who indicated a greater willingness to take risks were more likely to say that they would be very likely to purchase either a likely-fraudulent or a more-plausible product. A higher risk tolerance was associated with a greater increase in the predicted likelihood of purchase for the more-plausible products and the

coefficient was more significant. However, the difference in the two coefficients was not statistically significant. In terms of whether the ad was very credible, there was no significant relationship with willingness to take risks for either the more-plausible or the likely-fraudulent advertisements.

While increased impatience was significantly correlated with a lower likelihood of saying one would be a very-likely purchaser of a likely-fraudulent product, the relationship is statistically insignificant when considering the more-plausible advertisements.

Among the 12 individual characteristics – the "Impulsivity and Resisting Temptation" variables – the only significant differences in terms of the likelihood of being a very-likely purchaser involved characterizing oneself as impulsive and enjoying spending money.[87] While being more impulsive was correlated with a greater likelihood of purchase with both types of advertisements, the coefficient was smaller, and not statistically significant, when analyzing the more-plausible advertisements. On the other hand, those who had a greater enjoyment of spending money were only significantly more likely to be a very-likely purchaser with the more-plausible advertisements.

The correlations between being a very-likely purchaser and the number of cognitive reflection questions answered correctly do not differ significantly whether looking at likely-fraudulent or more-plausible ads. With both types of advertisements, answering more cognitive reflection questions correctly reduced the likelihood of being a very-likely purchaser. For neither set of ads, was there any significant correlation between the number of cognitive reflection questions answered correctly and the likelihood of finding the ad to be very credible.

Having more debt than one can handle financially was correlated with an increased likelihood of being a very-likely purchaser for both likely-fraudulent and more-plausible ads. The difference between the two coefficients was not statistically significant. Having too much debt was correlated with an increased likelihood of finding a likely-fraudulent ad to be very credible. However, there are no significant correlations between the amount of debt and the likelihood of finding an ad very credible when considering a more-plausible ad.

As with the likely-fraudulent advertisements, having greater math skills is correlated with a greater likelihood of being very likely to purchase a more-plausible product, though the relationship is statistically insignificant with the more-plausible products. There are no significant differences between the relationship examining the likely-fraudulent or the more-plausible ads. Correctly answering the more difficult math question – which asked about the expected payoff from a gamble – had an insignificant negative correlation with being a very-likely purchaser of a likely-fraudulent product or of finding a likely-fraudulent product to be very credible. When considering the more-plausible advertisements, the correlation with being a very-likely purchaser was positive, though still insignificant. However, the difference between the two coefficients was significant at the 5 percent level. Answering the more-difficult question correctly was correlated with a significantly greater likelihood of finding a more-plausible ad to be very credible.

[87] Both differences were only significant at the 10 percent level.

As with the likely-fraudulent advertisements, those who were more interested in what was being advertised in the more-plausible advertisements were more likely to indicate that they would be very likely to purchase the product. The coefficients in the more-plausible analysis were not significantly different from those when considering the likely-fraudulent ads. There are also no significant differences in terms of the likelihood of finding an ad to be very credible. Both when considering the likely-fraudulent and the more-plausible ads, those who were "Extremely Interested" in what the item being advertised promised were significantly more likely than other participants to find the ad to be very credible.

While there was no significant correlation between age and the likelihood of being a very-likely purchaser when shown a likely-fraudulent advertisement, those older than the 35 to 44 year old category showed consistent increases in the likelihood of being a very-likely purchaser when shown a more-plausible advertisement.[88] The coefficients, which measure the likelihood of being a very-likely purchaser relative to those who are between 35 and 44, were statistically significant for all of the age categories of 55 to 64 years old and older and were significantly different from the coefficients in the likely-fraudulent regression.

No such relationship with age was found when examining the likelihood that a more-plausible ad would be found to be very credible. With the exception of marginally significant differences for those who were 18 to 24 years old or 55 to 64 years old, relative to those who were between 35 and 44, age had no significant effect on the likelihood of finding a more-plausible ad to be very credible. This may suggest that the increased likelihood of being a very-likely purchaser of the more-plausible products is, in fact, the result of increased underlying demand for these products by older consumers.

As was found when analyzing the likely-fraudulent advertisements, the differences across products in the likelihood of being a very-likely purchaser or finding the ad to be very credible are very similar whether one controls for other factors or just looks at the raw data (Table 2). Notably, the ad-specific fixed effects show that participants were much less likely to be a very-likely purchaser or find the ad to be very credible if they viewed the more-plausible ad for the diet product than when they viewed either the more-plausible ad for the employment opportunity or the vacation offer. This may suggest that participants have a jaundiced view of all diet ads, perhaps because of all of the bogus ads for diet products that they have seen. Participants were also less likely to indicate that they would be very-likely purchasers of the vacation than the employment opportunity both with and without controlling for other factors.

Summary. In sum, most of the variables that were correlated with the likelihood of a participant saying that they would be a very-likely purchaser of a likely-fraudulent product or finding the ad to be very credible were also correlated with the being very likely to purchase a more-plausible product or finding the ad very credible. Consumer literacy, overconfidence, and skepticism have similar effects on the likelihood of being a very-likely purchaser whether viewing a likely-fraudulent or a more-plausible advertisement. A participant's general willingness to take risks, answering additional cognitive reflection questions correctly, and having more debt than one can handle financially also had similar effects in both the likely-fraudulent and more-plausible analyses.

[88] The coefficient for those between 25 and 34 is also positive, though it is far from significant.

Age, however, had a different effect on being a very-likely purchaser of a more-plausible product. Older participants – those older than 44 – were more likely to indicate that they would be very-likely to make a purchase of a more-plausible product. However, they were not more likely to find the advertisement to be very credible, suggesting that the increased likelihood of being a very-likely purchaser may be capturing greater underlying demand.

Given that many of the factors that are correlated with being a very-likely purchaser of a likely-fraudulent product are also associated with being very likely to purchase a more-plausible one, it is natural to wonder whether our results suggest anything more than that some people are more likely than others to say that they would buy a product – whether it be likely-fraudulent or more-plausible. Fully exploring this question is beyond the scope of the present paper. However, in order to shed a little light on this issue, we focused just on the responses of those participants who viewed one likely-fraudulent and one more-plausible ad. Using this subset of our data, we asked whether those who said that they were very likely to purchase the product in the likely-fraudulent ad they saw also said that they would be very likely to purchase the more-plausible product they saw. This analysis suggested that those who were very-likely purchasers of the likely-fraudulent product were more likely to be very-likely purchasers of the more-plausible product.[89] However, the correlation between being a very-likely purchaser of the two products was far from perfect. Only about 40 percent of those who indicated that they would be very likely to purchase the likely-fraudulent product also said that they would be very likely to purchase the more-plausible one.

There do appear to be, therefore, differences between those who indicate that they are very likely to purchase a likely-fraudulent product and those who are very-likely purchasers of a more-plausible product. To the extent that our analysis fails to identify these differences, the differences may be related to factors not considered in our analysis. Or, to the extent that the effect is the result of things we consider, we may simply not have enough observations to identify the differences.

7. Conclusion and Discussion

We have attempted to add to the understanding of what makes consumers more susceptible to becoming victims of consumer fraud. More specifically, we sought to identify personal characteristics that are correlated with being more likely to become a victim. To do this, we conducted a survey using members of an Internet panel. Participants were shown two of six mock print advertisements. The claims in three of the ads – one each for a weight-loss product, an employment opportunity, and a Caribbean vacation – were sufficiently outrageous that they would likely only be found in advertising for a fraudulent offering. The other three ads, which were for the same three types of products, only contained more-plausible claims.

After viewing an ad, participants were asked to evaluate the ad's credibility, and to indicate how likely they would be to purchase the product if they were interested in what the ad

[89] A Chi-square test for the independence of being a very-likely purchaser of the likely-fraudulent product seen and of the more-plausible product had a value of 123.1 with one degree of freedom. This is significant at all levels of significance. We got similar results if we attempted to control for the fact that the likely-fraudulent and more-plausible ads seen differed across participants.

claimed the product offered and they received the ad as an email or saw it as a flyer. Whether participants indicated that they would be very likely to purchase the product is the primary variable of interest in our analysis. We also examine whether participants indicated that they found the ad to be very credible. Study participants were also asked a number of questions that were used to measure the characteristics that we wanted to consider in investigating whether there were correlations with being a very-likely purchaser or finding the ad to be very credible. Our primary focus was on participants' ratings of the likely-fraudulent ads, though we also compared these results with those of an analysis of the more-plausible ads.

There are several limitations that should be kept in mind in interpreting the results of our study. First, it is important to keep in mind that this study is limited to looking for correlations with the various variables in our analysis. We make no representation that the results show causal relationships. In addition, our study was limited to three types of products and to advertisements that were presented as mock print ads. It would be interesting in future research to see whether the relationships we found are replicated for other types of offerings – particularly for financial offerings. It would also be interesting to see whether similar results are found with video advertisements or ads on other media.

In spite of these limitations, our analysis points to several interesting findings. The percentage of participants who indicated that they would be very likely to purchase a product was fairly low for all of the ads – especially for the likely-fraudulent ones. There was, however, a fair amount of variation from one ad to another. For those who viewed one of the three likely-fraudulent advertisements, the percentage indicating that they would be very-likely to purchase the product ranged from 7.3 percent to 12.0 percent. For the three more-plausible ads, the range was from 9.6 percent to 21.4 percent. For both the likely-fraudulent and the more-plausible ads the diet ads had the lowest percentage of very-likely purchasers, while the employment opportunity ads had the highest number. Indeed, the percentage who said that they would be very-likely purchasers of the more-plausible diet product – 9.6 percent – was lower than the percentage among those who were shown the likely-fraudulent employment opportunity ad. This may suggest that many consumers are skeptical of all weight-loss products, perhaps because of negative news reports about diet products that do not work or because they or their friends have previously experienced failure with such products.

Focusing on the likely-fraudulent ads, we identified several characteristics that were correlated with a person being susceptible to consumer fraud – that is, indicating that they would be very likely to purchase a likely-fraudulent product. The correlations with indicating that one would be very likely to purchase the likely-fraudulent product were negative for several of these characteristics, possibly suggesting that consumers with these characteristics may be better protected against becoming a victim. Some of these negative correlations were expected, including answering more of our consumer literacy questions correctly and being more skeptical, either in situations calling for enhanced caution or in general. We also found, as expected, that those who took the time to think about something for a minute rather than just accepting the intuitive, seemingly obvious, but actually incorrect, answer were less likely to be very-likely purchasers.

We also found that women were less likely than men to be very-likely purchasers of our likely-fraudulent products. In addition, and most interesting, was the negative relationship

between answering that one did not know the answer to our consumer literacy questions and having a reduced likelihood of being a very-likely purchaser. This may suggest that consumers are at risk if they do not realize the limits of their knowledge. Admitting that one does not know may provide protection, as does actually knowing the answer.

Other characteristics were positively correlated with being a very-likely purchaser. As we anticipated, those who were more relatively overconfident were more likely to be very-likely purchasers. Those who described themselves as being generally more willing to take risks were also more likely to be very-likely purchasers, as were those who described themselves as impulsive or extravagant. Those who said that they had more debt than they could handle financially were also more likely to say that they would be very-likely purchasers.

More surprisingly, we found that those who described themselves as preparing for the future were more, rather than less, likely to be very-likely purchasers, as were those with greater mathematical skills. Finally, we found that those who had no debt were more likely to be very-likely purchasers than were those who had debt but felt that they could handle more.

We also examined how these same factors affected participants' willingness to purchase the more-plausible products, and found that, in most cases, of the characteristics we examined, those that were correlated with being very likely to purchase one of the likely-fraudulent products were also correlated with being a very-likely purchaser of a more-plausible product. Those who knew the answers to our consumer literacy questions or knew that they did not know the answers were less likely to say that they would be very likely to purchase a more-plausible product, as well as a likely-fraudulent one. The same was true of those who were more skeptical. Those who were overconfident were also more likely to say that they would purchase a product – whether likely-fraudulent or more-plausible.

Our results may raise the possibility that, if one knew how to affect consumers' consumer-literacy knowledge, skepticism, or overconfidence, one might be able to reduce the risk of consumers falling for a fraudulent offer. At the same time, however, it appears that any such adjustment would also make them less responsive to non-fraudulent advertisements. And, while reducing susceptibility to fraud is clearly beneficial both individually and socially, it is less clear that those who are less willing to experiment with new products in general are better off than those who are somewhat more adventurous.

Another consideration that needs to be kept in mind in thinking about the possibility of applying the findings about overconfidence is that being, at least somewhat, overconfident is not necessarily overall welfare reducing, either in terms of psychological wellbeing or in terms of economic growth in general. Would inventors be as likely to undertake these activities if they knew how low the likelihood of success actually was? What about entrepreneurs who establish new businesses?

Figure 1: Likely-Fraudulent Diet Ad

FAT FOE

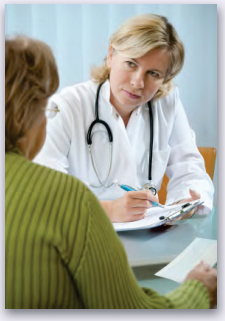
KISS YOUR DIETING DAYS GOODBYE

LOSE UP TO 10 POUNDS PER WEEK

Take our **breakthrough formula** before meals, feast on your favorite foods, and lose up to **2 pounds per day.**

Our **breakthrough ingredient** aubernium binds with food to block the absorbtion of calories.

Guaranteed to deliver permanent weight loss for everyone



I recommend FatFoe to my patients.

Ann Salim M.D.

Available at FatFoe.com or 1-800-FatFoe1

Figure 2: More-Plausible Diet Ad

SLIM PLAN

HELPS YOU LOSE WEIGHT WITH GREAT TASTING FOODS THAT LEAVE YOU FEELING FULLER LONGER

Start changing your life **NOW**

You get to eat foods you'll **LOVE**! We offer lots of delicious, low calorie choices, including decadent chocolate cake and apple pie, so you won't find yourself craving high-calorie foods.

Our delicious foods help you **feel fuller longer** so you can stay on the program and lose weight.

Why wait? Lose weight now

Slim Plan

Visit www.slimplan.com
or call 1-888-slimplan

Slim Plan
Apple Pie

Figure 3: Likely-Faudulent Part-Time Job Ad

Figure 4: More-Plausible Part-Time Job Ad

Figure 5: Likely-Fraudulent Vacation Ad

Figure 6: More-Plausible Vacation Ad

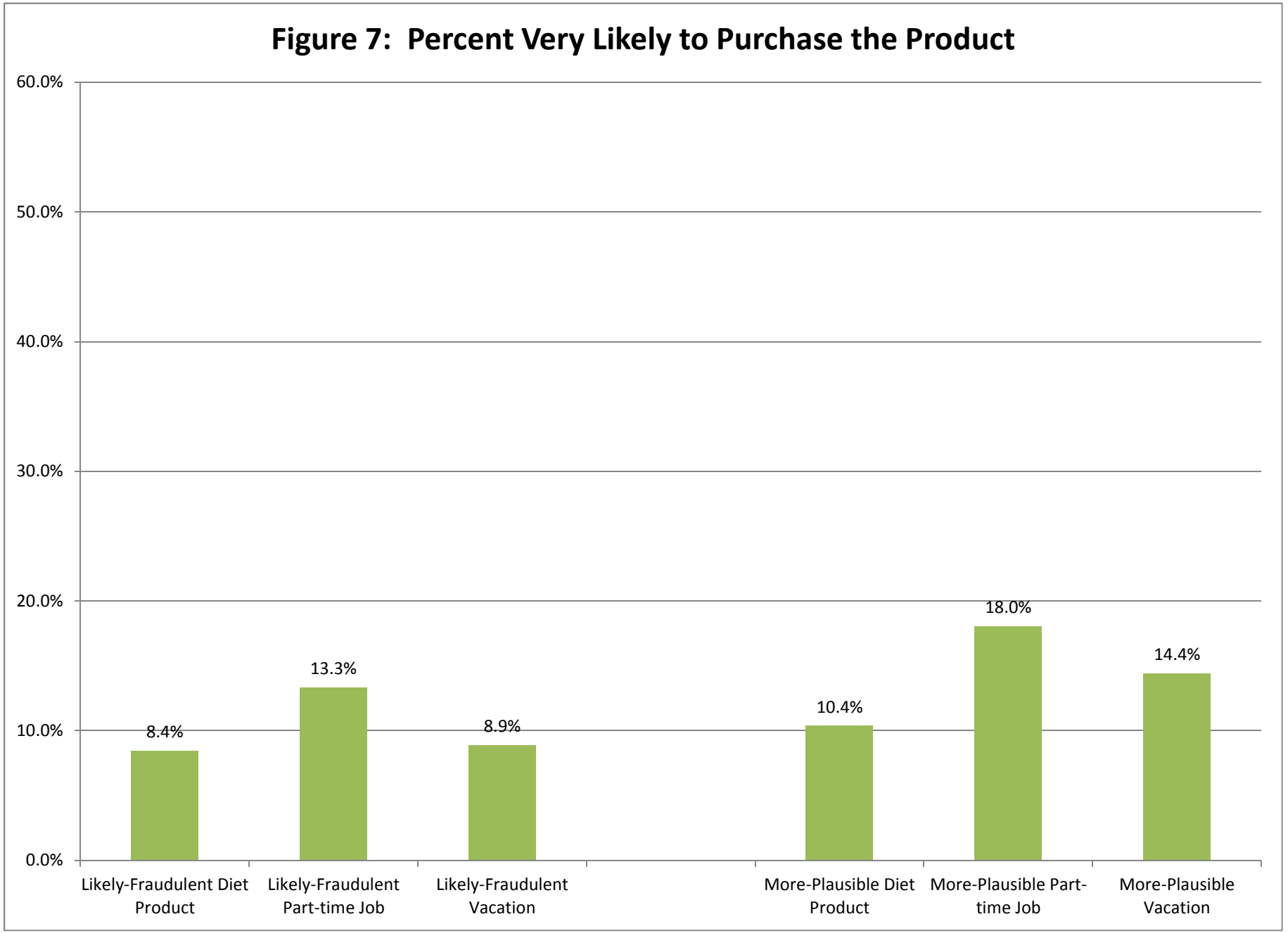


Figure 7: Percent Very Likely to Purchase the Product
60.0%
50.0%
40.0%
30.0%
20.0%
10.0%
0.0%
8.4%
13.3%
8.9%
10.4%
18.0%
14.4%
Likely-Fraudulent Diet Product
Likely-Fraudulent Part-time Job
Likely-Fraudulent Vacation
More-Plausible Diet Product
More-Plausible Part-time Job
More-Plausible Vacation

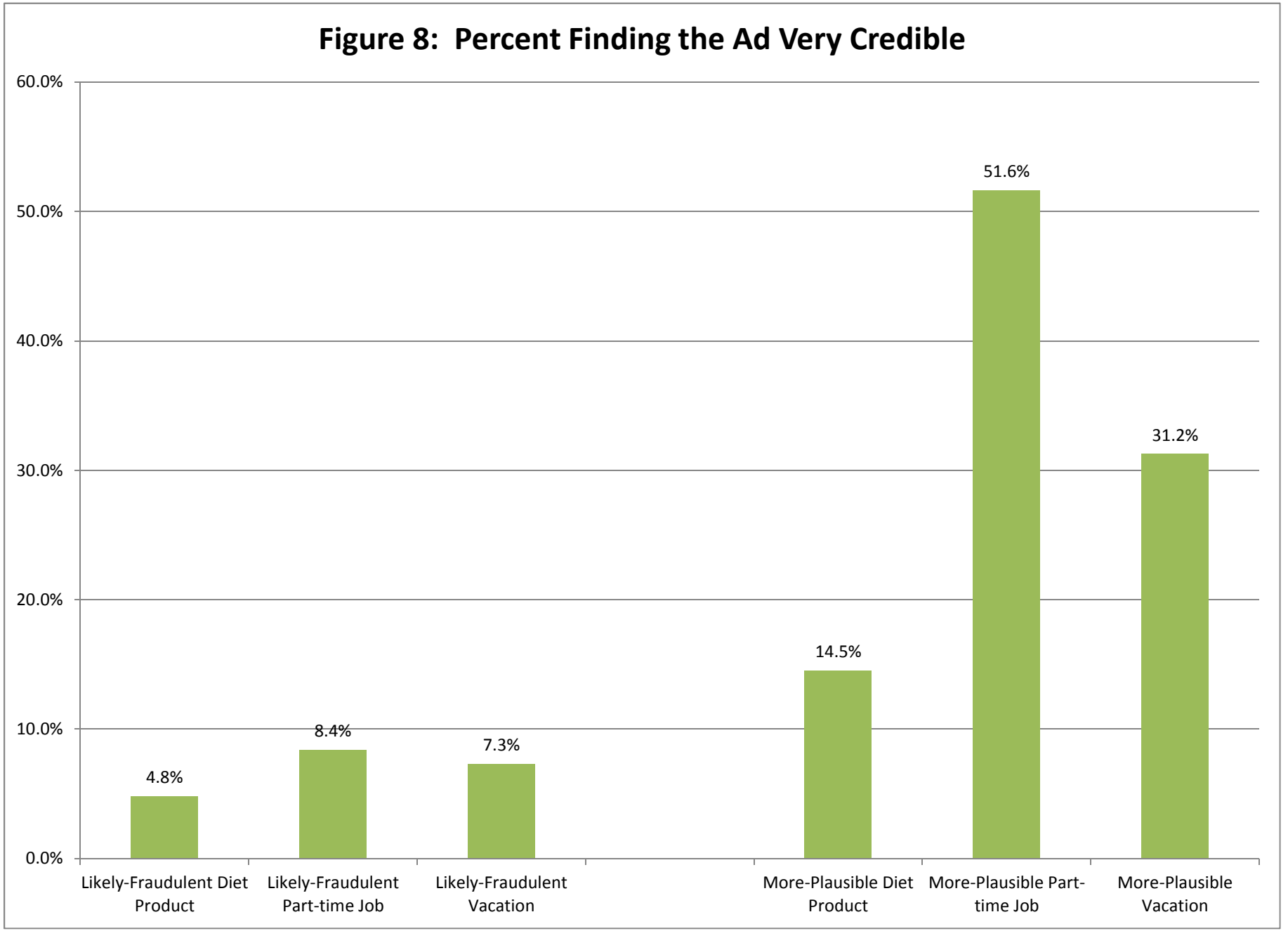


Figure 8: Percent Finding the Ad Very Credible
60.0%
50.0%
40.0%
30.0%
20.0%
10.0%
0.0%
4.8%
8.4%
7.3%
14.5%
51.6%
31.2%
Likely-Fraudulent Diet Product
Likely-Fraudulent Part-time Job
Likely-Fraudulent Vacation
More-Plausible Diet Product
More-Plausible Part-time Job
More-Plausible Vacation

Table 1: Predicted Effects of Explanatory Variables

	Those Who Are Predicted To Be More Likely to be Very-Likely Purchasers of a Likely-Fraudulent Product or To Find A Likely-Fraudulen Advertisement Very Credible (Sign on Coefficient)
Consumer Literacy	Answer Fewer Consumer Literacy Questions Answered Correctly (Negative Sign) No Prediction for Don't Know
Overconfidence	More Overconfident (Positive Sign)
Skepticism	Less Skeptical (Negative Sign)
General Willingness to Take Risks	More Willing to Take Risks (Positive Sign)
Impatient	More Impatient (Positive Sign)
Impulsivity and Resisting Temptation	
Impulsive	More Impulsive (Positive Sign)
Extravagant	More Extravagant (Positive Sign)
Easily Tempted	More Easily Tempted (Positive Sign)
Enjoy Spending Money	Enjoy Spending Money More (Positive Sign)
Careless	More Careless (Positive Sign)
Self-Controlled	Less Self-Controlled (Negative Sign)
Prepare for the Future	Prepare for the Future Less (Negative Sign)
Responsible	Less Responsible (Negative Sign)
Restrained	Less Restrained (Negative Sign)
Rational	Less Rational (Negative Sign)
Methodical	Less Methodical (Negative Sign)
A Planner	Do Less Planning
Number of Cognitive Reflection Questions Answered Correctly	Answer Fewer Cognitive Reflection Questions Correctly (Negative Sign)
Amount of Debt	Have More Debt Than Can Handle
Answered Expected Value Question Correctly	Did Not Answer the Question Correctly (Negative Sign)
Banks and Oldfield Math Skills	Lower Math Skills
Female	No Prediction
Only Adult in the Household	Live Alone (Positive Sign)
Experienced a Recent Negative Life Event	Experienced a Recent Negative Life Event (Positive Sign)

	Those Who Are Predicted To Be More Likely to be Very-Likely Purchasers of a Likely-Fraudulent Product or To Find A Likely-Fraudulen Advertisement Very Credible (Sign on Coefficient)
Race & Ethnicity	Racial Minorities – Particularly African Americans and Latinos
Education	Less Education
Age	Younger Consumers
Income	No Prediction
Interest in Product	No Prediction

Table 2: Evaluation of Study Advertisements

A. Likelihood of Purchasing Product

		Percent Very Likely to Buy[a]	Percent Very Unlikely to Buy[b]	Mean Rating[c]
Diet Product				
	Likely-Fraudulent	7.31% (6.16% - 8.45%)	62.85% (60.73% - 64.98%)	2.39 (2.32 – 2.47)
	More-Plausible	9.56% (7.72% - 11.40%)	43.74% (40.64% - 46.85%)	3.04 (2.93 – 3.15)
Employment Opportunity				
	Likely-Fraudulent	11.97% (10.54% - 13.39%)	44.70% (42.51% - 46.88%)	3.08 (2.99 – 3.16)
	More-Plausible	21.44% (18.88% - 24.01%)	27.74% (24.94% - 30.54%)	3.86 (3.75 – 3.98)
Vacation				
	Likely-Fraudulent	8.45% (7.23% - 9.68%)	45.34% (43.15% - 47.53%)	2.95 (2.88 – 3.03)
	More-Plausible	15.87% (13.60% - 18.15%)	20.53% (18.01% - 23.04%)	3.93 (3.82 – 4.03)

Notes at end of table.

B. Credibility of Ad

		Percent Finding Advertisement Very Credible[d]	Percent Finding Advertisment to Have Very Low Crediblity[e]	Mean Rating[f]
Diet Product				
	Likely-Fraudulent	4.18% (3.30% - 5.06%)	40.93% (38.76% - 43.09%)	2.88 (2.82 – 2.95)
	More-Plausible	11.29% (9.31% - 13.27%)	14.24% (12.06% - 16.43%)	3.92 (3.84 – 4.00)
Employment Opportunity				
	Likely-Fraudulent	7.19% (6.05% - 8.33%)	28.51% (26.52% - 30.49%)	3.36 (3.30 – 3.43)
	More-Plausible	54.78% (51.67% - 57.89%)	6.10% (4.60% - 7.59%)	5.36 (5.27 – 5.46)
Vacation				
	Likely-Fraudulent	6.59% (5.50% - 7.68%)	35.08% (32.98% - 37.18%)	3.17 (3.10 – 3.23)
	More-Plausible	28.41% (25.60% - 31.22%)	5.46% (4.04% - 6.88%)	4.69 (4.62 – 4.77)

Notes.

Figures in parentheses are 95 percent confidence intervals.

a. Percent of participants who gave a response of 1 or 2 to a question that asked how likely it was, based on the ad they had seen, that they would purchase the product if they received the ad as an email or saw it as a flyer and they were interested in what the product was advertised to provide – i.e., weight loss, a part time job, or a Caribbean vacation. The question was answered on a scale of 1 to 7 where 1 meant "Extremely Likely" and 7 meant "Extremely Unlikely."
b. Percent of participants who gave a response of 6 or 7 to the question set out in note a.
c. Responses to the question about buying the product have been reversed in calculating the mean so that a higher rating corresponds to a greater likelihood of purchasing the product.
d. Percent of participants who gave a rating of 2.33 or lower when asked to evaluate the credibility of the ad. Participants' rating of the of ad credibility was the average of their responses to three questions that asked them to evaluate the believability, truthfulness, and deceptiveness of the ad. Each of these questions was in the form "I think the ad is _____" and was rated on a scale of 1 to 7 where 1 meant "Strongly Agree" and 7 meant "Strongly Disagree." Responses to the question about deceptiveness were reverse coded since finding an ad deceptive means that it is not credible.
e. Percent of participants who gave a rating of 5.66 or above on the credibility of the ad.
f. Credibility ratings have been reversed in calculating the mean so that a higher rating corresponds to finding an ad to be more credible.

Table 3: Percent of Participants Who Indicated That They Would be Very Likely to Purchase, by Credibility Rating

	Rated Ad Credibility[a]			
	Very Low	Moderate	High Moderate	Very High
Likely-Fraudulent Ads	1.54% (1.00% - 2.09%)	5.12% (4.29% - 5.95%)	29.36% (25.65% - 33.06%)	50.42% (44.91% - 55.93%)
More-Plausible Ads	5.51% (2.70% - 8.32%)	3.84% (2.71% - 4.97%)	16.13% (13.30% - 18.96%)	32.22% (29.22% - 35.23%)

Note.

Figures in parentheses are 95 percent confidence intervals.

a. Participants' rating of the of ad credibility was the average of their responses to three questions that asked them to evaluate the believability, truthfulness, and deceptiveness of the ad. Each of these questions was in the form "I think the ad is _____" and was rated on a scale of 1 to 7 where 1 meant "Strongly Agree" and 7 meant "Strongly Disagree." Responses to the question about deceptiveness were reverse coded since finding an ad deceptive means that it is not credible. A "Very High" credibility rating was one that was equal to 2.34 or less. A "High Moderate" rating was between 2.66 and 3.34, a "Moderate" rating between 3.66 and 5.33, and a "Very Low" rating was greater than 5.66.

Table 4: Very Likely to Purchase, Likely-Fraudulent and More-Plausible Ads

		Likely-Fraudulent Ads		More-Plausible Ads	Diff
Consumer Literacy					
	Correct	- 0.871% *** (0.340%)		- 1.818% *** (0.650%)	
	Don't Know	- 1.342% *** (0.462%)		- 2.042% ** (0.917%)	
	Joint Significance	***		**	
Overconfidence					
	Absolute	+ 0.522% (0.410%)		+ 1.326% * (0.766%)	
	Relative	+ 1.912% *** (0.654%)		+ 0.994% (1.218%)	
	Joint Significance	***		**	
Skepticism					
	Situation Specific Skepticism	- 2.087% *** (0.438%)		- 1.567% ** (0.741%)	*
	General Advertising Skepticism, Low Situation Specific Skepticism	- 1.213% *** (0.293%)		- 1.857% *** (0.525%)	
	Joint Significance	***		***	*
General Willingness to Take Risks		+ 0.531% * (0.282%)		+ 1.532% *** (0.488%)	
Impatient		- 0.750% *** (0.248%)		- 0.484% (0.436%)	
Impulsivity and Resisting Temptation					
	Impulsive	+ 1.371% *** (0.334%)		+ 0.758% (0.583%)	*
	Extravagant	+ 0.738% *** (0.280%)		+ 0.629% (0.511%)	
	Easily Tempted	+ 0.120% (0.288%)		+ 0.450% (0.527%)	
	Enjoy Spending Money	+ 0.299% (0.285%)		+ 1.676% *** (0.502%)	*
	Careless	+ 0.105% (0.312%)		- 0.111% (0.616%)	
	Self-Controlled	+ 0.621% (0.384%)		+ 0.944% (0.676%)	
	Prepare for the Future	+ 1.003% ** (0.405%)		+ 1.175% * (0.613%)	
	Responsible	- 0.069% (0.448%)		+ 1.420% * (0.837%)	
	Restrained	- 0.143% (0.334%)		+ 0.318% (0.587%)	
	Rational	- 0.468% (0.455%)		- 0.618% (0.770%)	
	Methodical	+ 0.375% (0.376%)		- 0.299% (0.622%)	
	A Planner	+ 0.188% (0.351%)		+ 0.818% (0.620%)	
	Joint Significance	***		***	*

Table 4 (continued)

		Likely-Fraudulent Ads		More-Plausible Ads	Diff
Number of Cognitive Reflection Questions Answered Correctly		- 1.041% ** (0.443%)		- 2.382% *** (0.853%)	
Amount of Debt (Relative to Could Handle More Debt)					
	More Debt than Can Handle Financially	+ 3.277% ** (1.388%)		+ 6.047% ** (2.696%)	
	About as Much Debt as Can Handle	+ 0.230% (0.832%)		- 0.779% (1.629%)	
	Have No Debt	+ 2.555% ** (1.107%)		+ 1.005% (1.947%)	
	Joint Significance	***		**	
Answered Expected Value Question Correctly		- 2.246% (1.368%)		+ 5.204% (3.546%)	**
Banks and Oldfield Math Skills (Relative to Level 4)					
	Level 1	- 2.873% (2.274%)		- 4.529% (3.538%)	
	Level 2	- 3.099% ** (1.250%)		- 3.072% (2.166%)	
	Level 3	- 2.488% ** (1.150%)		+ 0.319% (2.119%)	
	Joint Significance	*			
Female		- 1.982% ** (0.786%)		- 0.657% (1.439%)	
Only Adult in the Household		+ 0.564% (0.971%)		- 2.792% (1.607%)	*
Experienced a Recent Negative Life Event		- 0.326% (0.722%)		- 1.050% (1.342%)	
Race & Ethnicity (Relative to Non-Latino White American)					
	Latino American	+ 3.596% ** (1.757%)		+ 7.247% ** (3.583%)	
	African American	+ 1.819% (1.694%)		+ 5.772% * (3.597%)	
	Asian American	+ 2.060% (1.957%)		+ 3.205% (3.922%)	
	Other	- 1.067% (2.030%)		+ 1.860% (4.984%)	
	Joint Significance			*	
Education (Relative to High School Graduate)					
	Less than High School Graduate	+ 0.344% (3.596%)		+ 1.836% (6.502%)	
	Some College or Technical School	- 0.732% (1.201%)		+ 0.713% (2.234%)	
	College Graduate	- 1.568% (1.249%)		- 3.242% (2.319%)	
	Education Beyond a BA	- 1.846% (1.372%)		- 4.433% * (2.522%)	
	Joint Significance			*	

Table 4 (continued)

		Likely-Fraudulent Ads		More-Plausible Ads	Diff
Age (Relative to 35 – 44 years old)					
	18 – 24 years old	+ 0.089% (1.544%)		- 0.139% (2.357%)	
	25 – 34 years old	+ 0.526% (1.191%)		+ 0.466% (1.916%)	
	45 – 54 years old	- 0.719% (1.134%)		+ 3.042% (2.035%)	
	55 – 64 years old	- 0.098% (1.231%)		+ 5.470% ** (2.342%)	*
	65 – 74 years old	- 1.300% (1.260%)		+ 7.084% *** (2.548%)	***
	75 years old or over	- 1.660% (2.049%)		+ 8.297% ** (4.518%)	**
	Joint Significance			**	**
Income (Relative to $40,000 - $60,000)					
	Less than $20,000	+ 0.728% (1.350%)		+ 4.308% (3.104%)	
	$20,000 - $40,000	+ 1.127% (1.168%)		+ 0.111% (2.196%)	
	$60,000 - $80,000	0.457% (1.160%)		- 4.084% ** (2.066%)	*
	$80,000 - $100,000	+ 0.775% (1.273%)		+ 0.725% (2.389%)	
	Over $100,000	0.440% (1.158%)		- 0.999% (2.284%)	
	Joint Significance			*	
Interest in Product (Relative to Somewhat Interested)					
	Extremely Interested	+ 11.000% *** (1.466%)		+ 11.007% *** (2.318%)	
	Very Interested	+ 1.098% (0.986%)		+ 5.289% *** (2.081%)	
	Not Very Interested	- 1.802% ** (0.881%)		- 3.793% ** (1.690%)	
	Not at All Interested	- 2.145% ** (0.884%)		- 3.161% * (1.806%)	
	Joint Significance	***		***	

Table 4 (continued)

		Likely-Fraudulent Ads		More-Plausible Ads	Diff
Ad Seen (Relative to Saw Likely-Fraudulent Employment Opportunity Ad)					
	Saw Likely-Fraudulent Diet Ad	- 3.642% *** (0.805%)		----	
	Saw Likely-Fraudulent Vacation Ad	- 2.059% ** (0.869%)		----	
	Joint Significance	***			
Ad Seen (Relative to Saw More-Plausible Employment Opportunity Ad)					
	Saw More-Plausible Diet Ad	----		- 13.872% *** (1.621%)	
	Saw More-Plausible Vacation Ad	----		- 6.988% *** (1.847%)	
				***	
Joint Significance of All Variables Except Ad Seen (X^2 (54))		507.63 ***		290.84 ***	
Observations		5,183		2,579	

Note.

* denotes statistical significance at the 10 percent level
** denotes statistical significance at the 5 percent level
*** denotes statistical significance at the 1 percent level

Table 5: Advertisement is Very Credible, Likely-Fraudulent and More-Plausible Ads

		Likely-Fraudulent Ads		More-Plausible Ads	Diff
Consumer Literacy					
	Correct	+ 0.036% (0.301%)		- 0.029% (0.996%)	
	Don't Know	- 0.108% (0.388%)		+ 0.024% (1.424%)	
	Joint Significance				
Overconfidence					
	Absolute	+ 0.402% (0.367%)		+ 0.932% (1.147%)	
	Relative	+ 0.241% (0.575%)		+ 1.067% (1.887%)	
	Joint Significance				
Skepticism					
	Situation Specific Skepticism	- 0.928% ** (0.412%)		+ 3.533% *** (1.123%)	***
	General Advertising Skepticism, Low Situation Specific Skepticism	- 0.659% ** (0.265%)		- 2.687% *** (0.815%)	
	Joint Significance	**		***	***
General Willingness to Take Risks		- 0.068% (0.243%)		+ 0.289% (0.730%)	
Impatient		- 0.589% *** (0.221%)		- 0.235% (0.647%)	*
Impulsivity and Resisting Temptation					
	Impulsive	+ 0.448% (0.289%)		+ 1.750% * (0.902%)	
	Extravagant	+ 0.289% (0.260%)		- 1.024% (0.797%)	*
	Easily Tempted	- 0.219% (0.265%)		- 0.755% (0.771%)	
	Enjoy Spending Money	+ 0.758% *** (0.250%)		+ 2.493% *** (0.732%)	
	Careless	+ 0.307% (0.295%)		- 0.779% (0.946%)	
	Self-Controlled	+ 0.108% (0.315%)		+ 2.089% ** (0.967%)	
	Prepare for the Future	+ 0.744% ** (0.340%)		+ 2.139% ** (0.890%)	
	Responsible	- 0.013% (0.397%)		+ 3.270% *** (1.246%)	*
	Restrained	- 0.290% (0.291%)		- 0.096% (0.862%)	
	Rational	+ 0.154% (0.415%)		- 0.650% (1.200%)	
	Methodical	+ 0.433% (0.345%)		+ 0.103% (0.962%)	
	A Planner	- 0.167% (0.332%)		- 0.864% (0.941%)	
	Joint Significance	***		***	**

Table 5 (continued)

		Likely-Fraudulent Ads		More-Plausible Ads	Diff
Number of Cognitive Reflection Questions Answered Correctly		- 0.633% (0.403%)		- 0.851% (1.186%)	
Amount of Debt (Relative to Could Handle More Debt)					
	More Debt than Can Handle Financially	+ 2.229% ** (1.206%)		- 0.914% (3.688%)	
	About as Much Debt as Can Handle	+ 1.260% * (0.752%)		- 1.524% (2.477%)	*
	Have No Debt	+ 2.010% ** (0.944%)		- 0.701% (2.818%)	*
	Joint Significance	*			
Answered Expected Value Question Correctly		- 0.084% (1.362%)		+ 10.597% ** (4.539%)	*
Banks and Oldfield Math Skills (Relative to Level 4)					
	Level 1	+ 0.853% (2.174%)		-12.055% * (5.875%)	*
	Level 2	+ 0.759% (0.978%)		- 2.321% (3.104%)	
	Level 3	+ 1.821% * (0.961%)		- 0.735% (2.867%)	
	Joint Significance				
Female		- 1.522% ** (0.688%)		+ 0.148% (2.111%)	*
Only Adult in the Household		- 0.756% (0.832%)		+ 0.349% (2.665%)	
Experienced a Recent Negative Life Event		- 1.070% * (0.638%)		+ 1.897% (2.036%)	*
Race & Ethnicity (Relative to Non-Latino White American)					
	Latino American	+ 0.597% (1.395%)		+ 1.169% (4.568%)	
	African American	+ 2.806% * (1.701%)		+ 7.782% (5.341%)	
	Asian American	+ 1.483% (1.808%)		- 9.890% * (4.926%)	**
	Other	+ 0.323% (2.197%)		+ 2.325% (8.118%)	
	Joint Significance				
Education (Relative to High School Graduate)					
	Less than High School Graduate	- 4.007% (2.061%)		- 8.700% (8.818%)	
	Some College or Technical School	- 2.334% ** (1.116%)		+ 1.057% (3.196%)	*
	College Graduate	- 2.560% ** (1.163%)		- 2.174% (3.386%)	
	Education Beyond a BA	- 0.668% (1.355%)		- 1.237% (3.688%)	
	Joint Significance	**			

Table 5 (continued)

		Likely-Fraudulent Ads		More-Plausible Ads	Diff
Age (Relative to 35 – 44 years old)					
	18 – 24 years old	- 0.887% (1.404%)		- 6.835% * (3.930%)	
	25 – 34 years old	-0.913% (1.026%)		- 1.492% (3.197%)	
	45 – 54 years old	+ 0.676% (1.065%)		+ 4.126% (3.223%)	
	55 – 64 years old	+ 0.547% (1.157%)		+ 6.155% * (3.513%)	
	65 – 74 years old	- 0.685% (1.117%)		- 0.113% (3.396%)	
	75 years old or over	- 1.370% (1.727%)		+ 3.317% (5.841%)	
	Joint Significance			*	
Income (Relative to $40,000 - $60,000)					
	Less than $20,000	+ 1.196% (1.364%)		+ 4.809% (4.493%)	
	$20,000 - $40,000	+ 1.971% * (1.051%)		- 3.043% (3.244%)	**
	$60,000 - $80,000	+ 0.144% (0.981%)		- 0.213% (3.265%)	
	$80,000 - $100,000	+ 0.333% (1.067%)		- 1.778% (3.440%)	
	Over $100,000	+ 0.703% (1.007%)		- 0.866% (3.349%)	
	Joint Significance				
Interest in Product (Relative to Somewhat Interested)					
	Extremely Interested	+ 2.829% *** (1.045%)		+ 9.016% *** (3.102%)	
	Very Interested	+ 1.580% * (0.922%)		+ 3.238% (2.911%)	
	Not Very Interested	- 0.337% (0.826%)		+ 6.056% (2.850%)	
	Not at All Interested	- 0.821% (0.840%)		- 6.386% ** (2.733%)	
	Joint Significance	***		***	

Table 5 (continued)

		Likely-Fraudulent Ads		More-Plausible Ads	Diff
Ad Seen (Relative to Saw Likely-Fraudulent Employment Opportunity Ad)					
	Saw Likely-Fraudulent Diet Ad	- 3.068% *** (0.688%)		----	
	Saw Likely-Fraudulent Vacation Ad	- 0.703% (0.776%)		----	
	Joint Significance	***			
Ad Seen (Relative to Saw More-Plausible Employment Opportunity Ad)					
	Saw More-Plausible Diet Ad	----		- 48.636% *** (2.059%)	
	Saw More-Plausible Vacation Ad	----		- 31.513% *** (2.362%)	
	Joint Significance			***	
Joint Significance of All Variables Except Ad Seen (X^2 (54))		151.15 ***		249.82 ***	
Observations		5,183		2,579	

Note.

* denotes statistical significance at the 10 percent level
** denotes statistical significance at the 5 percent level
*** denotes statistical significance at the 1 percent level

Appendix A: Summary Statistics, Explanatory Variables

a. Continuous Variables

	Mean	S.D.	Minimum	Maximum
Consumer Literacy				
Correct	5.267	1.623	0	7
Don't Know	0.600	1.140	0	7
Overconfidence				
Absolute	0.629	1.268	- 5	6
Relative	0.564	0.848	- 2	3
Skepticism				
Situation Specific Skepticism	2.159	1.389	- 4	6
General Advertising Skepticism, Low Situation Specific Skepticism	1.186	1.953	0	7
General Willingness to Take Risks	3.884	1.517	1	7
Impatient	4.041	1.581	1	7
Impulsivity and Resisting Temptation				
Impulsive	3.271	1.402	1	7
Extravagant	2.901	1.521	1	7
Easily Tempted	3.431	1.476	1	7
Enjoy Spending Money	4.077	1.579	1	7
Careless	2.431	1.407	1	7
Self-Controlled	5.156	1.364	1	7
Prepare for the Future	4.912	1.481	1	7
Responsible	5.758	1.401	1	7
Restrained	4.845	1.353	1	7
Rational	5.479	1.383	1	7
Methodical	5.013	1.399	1	7
A Planner	5.285	1.486	1	7
Number of Cognitive Reflection Questions Answered Correctly	0.673	0.934	0	3
Answered Expected Value Question Correctly	0.061	0.240	0	1
Answered Expected Value Question Correctly	0.062	0.240	0	1
Female	0.519	0.500	0	1
Only Adult in Household	0.165	0.372	0	1
Experienced a Recent Negative Life Event	0.385	0.486	0	1

Appendix A (continued)

b. Categorical Variables

		Percent
Amount of Debt (Relative to Could Handle More Debt)		
	More Debt than Can Handle Financially	12.0%
	About as Much Debt as Can Handle	36.5%
	Could Handle More Debt	28.8%
	Have No Debt	22.7%
Banks and Oldfield Math Skills		
	Level 1	
	Level 2	3.2%
	Level 3	37.7%
	Level 4	23.3%
		35.8%
Race & Ethnicity		
	Latino Americans	5.9%
	African American	5.4%
	Asian Americans	3.9%
	Non-Latino White Americans	82.9%
	Other	1.9%
Education (Relative to High School Graduate)		
	Less than High School Graduate	1.3%
	High School Graduate	14.3%
	Some College or Technical School	34.7%
	College Graduate	29.2%
	Education Beyond a BA	20.6%
Age		
	18 – 24 years old	8.6%
	25 – 34 years old	19.6%
	35 – 44 years old	16.9%
	45 – 54 years old	20.3%
	55 – 64 years old	16.2%
	65 – 74 years old	15.0%
	75 years old or over	3.5%

Appendix A (continued)

		Percent
Income		
	Less than $20,000	9.5%
	$20,000 - $40,000	19.0%
	$40,000 - $60,000	17.4%
	$60,000 - $80,000	17.7%
	$80,000 - $100,000	14.7%
	Over $100,000	21.8%
Interest in Product		
	Extremely Interested	17.7%
	Very Interested	17.8%
	Somewhat Interested	30.0%
	Not Very Interested	17.7%
	Not at All Interested	16.9%

Appendix B:

Questionnaire And Recruitment E-Mails

Text of Email to Be Used to Recruit Participants from Ipsos Panel

Hi $FIRSTNAME,

A new survey is available!

i-Say wants to give you the chance to do more with your opinion. Every survey counts toward improving products and services used every day! If you can, start this survey now or you may miss this opportunity to participate and earn rewards. By completing this survey, you will earn **i-Say points** and an entry into our **$5,000 Monthly Click Draw**.

Start the Survey

Note: If clicking above doesn't work, copy and paste this URL into your browser:
$LINK$PANELISTID&supplierID=$SupplierID&ci=$LANGUAGECODE-$IPS_COUNTRYCODE

As always, your responses will be kept confidential. Thank you for your participation.

Sincerely,

Emily Martin
Director of Research

You are receiving this email as a registered member of the i-Say panel. To ensure receipt of future email communication and surveys, please add questions@i-say.com to your safe senders list.

CONTACT US

Email: questions@i say.com

i Say Team
1600 Stewart Ave. Suite 500
Westbury, NY 11590

REFERENCE

PIN number: $PANELISTID

Survey: $ISIS

TRUSTe Certified Email

SOCIAL

Facebook
Twitter
Blog

UNSUBSCRIBE | PRIVACY POLICY | REWARDS PROGRAM

CASRO

We are a member of the Council of American Survey Research Organizations (CASRO)

This research is being conducted for the United States Federal Trade Commission.
OMB Control # 3084-[Insert]
Expires [Insert]

Text of Reminder Email to Be Sent to Members of the Ipsos Panel Who Do Not Respond to the Initial Invitation

Hi $MFN,

We recently invited you to take part in a survey and there is still time to share your opinion.

If you already completed this survey we thank you for your participation. If not, now is your chance. By completing this survey, you will earn **i-Say points**, and an entry into our **$5,000 Monthly Click Draw**.

Start the Survey

Note: If clicking above doesn't work, copy and paste this URL into your browser:
$LINK$PANELISTID

As always, your responses will be kept confidential. Thank you for your participation.

Sincerely,

Emily Martin
Director of Research

You are receiving this email as a registered member of the i-Say panel. To ensure receipt of future email communication and surveys, please add questions@i-say.com to your safe senders list.

CONTACT US

Email: questions@i say.com

i Say Team
1600 Stewart Ave. Suite 500
Westbury, NY 11590

REFERENCE

PIN number: $PANELISTID

Survey: $ISIS

TRUSTe Certified Email

SOCIAL

Facebook
Twitter
Blog

UNSUBSCRIBE | PRIVACY POLICY | REWARDS PROGRAM

CASRO

We are a member of the Council of American Survey Research Organizations (CASRO)

This research is being conducted for the United States Federal Trade Commission.
OMB Control # 3084-[Insert]
Expires [Insert]

First Screen Seen by Those Who Respond to the Invitation To Participate

You are being asked to participate in a survey about how people interpret advertisements. If you agree to take part in this research, you will be asked to read two hypothetical print advertisements and answer some questions about them. You will also be asked questions about yourself that may help us understand whether people's views about the ads are correlated with other characteristics they may have. The study will take about 30 minutes.

You can earn up to 90 reward points, plus an entry into our monthly sweepstakes (with various prizes worth up to $5,000).

Please remember that your participation is completely voluntary. As always, please be assured that we will treat your responses as confidential and will only use and disclose your information in accordance with our Privacy Policy, which is located at http://www.i-say.com/Privacy/PRIVACYPOLICY/tabid/167/language/en-US/Default.aspx

If you have questions about this survey, please email questions@isay.com.

This research is being conducted for the United States Federal Trade Commission ("FTC").
OMB Control #3084-[Insert]
Expires [Insert]

We will share survey responses with the FTC, but not your identity. For more information about how the FTC uses and handles the information it collects, please visit the FTC's privacy policy at http://www.ftc.gov/ftc/privacy.shtm.

Disclosure of Estimated Burden

The estimated average burden associated with this information collection is 35 minutes per respondent. Burden estimates include the time for reviewing instructions, gathering and maintaining data in the required form, and completing the information collection, but exclude the time for compiling and maintaining business records in the normal course of a respondent's activities. A Federal agency may not conduct or sponsor, and an organization (or a person) is not required to respond to a collection of information, unless it displays a currently valid OMB control number. Comments concerning the accuracy of this burden estimate and suggestions for reducing this burden should be directed to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, D.C. 20503, and to Keith B. Anderson, Economist, Bureau of Economics, Federal Trade Commission, 600 Pennsylvania Avenue, NW, Mail Stop NJ-4136, Washington, D.C. 20580.

Questionnaire

[Ad Credibility]

[**Programmer: Display the following text on the screen.]**

In the first part of this survey, you will see two hypothetical print advertisements like you might see in a magazine, a newspaper, a flyer, or an email. We have not used real brand names or addresses in the ads.

Please examine each ad as you would an actual ad.

[Programmer: There will be ads for three products – a diet product, a job ad, and a vacation. For each product, there will be both a fraudulent and a plausible ad. Each person will see two ads. Which two ads each person sees should be chosen by randomly selecting one of the 18 pairs on the list at the end of this questionnaire.

Show the subject the first ad with the following text above the ad.]

Please examine this ad. When you are ready to proceed, click on "Next."

[Programmer: When the person clicks on the "Continue" button, display the following text and the grid with the three descriptions on the screen. Also provide buttons for "Review Ad" and "Continue."]

We would like to learn something about your opinions about this ad. Below are several brief statements that may describe your views of the ad to one degree or another. On a scale of 1 to 7, where 1 indicates that you strongly agree with the statement and 7 indicates that you strongly disagree, please indicate how much you agree or disagree with the statement. There are no right or wrong answers to these questions, we just want to know your opinions about the ads. If you would like to view the ad again while answering these questions, please click on "Review Ad."

	Strongly Agree			Neither Agree nor Disagree			Strongly Disagree
I think the ad is believable	1	2	3	4	5	6	7
I think the ad is truthful	1	2	3	4	5	6	7
I think the ad is deceptive	1	2	3	4	5	6	7

[Programmer: If the person clicks on "Review Ad" show them the ad again.]

[Purchase Intention]

[Programmer: After the person answers all three of the above questions, display the following text on the screen along with the grid with the following questions. Again, include "Review Ad" and "Continue" buttons.]

We would also like to know whether, based on the ad, you would be likely to buy this product, or would recommend it to a friend, if you actually received the ad as an email or saw it as a flyer. On a scale of 1 to 7, for each of the following two questions, please describe the likelihood that you would take the action described where 1 indicates that it is extremely likely and 7 indicates that it is extremely unlikely that you would take the action. Again, there are no right or wrong answers, we just want to know how you would react. As before, if you would like to view the ad again while answering these questions, please click on "Review Ad."

	Extremely Likely			Neither Likely Nor Unlikely			Extremely Unlikely
How likely would you be to *[Insert Product Action]* if you *[Insert What Product Does]*?	1	2	3	4	5	6	7
If friends *[Insert What Product Does]*, how likely would you be to recommend *[Insert Product Name]* to them?	1	2	3	4	5	6	7

[Programmer: Here is the table of inserts for the above table:

Ad Seen	**Product Name**	**Product Action**	**What Product Does**
Fraudulent Diet Ad	FatFoe	try FatFoe	wanted to lose weight
Plausible Diet Ad	SlimPlan	try SlimPlan	wanted to lose weight
Fraudulent Job Ad	BillFromHome.net	try and get a job with BillFromHome.net	wanted some additional income
Plausible Job Ad	JavaJoe's	try and get a job with Java Joe's	wanted some additional income
Fraudulent Vacation Ad	the Regal Cancun	book at the Regal Cancun	wanted a Caribbean vacation
Plausible Vacation Ad	the Regal Cancun	book at the Regal Cancun	wanted a Caribbean vacation

[Programmer: After the person answers the above two sets of questions on a first ad, they should be presented with the second ad from the pair of ads that was selected for that person and asked to answer the same two sets of questions. After the person answers the questions about the second ad, they should proceed to the next section.]

[Impulsive / Risk Taking / Impatient]

Now, I would like to learn something about how you generally view yourself. Below are several adjectives that could describe you. On a scale of 1 to 7 where 1 indicates that the sentence would almost always describe you and 7 indicates that it would almost never describe you, please indicate how well each of the following would describe you.

	Almost always would describe me			Sometimes would describe me			Almost never would describe me
Impulsive	1	2	3	4	5	6	7
Careless	1	2	3	4	5	6	7
Self-controlled	1	2	3	4	5	6	7
Extravagant	1	2	3	4	5	6	7
Prepare for the future	1	2	3	4	5	6	7
Responsible	1	2	3	4	5	6	7
Restrained	1	2	3	4	5	6	7
Easily tempted	1	2	3	4	5	6	7
Rational	1	2	3	4	5	6	7
Methodical	1	2	3	4	5	6	7
Enjoy spending money	1	2	3	4	5	6	7
A planner	1	2	3	4	5	6	7
Willing to take risks	1	2	3	4	5	6	7
Impatient	1	2	3	4	5	6	7

[Cognitive Reflection Test]

Please answer the following questions by typing in a number.

A bat and a ball cost $1.10 in total. The bat costs $1 more than the ball. How much does the ball cost?

_____ cents.

If it takes five machines five minutes to make five widgets, how long would it take 100 machines to make 100 widgets?

_____ minutes

In a lake, there is a patch of lily pads. Every day, the patch of lily pads doubles in size. If it takes 48 days for the patch to cover the entire lake, how long would it take for the patch to cover half of the lake?

_____ days

[Numerical Skills]

Again, please answer the following questions by typing in your answer.

Suppose that each time a gambling game is played a person has a 25 percent chance of winning $20 and a 75 percent chance of losing $4. If a large number of people play the game, what would be the average winnings or losses per person?

On average, people would *[ ]* win / *[ ]* lose $_____. (Please check either "win" or "lose" depending on whether people would, on average, win or lose money and indicate how much money they would win or lose on average.)

During a sale, a store is selling all items at half price. Before the sale, you had admired a sofa that cost $600. How much would the sofa cost during the sale?

The sofa would cost $____ during the sale.

If the chance of getting a disease is 10 percent, out of 1,000 people, how many would be expected to get the disease?

_____ people would get the disease.

A used car dealer is selling a car for $10,000. This is two-thirds of what the car cost new. How much did the car cost when it was new.

The car cost $_____ when it was new.

If five people have the winning number in a lottery and the total prize is $2 million, how much will each of them get?

Each person will get $_____.

Let's say you have $200 in a savings account. The account earns 10 percent interest compounded annually. If you have not withdrawn any money, how much will you have in the account at the end of two years?

There will be $____ in the account at the end of two years.

We would like to know how confident you are in your answers you just gave. Of the last six questions you just answered– beginning with the question about the amount people would win or lose in a gamble and continuing through the question you just answered about the amount of money in the savings account – how many do you think you answered correctly?

I answered ___ of the previous six questions correctly.

How do you think your performance on these questions compared to that of all the other people who are participating in this survey? Do you think that you were:

[ ] Among the top quarter of participants – those who did the best on these questions
[ ] Not among the top quarter of participants, but among the top half
[ ] In the bottom half of participants, but not in the bottom quarter
[ ] In the bottom quarter of all participants – those who did the worst on these questions

[General Ad Skepticism]

Now, please tell me how much you agree or disagree with each of the following statements, again using a scale of 1 to 7. A 1 indicates that you strongly agree, while a 7 says that you strongly disagree.

	Strongly Agree			Neither Agree nor Disagree			Strongly Disagree
We can depend on getting the truth in most advertising	1	2	3	4	5	6	7
Advertising's aim is to inform the consumer	1	2	3	4	5	6	7
I believe advertising is generally truthful	1	2	3	4	5	6	7
Advertising is a reliable source of information about the quality and performance of products.	1	2	3	4	5	6	7
Advertising is truth well told.	1	2	3	4	5	6	7
In general, advertising presents a true picture of the product being advertised	1	2	3	4	5	6	7
I feel I've been accurately informed after viewing most advertisements.	1	2	3	4	5	6	7
Most advertising provides consumers with essential information	1	2	3	4	5	6	7

[Skepticism in Specific Situations]

Below are several claims that might be made about a product or an offer, followed by a question about the product or offer. On a scale of 1 to 7, please indicate how likely you think it is that the claim is true, where 1 indicates that you think it very likely that the claim is true and 7 indicates that you think it very unlikely. There are no right or wrong answers to these questions, we just want to find out what you think.

	Very Likely To Be True			Neither Likely nor Unlikely to be True			Very Unlikely To Be True
A telemarketer tells you he has a great offer for you – a wonderful product at a great price. However, you need to act now because the offer is only available today. How likely is it that the offer is, in fact, a wonderful product at a great price?	1	2	3	4	5	6	7
Your local department store advertises a shirt that it says has very vibrant color. How likely is it that the shirt's color is as described?	1	2	3	4	5	6	7
An advertisement from a company you have never heard of claims that its product is of the highest quality. How likely is it that the product is of high quality?	1	2	3	4	5	6	7
Your local grocery store says that a product is on sale and a good value. How likely is it that the offer is, in fact, a good value?	1	2	3	4	5	6	7
An advertisement features a famous athlete or movie star who says that the product works great and it will work for you. How likely is it that the product will work for you as the advertisement claims?	1	2	3	4	5	6	7
A marketer claims that his product contains a new break-through ingredient that the major drug firms do not want you to know about. How likely is it that the product will work for you as the advertisement claims?	1	2	3	4	5	6	7
Your local store advertises its work pants and says that they are extremely durable. How likely is it that the works pants are, in fact, very durable?	1	2	3	4	5	6	7
A well-known company from whom you have bought many good products in the past advertises the high quality of its new line or products. How likely is it that the product is of high quality?	1	2	3	4	5	6	7

A friend tells you about a new cleaning product that he has used and says that he thinks it would work well for you. How likely is it that the product will work for you as your friend says it will?	1	2	3	4	5	6	7
A 30 minute advertisement on late night television claims that a product will work wonders. How likely is it that the product will work as the advertisement claims?	1	2	3	4	5	6	7

[Consumer Literacy]

Suppose that you had $100 in a savings account and the interest rate was 2 percent per year. After 5 years, how much do you think you would have in the account if you left the money to grow?

[ ] More than $102
[ ] Exactly $102
[ ] Less than $102
[ ] Don't know.

Imagine that the interest rate on your savings account was 1 percent per year and inflation was 2 percent per year. After one year, how much would you be able to buy with the money in this account?

[ ] More than today
[ ] Exactly the same
[ ] Less than today
[ ] Don't know

A 15-year mortgage typically requires higher monthly payments than a 30-year mortgage, but the total interest paid over the life of the loan will be less.

[ ] True
[ ] False
[ ] Don't know

When you diversify your investment portfolio – for example, by buying mutual funds rather than putting all of your money in a single stock – how does the risk that you will lose a substantial share of the total amount you invest change?

[ ] It increases
[ ] It decreases
[ ] It could increase or decrease
[ ] It remains the same
[ ] Don't know

If you lose your credit card and someone uses it to buy a $500 television set, how much will you be required to pay out of your own pocket?

[ ] $500
[ ] $500, unless you purchased insurance to protect you against the loss of your credit card
[ ] $250
[ ] $100
[ ] $50
[ ] $0
[ ] Don't know

Suppose you are ordering something from an Internet website and are trying to decide how to pay for the purchase. Which of the following payment mechanisms provides you with the greatest protections if the product is not received or does not work as you expected?

[ ] Cash
[ ] Personal check
[ ] Money order
[ ] Credit card
[ ] Don't know

Suppose you missed several payments on a loan three years ago. Which of the following statements best describes the impact these missed payments would have on your ability to get a new loan?

[ ] Lenders will know about the missed payments on the old loan and will use this information in deciding whether to approve a new loan and what interest rate to charge.
[ ] Privacy policies for financial transactions will prevent lenders from finding out about the missed payments on the old loan.
[ ] Federal law prohibits lenders from considering any missed payments that occurred more than two years ago.
[ ] Lenders do not care about a consumer's past experience with other lenders as long as the consumer is currently employed and earns enough money to make the new loan payments.
[ ] Don't know.

[Programmer: Below are two options for the next question. The option to use depends on whether the person checked the "Don't know" box on any of the preceding seven questions. If the answer to any of the seven questions was "Don't know" use Option I, else use Option II.]

[Option I]

Of the last seven questions we asked – beginning with the question about how much money you would have in your checking account after five years – you answered **[Insert the number of questions for which the person did not answer "Don't know"]**. (On the other **[Insert the number of questions for which the person answered "Don't know."]** you said that you did not know the answer.) How many of these **[Insert the number of questions for which the person did not answer "Don't know"]** questions do you think you got correct?

I think I got _____ of the **[Insert the number of questions for which the person did not answer "Don't know"]** questions I answered correct.

[Option II]

Of the last seven questions we asked – beginning with the question about how much money you would have in your checking account after five years – how many do you think you got correct?

I think I got _____ of the last seven questions correct.

[Risk Taking – Specific Domains]

We would now like to know how willing you are to take risks in different areas of life, for example in financial matters or while driving your car. On a scale of 1 to 7 where 1 indicates that the sentence would almost always describe you and 7 indicates that it would almost never describe you, please indicate how well each of the following would describe you.

	Almost always would describe me			Sometimes would describe me			Almost never would describe me
I am willing to take risks in financial matters	1	2	3	4	5	6	7
I am willing to take risks when it comes to my health	1	2	3	4	5	6	7
I am willing to take risks when it comes to my career	1	2	3	4	5	6	7
I am willing to take risks when driving	1	2	3	4	5	6	7
I am willing to take risks in sports or leisure activities	1	2	3	4	5	6	7

[Fraud Experience – Diet Products]

We would now like to ask you some questions about things that may have happened to you in the past couple of years – that is since **[Programmer: Insert December 2011 or the current month of 2012, depending on whether this is being done is December 2013 or after the first of the year.]**

In the past two years, have you paid anyone for a product such as nonprescription drugs, dietary supplements, skin patches, creams, wraps, or earrings that the seller suggested or implied would help you lose a substantial amount of weight?

[ ] Yes
[ ] No
[ ] Don't know

[Programmer: If answer to previous question is "Yes" go to next question; else go to Instruction Before "Fraud Experience – Job."]

If you purchased such a weight-loss product more than once in the last two years, please think about the most recent time you purchased such a product in answering the following questions.

Did the seller suggest or imply that using this product would make it easy to lose weight?

[ ] Yes
[ ] No
[ ] Don’t know

Did the seller suggest or imply that by using this product you could lose weight without exercise and/or without reducing the amount you eat?

[ ] Yes
[ ] No
[ ] Don’t know

Which of the following best describes your experience in using the product?

[ ] I lost about more weight than I expected to lose
[ ] I lost about as much weight as I expected to lose
[ ] I lost about half of the weight I expected to lose
[ ] I only lost a little of the weight I expected to lose
[ ] I lost no weight
[ ] I gained weight
[ ] I did not use the product

[Fraud Experience – Business Opportunity]

In the past two years, have you paid anyone for an opportunity to operate your own business, such as a business opportunity or a franchise?

[ ] Yes
[ ] No
[ ] Don't know

[Programmer: If answer to previous question is "Yes" go to next question; else go to "Fraud Experience – Work-at-Home."]

If you purchased such a business opportunity or franchise more than once in the last two years, please think about the most recent time you purchased one in answering the following questions.

Did the seller lead you to believe that you would earn a certain amount of income or profit from this business?

[ ] Yes
[ ] No
[ ] Don't know

[Programmer: If answer to the previous question is "Yes" ask the next question; else skip to the question after the next one.]

Which of the following best describes the amount of money you made from this business?

[ ] Made more money than I had been led to expect
[ ] Made roughly as much money as I had been led to expect
[ ] Made at least half as much money as I had been led to expect
[ ] Made less than half as much money as I had been led to expect
[ ] Did not make any money
[ ] Lost money
[ ] Did not work at the business
[ ] Don't know

Were you promised help in locating customers who would use your services or businesses that would allow you to sell your products from their premises?

[ ] Yes
[ ] No
[ ] Don't know

[Programmer: If answer to the previous question is "Yes" ask the next question; else skip to "Fraud Experience – Work-at-Home."]

Did you receive the promised assistance?

[ ] Yes
[ ] No
[ ] Don't know

[Fraud Experience – Work-at-Home]

In the past two years, have you paid anyone who promised to provide you with work that you could do at home?

[ ] Yes
[ ] No
[ ] Don't know

[Programmer: If answer to previous question is "Yes" go to next question; else go to next section.]

If you paid someone for work that you could do at home more than once in the last two years, please think about the most recent time you purchased one in answering the following questions.

Did the seller lead you to believe that you would earn a certain amount of money while performing this work at home?

[ ] Yes
[ ] No
[ ] Don't know

[Programmer: If answer to previous question is "Yes," go to next question; else go to next section.]

Which of the following best describes the amount of money you made in this job?

[ ] Made more money than I had been led to expect
[ ] Made roughly as much money as I had been led to expect
[ ] Made at least half as much money as I had been led to expect
[ ] Made less than half as much money as I had been led to expect
[ ] Did not make any money
[ ] Lost money
[ ] Did not work at the business
[ ] Don't know

In the past two years, have you experienced a serious negative life event, such as divorce, the death of a family member or close friend, a serious injury or illness in your family, or the loss of a job?

[ ] Yes
[ ] No
[ ] Decline to answer

Thinking for a moment about your personal debt on which you current make monthly payments, such as for mortgages, credit cards, personal loans, and car loans, would you say the amount of debt you current have is

[ ] More than you can handle financially
[ ] About as much as you can handle financially
[ ] You could handle more debt than you currently have
[ ] You do not currently have any personal debt
[ ] Decline to answer

[Product Interest]

Now we would like to ask some questions to learn something about your interest in some of the things we have talked about.

How interested would you be in losing weight?

[ ] Extremely interested
[ ] Very interested
[ ] Somewhat interested
[ ] Not very interested
[ ] Not at all interested

How interested would you be in working at a part-time job or a job that you could perform at home?

[ ] Extremely interested
[ ] Very interested
[ ] Somewhat interested
[ ] Not very interested
[ ] Not at all interested

How interested would you be in a vacation at a Caribbean beach resort?

[ ] Extremely interested
[ ] Very interested
[ ] Somewhat interested
[ ] Not very interested
[ ] Not at all interested

[Demographics]

And, for statistical purposes only …

In what year were you born?

_____

[ ] Decline to answer

Are you

[ ] Female
[ ] Male
[ ] Decline to answer

What is the highest level of education you have completed or the highest degree you have received? If you received your education in another country, please indicate the equivalent level below.

[ ] Less than high school
[ ] Completed some high school
[ ] Completed high school
[ ] Completed some technical or vocational school
[ ] Completed some college
[ ] Graduated from college – Received a Bachelor of Arts or Bachelor of Science degree
[ ] Completed some graduate or professional school
[ ] Completed graduate or professional school – Received a degree like a Master of Arts, Master of Science, PhD, MD, law degree, etc.
[ ] Decline to answer

Are you of Hispanic or Latino origin?

[ ] Yes, of Hispanic origin
[ ] No, not of Hispanic origin
[ ] Decline to answer

Please choose one or more categories that best indicates your race. Are you? *(Check all that apply)*

[ ] White
[ ] Black or African American
[ ] American Indian or Alaska Native
[ ] Asian
[ ] Native Hawaiian or Other Pacific Islander
[ ] Other
[ ] Decline to answer

How many people currently live in your household? Please include yourself and any children.

_____

[ ] Decline to answer

[Programmer: If answer is greater than 1, ask the following. If answer is 1 or the person declines to answer, skip the following question.]

How many people under the age of 18 currently reside in your household?

_____

[ ] Decline to answer

And, for statistical purposes only, in which of the following categories does your total annual HOUSEHOLD income fall?

[ ] Under $20,000 per year
[ ] At least $20,000 per year, but less than $40,000
[ ] At least $40,000 per year, but less than $60,000
[ ] At least $60,000 per year, but less than $80,000
[ ] At least $80,000 per year, but less than $100,000
[ ] $100,000 per year or more
[ ] Decline to answer

This completes our questions for you today. Thank you for participating.

Cells for Internet Panel Fraud Experiment

A. See Diet Ad First
    1. Fraudulent Diet Ad – Fraudulent Jobs Ad
    2. Fraudulent Diet Ad – Legitimate Jobs Ad
    3. Fraudulent Diet Ad – Fraudulent Vacation Ad
    4. Fraudulent Diet Ad – Legitimate Vacation Ad
    5. Legitimate Diet Ad – Fraudulent Jobs Ad
    6. Legitimate Diet Ad – Fraudulent Vacation Ad

B. See Jobs Ad First
    1. Fraudulent Jobs Ad – Fraudulent Diet Ad
    2. Fraudulent Jobs Ad – Legitimate Diet Ad
    3. Fraudulent Jobs Ad – Fraudulent Vacation Ad
    4. Fraudulent Jobs Ad – Legitimate Vacation Ad
    5. Legitimate Jobs Ad – Fraudulent Diet Ad
    6. Legitimate Jobs Ad – Fraudulent Vacation Ad

C. See Vacation Ad First
    1. Fraudulent Vacation Ad – Fraudulent Diet Ad
    2. Fraudulent Vacation Ad – Legitimate Diet Ad
    3. Fraudulent Vacation Ad – Fraudulent Jobs Ad
    4. Fraudulent Vacation Ad – Legitimate Jobs Ad
    5. Legitimate Vacation Ad – Fraudulent Diet Ad
    6. Legitimate Vacation Ad – Fraudulent Jobs Ad