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## Understanding and Combating Investment Fraud

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Gary R. Mottola

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## Understanding and Combating Investment Fraud

### Abstract

Investment fraud is a significant problem in America. Estimates vary, but a conservative one is that about 10 percent of the investors will be victimized by investment fraud at some point in their lives. Further, many baby boomers are entering retirement with significant assets, and enforcement actions by financial regulators indicate that investors can be vulnerable to fraud at key 'wealth events' in their lives, such as when they face a decision about what to do with money arising from the sale of a house, an inheritance, or an IRA rollover. Protecting these assets—for baby boomers and younger generations who face key wealth events—will be important to ensure the financial well-being and retirement security of millions of Americans. This chapter reviews the dynamics of investment fraud victimization, explains how fraudsters use social influence tactics to defraud their victims, and describes current investor protection efforts.

### Keywords

Investment fraud, financial fraud, social influence, demographics and fraud, psychographics and fraud, investment fraud solicitations, fraud victimization rates, investor protection

### Disciplines

Economics

### Comments

The published version of this Working Paper may be found in the 2017 publication: *Financial Decision Making and Retirement Security in an Aging World*.

# **Financial Decision Making and Retirement Security in an Aging World**

EDITED BY

Olivia S. Mitchell,  
P. Brett Hammond, and  
Stephen P. Utkus

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## Chapter 10

# **Understanding and Combating Investment Fraud**

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*Christine N. Kieffer and Gary R. Mottola*

Despite the destructive toll that investment fraud can have on its victims, researchers have only recently begun to understand the mechanics of fraud and the characteristics of investment fraud victims. This chapter reviews investment and financial fraud victimization rates, examines the demographic and psychographic patterns associated with investment fraud victimization, explores the role of targeting in victimization, and explains how fraudsters rely on social influence tactics to defraud their victims. We find that about one in ten investors will be victimized by investment fraud over the course of their lives. Moreover, older people are targeted for investment fraud more frequently than younger people, but after controlling for the effects of targeting, older people are not more likely than younger people to be victimized by investment fraud. We conclude with a discussion of what is being done by consumer protection organizations and policymakers to protect investors from investment fraud.<sup>1</sup>

### **The Prevalence and Impact of Fraud Victimization**

Investment fraud is a subset of financial fraud, and it occurs when someone 'knowingly misleads an investor using false information for the purpose of monetary gain' (Beals et al. 2015). Investment fraud includes scams like penny stock fraud, pre-IPO scams, oil and gas scams, Ponzi schemes, and high-yield investment program fraud, to name a few. More generally, financial fraud also includes other types of economic frauds, like lottery and sweepstake scams, as well as scams involving worthless or non-existent products, and services such as bogus weight loss products or fake memorabilia.

Obtaining an accurate estimate of fraud prevalence—whether investment fraud or financial fraud—has been hindered by a number of factors. Estimates vary, sometimes widely, due to inconsistent definitions of fraud, differences in the types of fraud examined, populations studied, under-reporting of fraud, and the method used to measure fraud, such as law

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enforcement records or surveys (Deevy and Beals 2013). As such, fraud prevalence estimates need to be considered in this context.

Although there are few estimates of investment fraud prevalence rates, one is that about 7 percent of older investors will be victimized by investment fraud at some point in their lives (Shadel et al. 2007). A calculation by the authors based on data from a 2012 survey puts the estimate at 10 percent of Americans age 40+ (FINRA Investor Education Foundation 2013a). More common are prevalence estimates of financial fraud. Financial fraud prevalence rates as low as 4 percent and as high as 14 percent have been reported (AARP 2003; Anderson 2007), and recent work by the Federal Trade Commission (FTC) puts the estimated prevalence rate at 11 percent (Anderson 2013). These estimates are likely on the low side because fraud tends to be underreported. Victims are often reluctant to report fraud because they believe that reporting will make no difference, they are not sure where to report the crime, or they are too embarrassed to do so (FINRA Investor Education Foundation 2013a). From an international perspective, a study by the United Nations Interregional Crime and Justice Research Institute found that consumer fraud rates averaged 11 percent across twenty-nine countries (Van Dijk et al. 2007).

Regardless of the varying prevalence rates, these and other studies conclude that financial fraud is a significant and costly problem for Americans. For example, the Stanford Center on Longevity's Financial Fraud Research Center (FFRC) estimated that approximately \$50 billion is lost annually to consumer financial fraud in the US (Deevy et al. 2012). And the UK's Financial Conduct Authority estimates that £1.2 billion is lost annually to investment fraud, with an average loss of £20,000 per investor (Graham 2014).

The full cost of financial fraud can also extend far beyond the amount of money lost. The \$50 billion dollar figure noted above does not take into account indirect costs like legal fees, late fees, and lost wages—and importantly, it does not consider the non-financial costs of fraud, including stress, anxiety, and depression. One study that examined the broader impact of financial fraud among Americans age 25+ found that nearly two-thirds of self-reported financial fraud victims experienced at least one non-financial cost of fraud to a serious degree, including anger, stress, and psychological and emotional issues (FINRA Investor Education Foundation 2015). Beyond psychological and emotional costs, nearly half of fraud victims in that study reported incurring indirect costs associated with the fraud such as late fees, legal fees, and bounced checks. For example, 29 percent of respondents reported more than \$1,000 in indirect costs, and 9 percent declared bankruptcy as a result of the fraud. A sobering insight from that study is that nearly half of victims blamed themselves for the incident, an indication of the far-reaching effects of financial fraud on the lives of its



victims. These non-traditional costs of fraud are not unique to the American context: a study in the UK also found high levels of anger, stress, and emotional issues among fraud victims (Button et al. 2014).

Beyond prevalence rates, another way to think about financial victimization is to consider how many investors have assets at risk. Nearly seven in ten households in America own investments either through taxable accounts or retirement accounts like 401(k)s and various types of IRAs (Mottola 2015). Accordingly, a broad swathe of the population has assets that are potentially vulnerable to investment fraud. Moreover, even people without investment accounts could fall prey to investment fraud if, for example, a fraudster convinces them to pull equity out of their homes to use in a fraudulent scheme. Further, many Baby Boomers are entering retirement with significant assets (Lusardi and Mitchell 2006). Enforcement actions by financial regulators indicate that investors can be vulnerable to fraud at key ‘wealth events’ in their lives, such as when they face a decision about what to do with money arising from the sale of a house, an inheritance, or an IRA rollover (FINRA 2015). Protecting these assets—for Boomers and younger generations who face key wealth events—will be important to ensuring the financial well-being and retirement security of millions of Americans.

## **The Demographics and Psychographics of Victimization**

As noted earlier, our understanding of fraud victimization prevalence rates is hampered by a number of methodological and practical issues, and these limitations apply to our understanding of how demographic and psychographic variables are related to fraud victimization. Yet a growing body of research has provided important insights, including the notion that no single stereotypical fraud victim profile exists: that is, targets and victims of financial fraud vary by scam type. Early research has found that investment fraud victims tend to be college-educated, financially literate men who are optimistic (Consumer Fraud Research Group 2006). Subsequent research supports this profile (AARP 2011; Graham 2014). This profile may be contrasted to that of lottery fraud victims, who are more typically single older female consumers and those with lower levels of education and income (Consumer Fraud Research Group 2006; AARP 2011).

### **Age and Fraud**

Age is probably the most frequently researched demographic variable associated with fraud. There is a common belief that older people are more

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likely to be victims of financial fraud, but stereotypes about victims are not entirely supported by research.<sup>2</sup> Certainly, some studies report that age and fraud victimization are positively related. For example, one study found that people age 50+ make up 35 percent of the population but 57 percent of telemarketing fraud victims (AARP 1996). Another study found that Americans age 65+ were more likely to lose money to financial fraud than those in their 40s (FINRA Investor Education Foundation 2013a). Also, some researchers found that decreasing cognition associated with aging is predictive of future financial fraud incidence (Gamble et al. 2014).

Nevertheless, other authors have reported the opposite: that is, as age increases, fraud victimization decreases. The first widely cited study on fraud found that older consumers were three times less likely to be victims of personal fraud than younger consumers (Titus et al. 1995). Two Federal Trade Commission studies also showed that younger adults are more likely to be victims of fraud (Anderson 2004, 2007). Another recent study reported that the risk of fraud victimization decreased after age 50 (DeLiema 2015). In addition, researchers surveyed findings from fourteen different studies, and they concluded that there was no compelling evidence of a relationship between age and consumer fraud victimization (Ross et al. 2014).

The confusion arises for several reasons. Perhaps most important, as noted earlier, fraud profiles vary with the type of fraud, so research that looks at the profiles of victims by grouping all fraud types together may attenuate the relationship between age and fraud. Also, different conclusions may be reached depending upon the type of fraud examined. Moreover, some research suggests that older people are less likely to acknowledge fraud (AARP 2011), which would obviously impact associations between age and fraud. Results can also vary based on differences in the populations studied.

Despite the empirical uncertainty about the relationship between age and fraud, there is widespread belief that older people are more likely to be victims of consumer fraud (Ross et al. 2014). Anecdotally, researchers have pointed to the likelihood of seniors having more assets than younger adults, consequently making them better fraud targets. In addition, researchers have started to establish a link between cognitive changes associated with aging and susceptibility to at least some forms of fraud. For example, several researchers found that older people were more trusting of strangers' faces, and neurological evidence supports this association (Castle et al. 2012). This higher level of trust could reduce the ability to recognize red flags and lead to greater engagement with fraudsters. Social isolation can play a role as well. Increased isolation among the elderly may result in an older adult being more open to engaging with strangers to fulfill unmet social needs (Ganzini et al. 1990; Lee and Soberon-Ferrer 1997; Federal Bureau of Investigation 2014).

### **Other Demographic and Psychographic Variables**

Beyond age, research also suggests that a number of demographic variables are related to fraud victimization, although these findings are also mixed. Sex, income, education, and marital status have all been associated with fraud to varying degrees. Victims of investment fraud have higher incomes and educational levels relative to victims of other financial fraud crimes (AARP 2011). They are also more likely to be married (Consumer Fraud Research Group 2006; AARP 2011).

A number of psychographic variables have also been associated with fraud victimization, among them, risk tolerance, perceptions of debt, impulsiveness, and financial literacy. Specifically, higher levels of risk tolerance and engagement in risky behaviors are associated with a higher probability of fraud victimization (Van Wyk and Benson 1997; Schoepfer and Piquero 2009), as are higher levels of debt (Anderson 2004; Kerley and Copes 2002). Using multilevel data (i.e., fMRI, survey, and demographic), analysts have compared investment fraud victims and non-victims, and they found that victims reported higher impulsiveness and demonstrated less cognitive flexibility. They also showed less ventrolateral prefrontal cortical activity, which is consistent with reduced impulse control (Knutson and Samanez-Larkin 2014). Somewhat counter-intuitively, higher levels of financial literacy have been associated with an increased probability of investment fraud victimization (Consumer Fraud Research Group 2006; AARP 2007) and consumer fraud victimization (AARP 2008).

What could account for this counter-intuitive relationship between financial literacy and fraud? One explanation might be over-confidence, a well-established bias in which a person tends to be more confident than correct; in other words, over-confident individuals overestimate the accuracy of their beliefs (Myers 1993). The idea that over-confidence can affect financial decisions is not new. In an important study of stock trading behavior, researchers found that over-confidence was associated with higher levels of trading and lower portfolio returns for online traders (Barber and Odean 2001). Other researchers also found that over-confidence was a significant determinant of risky financial behavior: over-confident individuals made larger contributions in an investment game and were willing to take greater investment risk (McCannon et al. 2015).

In some interesting analyses on whether over-confidence was related to fraud susceptibility, researchers found that over-confidence was a risk factor for financial fraud victimization (Gamble et al. 2014). Yet the researchers did not establish whether over-confidence mediated the relationship between financial literacy and financial fraud. That is, it is possible that as financial literacy increases, feelings of over-confidence rise as well. This over-confidence could yield feelings of invulnerability that, paradoxically,

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make respondents with high levels of financial literacy more susceptible to fraud. From this perspective, there is not a direct link between financial literacy and fraud susceptibility. Rather, over-confidence may mediate the relationship.

An inability to identify the ‘red flags of fraud’ (i.e., responding positively when presented with persuasion statements) provides another psychographic factor thought to be related to investment fraud victimization (AARP 2011). People’s inability to identify the red flags of fraud is usually measured by showing marketing statements typically used by fraudsters which are inconsistent with ethical investment advertisements. For example, ‘The lowest return you could possibly get on this investment is 50 percent annually, but most investors are making upward of 110 percent per year’ is a red flag statement, as is ‘There is no way to lose money on this investment.’ If the survey respondent rates these statements and others like them as ‘appealing’, they are considered less able to identify the red flags of fraud. The lack of understanding of reasonable investment returns (FINRA Investor Education Foundation 2013a), and the desire for higher-than-average investment yields, leaves many Americans vulnerable to fraudulent investment pitches.

### **The Role of Targeting in Investment Fraud Victimization**

While there is ample evidence that both demographic and psychographic variables are related to financial fraud victimization, another factor may also help explain the likelihood of being victimized by fraud: the number of times someone is targeted for fraud. For example, one demographic group may have low levels of fraud victimization because it is not frequently targeted; conversely, a group may have high levels of fraud victimization because it is frequently targeted. In other words, examining the relationship between age (or any demographic variable) and fraud victimization, without controlling for how often a person is solicited for fraud, could result in biased estimates of the relationship between key demographic variables and fraud victimization.

To better understand investment fraud victimization, we use a regression framework to examine, in particular, the relationship between age and investment fraud victimization after controlling for a host of demographic and psychographic variables and the likelihood of being targeted for investment fraud. We are able to conduct this analysis by combining two different datasets. In 2012, the FINRA Investor Education Foundation commissioned a study that examined the susceptibility of Americans to financial fraud (FINRA Investor Education Foundation 2013a). As part of this research,

2,364 adults age 40+ completed an online survey via a non-probability based Internet panel. The survey covered a wide range of measures of fraud susceptibility and exposure to fraud. More than three-quarters of these respondents were recruited from the panel that had completed the 2012 National Financial Capability Study earlier that year (FINRA Investor Education Foundation 2013b). The two survey databases were combined and the resulting dataset of 1,721 respondents aged 40 to 94 was weighted to match the US Census distributions for both age (40 and over) and ethnicity. Table 10.1 contains sample characteristics and the Appendix contains a description of all the variables used in the regressions. As shown in Table 10.1, the overall investment fraud victimization rate was 10 percent, the average age was 57, 73 percent of the sample was targeted for at least one type of investment fraud, and, on average, respondents received 1.8 solicitations (i.e., were targeted) for likely fraudulent investments.

Table 10.2 presents the results of a series of logistic regression models predicting investment fraud. After controlling for demographic and psychographic variables, these results provide some insight into the role that targeting plays in investment fraud victimization. The first regression (column 1) contains only demographic variables, where age is strongly associated with investment fraud victimization. As indicated by the odds ratio (OR), for every ten-year increase in age, the predicted odds of being an investment fraud victim is 1.31 times higher. This statistically significant effect is equivalent to a 31 percent increase in the odds of being a victim of investment fraud.<sup>3</sup> Household income is also strongly and positively

TABLE 10.1 Sample characteristics for data analysis

<i>Variable</i>	<i>Statistic</i>
Investment fraud victimization (dependent variable)	10%
Targeted for at least one type of investment fraud	73%
Household income > = \$50,000	46%
Male	47%
College degree	31%
White	73%
Dependants	29%
Widow/widower	7%
Mean age	57
Mean financial literacy questions answered correctly	3.1
Mean risk tolerance	4.3
Mean perceptions of debt	3.8
Mean inability to identify the red flags of fraud	5.9
Mean number of targeted investment frauds	1.8

*Source:* Authors' calculations based on data from the FINRA Investor Education Foundation's Fraud Susceptibility Study (2013) and the 2012 National Financial Capability Study.

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related to investment fraud victimization, as indicated by the highly significant OR of 1.58, so the odds of investment fraud victimization for individuals from households with \$50,000+ in income were 58 percent higher than individuals from households with less than \$50,000 in income. The odds of males being victimized by investment fraud are almost two times higher than females (OR = 1.72), and the odds of college-educated respondents are 42 percent higher than their less educated counterparts (OR = 1.42). Non-Asian minority status (i.e., black and Hispanic), marital status, presence of dependants in the house, and being a widow/widower were not related to investment fraud victimization.<sup>4</sup>

Column 2 in Table 10.2 adds psychographic variables into the equation including financial literacy, perception of debt, risk tolerance, and a measure of the inability of respondents to identify common red flags of fraud. These four variables are all significantly and positively related to investment fraud victimization. Including these psychographic variables eliminates the relationship between household income and fraud victimization, as well as gender and fraud victimization. Yet the age effect remains strongly related to victimization.

The third column controls for investment fraud targeting by adding a variable that is a count of investment fraud solicitations, and this variable is highly related to fraud victimization. For each additional investment fraud solicitation that a respondent receives, the odds of his victimization increases by a factor of 1.84. In addition, the inclusion of this targeting variable eliminates the significance of all other demographic variables, including age. However, risk tolerance, financial literacy, and the inability of the respondent to identify the red flags of fraud remain statistically significant.<sup>5</sup>

It is not our intention, however, to suggest that age does not play a role in investment fraud victimization. Rather, we believe that the positive relationship often found between age and investment fraud could be due, in part, to older people being targeted for investment fraud more frequently than younger people. Aging could still increase fraud victimization through natural cognitive declines associated with the aging process—and with our current dataset we were unable to examine this possibility. More work clearly needs to be done in this area, but these regressions provide evidence indicating that targeting needs to be taken into consideration to fully understand the nuanced relationship between age and investment fraud victimization.

While the targeting variable is the strongest predictor of investment fraud victimization, we still need to know: how common are investment fraud solicitations, and who tends to get targeted. Figure 10.1 shows a histogram of the number of different types of investment fraud contacts that respondents reported. It is evident that most respondents had been

TABLE 10.2 Factors associated with investment fraud victimization

Variable	1 Demographic variables only		2 Demographics and psychographics		3 Demographics, psychographics, and solicitations	
	Coefficient	Odds ratio	Coefficient	Odds ratio	Coefficient	Odds ratio
Age (10-yr)	0.27** (0.09)	1.31	0.36** (0.10)	1.4	0.15 (0.11)	1.16
Income > = \$50,000	0.46* (0.19)	1.58	0.17 (0.20)	1.2	0.05 (0.21)	1.05
Male	0.54** (0.17)	1.72	0.24 (0.18)	1.3	0.02 (0.20)	1.02
Non-Asian minority	-0.11 (0.22)	0.89	-0.04 (0.22)	1	-0.23 (0.24)	0.8
Married	-0.05 (0.20)	0.95	0.02 (0.21)	1	0.19 (0.23)	1.21
Presence of dependants in household	0.29 (0.20)	1.34	0.23 (0.21)	1.3	0.17 (0.22)	1.18
College educated	0.35* (0.18)	1.42	0.21 (0.18)	1.2	0.00 (0.20)	1
Widow/widower	0.35 (0.34)	1.42	0.57 (0.35)	1.8	0.57 (0.38)	1.77
Measured financial literacy			0.34** (0.08)	1.4	0.17* (0.09)	1.19
Inability to identify red flags of fraud			0.08* (0.04)	1.1	0.07* (0.04)	1.08
Too much debt			0.08* (0.04)	1.1	0.06 (0.04)	1.06
Risk tolerance			0.18** (0.04)	1.2	0.14** (0.04)	1.15

(continued)

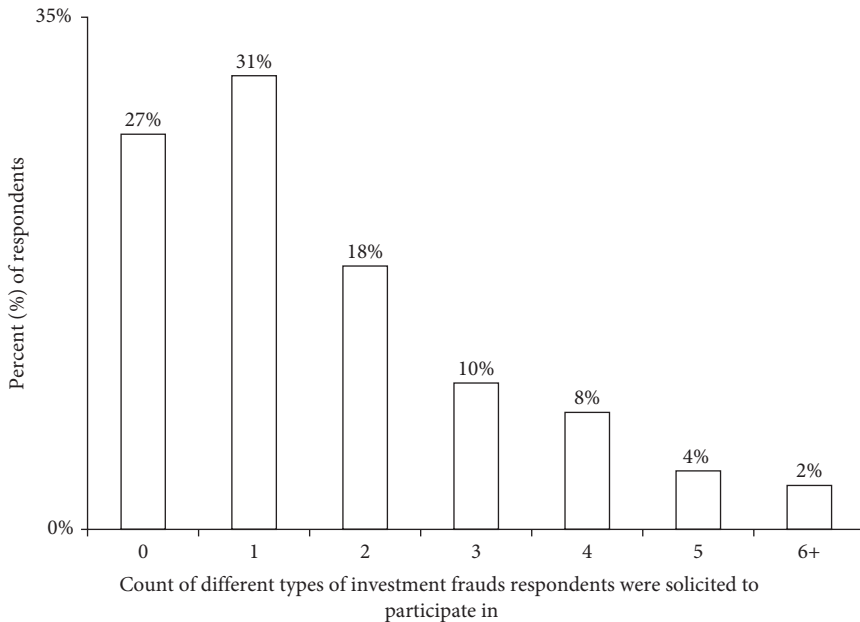
TABLE 10.2 Continued

Variable	1 Demographic variables only		2 Demographics and psychographics		3 Demographics, psychographics, and solicitations	
	Coefficient	Odds ratio	Coefficient	Odds ratio	Coefficient	Odds ratio
Investment scam contacts					0.62** (0.06)	1.85
Intercept	-4.36 (0.56)		-7.42 (0.78)		-6.58 (0.83)	
Observations	1,573		1,573		1,573	
R-square	0.03		0.07		0.14	
Max-rescaled R-square	0.06		0.13		0.28	
Likelihood ratio	44.411 p < 0.0001		106.243 p < 0.0001		236.941 p < 0.0001	

*Notes:* A logistic regression was conducted; standard errors are in parentheses. \*\* p < 0.01, \* p < 0.05. The likelihood ratio is the difference between the log-likelihood for the constant-only and full model. Due to missing data, 148 observations were dropped from the analysis. For reference, 10 percent of survey respondents in this analysis were classified as investment fraud victims.

*Source:* Authors' calculations based on data from the FINRA Investor Education Foundation's Fraud Susceptibility Study (2013) and the 2012 National Financial Capability Study. Both the regression output and dataset are available upon request.





**Figure 10.1.** Number of different fraudulent investments that survey respondents were targeted to participate in

*Note:* Percentage of survey respondents by the count of different types of likely fraudulent investment scams that they were solicited to participate in (nine different investment frauds were examined).

*Source:* Authors' calculations based on data from the FINRA Investor Education Foundation's Fraud Susceptibility Study (FINRA Investor Education Foundation 2013a) and the National Financial Capability Study (FINRA Investor Education Foundation 2013b). Data are available upon request.

contacted to participate in at least one type of fraudulent investment, and many were contacted to participate in more than one. On average, respondents were contacted for 1.77 different investment frauds.

Table 10.3 shows the results of a negative binomial regression that predicts the number of times the respondents were solicited to participate in one of nine different likely fraudulent investments, using demographic information easily obtained by a fraudster. This analysis focuses on the targeting of investment fraud, so we only use variables in the model that can be known or easily obtained. Results in Table 10.3 show that, as age increases, the number of fraudulent solicitations a respondent received also rises. The incidence rate ratio (IRR) for age of 1.22 indicates that, for every ten-year increase in age, and holding other factors constant, the expected investment fraud solicitation rate is 1.22 times higher. Stated differently, a

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TABLE 10.3 Factors associated with investment fraud targeting

Variable	Incidence rate ratio	Statistical significance
Age (10-yr)	1.22 (0.03)	**
Income > = \$50,000	1.26 (0.07)	**
Male	1.36 (0.07)	**
Non-Asian minority	1.07 (0.07)	
Married	0.92 (0.06)	
Presence of dependants in household	1.03 (0.63)	
College educated	1.33 (0.07)	**
Widow/widower	1.08 0.10	
Observations	1,721	
Wald chi-square	230.77	**
Pseudo R-square	0.04	

*Notes:* A negative binomial regression model was used to model the count data; robust standard errors are in parentheses. (Poisson regression was not used due to overdispersion of the dependent variable, but both models yielded similar results.) \*\*  $p < 0.01$ , \*  $p < 0.05$ .

*Source:* Authors' calculations based on data from the FINRA Investor Education Foundation's Fraud Susceptibility Study (2013) and the 2012 National Financial Capability Study. The regression output and dataset are available upon request.

ten-year increase in age is associated with a 22 percent increase in the number of investment fraud solicitations. Men are predicted to get 36 percent more investment fraud solicitations than women. Household income is also strongly and positively related to investment fraud solicitations, as is being college-educated. We conclude that older, affluent, college-educated males are most likely to be targeted for investment fraud, consistent with the AARP (2011) results.

### Social Influence and Investment Fraud

While some demographic groups are clearly more likely to be targeted and become victims of investment fraud than others, anyone with access to capital could potentially be at risk. The ubiquity of fraud solicitations, coupled with the inability of many people to recognize the red flags of fraud, place a large number of Americans at risk of losing money to scams (FINRA Investor Education Foundation 2013a). Given that financial literacy

appears to be positively correlated with fraud victimization, it is important to think beyond traditional financial education to address investment fraud victimization. Financial decisions have also been linked to emotions (Lerner et al. 2004); therefore, persuasion techniques that influence emotions can also impact decision making (Kircanski et al. 2016). Combating investment fraud thus requires an understanding of how fraudsters operate, as well as the techniques they use to separate victims from their money.

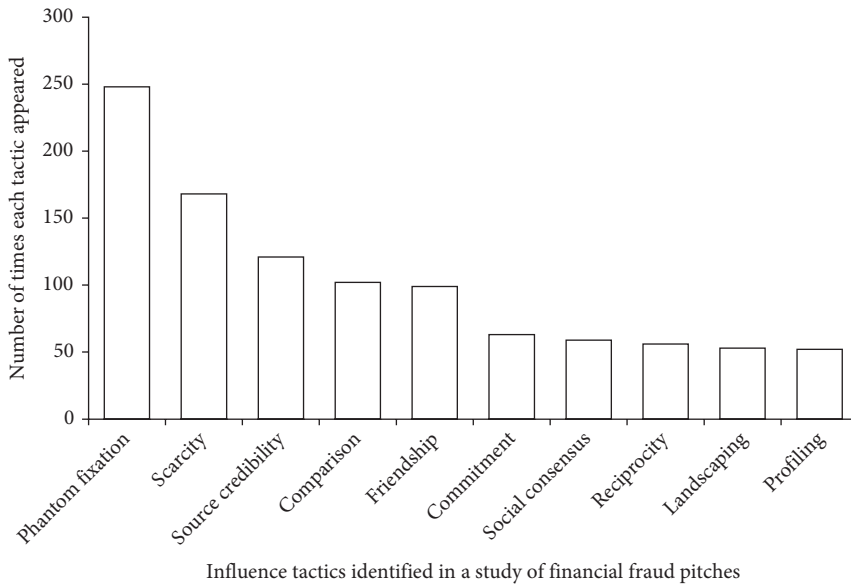
Social influence refers to the study of how people change the thoughts, feelings, and behavior of other people (Pratkanis 2007). The science of social influence offers insights into better understanding and preventing investment fraud. The Consumer Fraud Research Group analyzed 128 full-length transcripts drawn from undercover tapes of financial fraud pitches to identify the influence tactics used to perpetrate economic fraud crimes and to rank these tactics by frequency of use (see Figure 10.2). Their analysis included the seven most common scam types found in the database of tapes—including investment, coin, recovery room, credit card, sweepstakes, lottery, and travel scams (Consumer Fraud Research Group 2006).

Here we focus on five of the influence tactics identified in this research as commonly used in investment fraud. These include phantom riches (also called phantom fixation), scarcity, source credibility, social consensus, and reciprocity. Of course, influence techniques are not only used to defraud people: indeed, they are used in the marketing of a range of products and services every day. When fraudsters use these tactics for ill-intent, however, they cross an ethical line that can lead to long-lasting and potentially devastating consequences for their victims.

Planting the seed of ‘phantom riches’ is a common technique used by fraudsters and involves dangling the prospect of wealth by enticing a potential victim with something he wants but cannot have (Pratkanis and Farquhar 1992). An example of phantom riches used by fraudsters is a statement like ‘The lowest return you could possibly get on this investment is 50 percent annually, but most investors are making upwards of 110 percent a year.’ Survey research suggests that people are attracted to this type of statement (FINRA Investor Education Foundation 2013a), though it is not a responsible form of investment advertising, and returns of 50 to 100 percent per year are highly improbable.

The tactic of scarcity is applied when a salesperson creates a false sense of urgency by claiming there is a limited supply or limited time to act, or by claiming the opportunity is exclusive. This results in the product or service being perceived as more valuable. Worchel et al. (1975) demonstrated the influence of scarcity on perceived value in a simple experiment in which they asked subjects to rate the attractiveness of cookies. The experimenters manipulated the supply of the cookies by showing some subjects a jar with ten cookies in it, and other subjects a jar with two cookies in it. The cookies

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**Figure 10.2.** Number of times identified influence tactics appeared in analysis of fraud pitch transcripts

*Note:* Analysis of influence tactics found in 128 full-length transcripts drawing from a total of 650 undercover tapes of financial fraud pitches. Seven common scam types were found in the database of tapes—including investment, coin, recovery room, credit card, sweepstakes, lottery, and travel scams.

*Source:* Consumer Fraud Research Group (2006).

were rated as more attractive when they were presented in the jar with two cookies. West (1975) found a similar increase in the attractiveness of cafeteria food, following a decrease in the availability of the food. Examples of how a fraudster might use scarcity include the following statements: ‘This is an opportunity that is only available to a limited number of investors’, or ‘This offer is only good for today.’ These are examples of scarcity based on supply and scarcity based on time, respectively.

The power of scarcity may be explained by Reactance Theory (Brehm and Brehm 1981). Reactance occurs when an individual is motivated to react against the impending loss of a behavior, item, or freedom. In terms of investment fraud, if a fraudster proposes that one could lose access to an investment by not ‘acting today’, one might react against this by wanting the investment more than one did before. Loss aversion may be related to scarcity as well. Loss aversion comes from Prospect Theory and posits that losing something is psychologically more painful than gaining something of similar value (Kahneman and Tversky 1979). In terms of its use by

fraudsters, losing the opportunity to earn a big return on an investment may be painful enough to motivate a fraud target to go ahead with the investment, despite reservations.

Source credibility is a technique used by fraudsters that capitalizes on the finding that people are more likely to believe others in positions of authority, and to trust organizations that they perceive as legitimate. A classic example of the power of source credibility, although not an example of fraud, is Stanley Milgram's (1965, 1974) work on obedience. As is commonly known, that study showed the ease with which a researcher donning a lab coat and clipboard (to help establish credibility and authority) could compel study subjects to ostensibly shock confederates in another room, despite confederates pleading for the subject to stop the shocks (of course, no shocks were actually being administered). In fact, many subjects 'administered' shocks to a confederate even when they believed the confederate was unconscious. While Milgram noted that several factors contributed to the subjects' willingness to shock the confederates, he argues that authority must be established and perceived as legitimate.

Source credibility is used to build trust, and once trust is established between the fraudster and the potential victim, it becomes easier for the fraudster to perpetrate the fraud. Source credibility is also established by using professional credentials, whether real or artificial. An example of source credibility that an investment fraudster might use is a statement like the following: 'We are a highly regarded and profitable investment management company specializing in the foreign exchange markets, futures, options, commodities, stocks, bonds, real estate, business startup, and many other investments.' The appeal of this statement was tested among US adults age 40+, and 29 percent of the respondents found the statement appealing (FINRA Investor Education Foundation 2013a).

Fraudsters also use the tactic of social consensus (sometimes referred to as social proof) whereby the more it appears that everyone else is engaging in a particular behavior or holds a particular belief, the more likely it is that an individual will join and agree with the group (Pratkanis 2007). Social consensus is tied to social pressure and conformity. If everyone does something, not only must it be a good idea, but it can be difficult to go against group consensus. Solomon Asch (1956) famously demonstrated the power of the group to engender conformity in his classic line experiment. In this experiment, he used several confederates to provide obviously wrong answers about the length of a line on a card. The subject of the experiment, who answered the question about the length of the line last or second-to-last, often provided an obviously wrong answer as well, just to conform to the group.

Social consensus is often exploited by fraudsters to commit affinity fraud. This happens when a fraudster takes advantage of the trust inherent in groups of like-minded individuals, such as those who attend the same

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place of worship or social club. The fraudster, who is or pretends to be a member of the group, points out to potential victims that other members of their group have already purchased a particular investment. This implies that, if their friends and colleagues are involved, it must be a good investment. Further, among respondents to a study of investment fraud who indicated that they had participated in a fraudulent investment, 34 percent were introduced to the seller through a friend (FINRA Investor Education Foundation 2013a). Social consensus can even be effective with strangers. For example, a typical pitch from a fraudster is something like 'This investment made hundreds of people extremely wealthy.' With this statement, the fraudster is relying on the potential victim thinking that hundreds of people can't be wrong. In fact, research has found that such a statement is appealing to 30 percent of the respondents who rated it (FINRA Investor Education Foundation 2013a).

The norm of reciprocity is another technique that fraudsters rely on to convince potential victims to part with their money (Gouldner 1960). The norm is based on the notion that people should return help to those who help them, and the norm is found to be powerful and universal. The power of reciprocity has been demonstrated in a number of different settings, including charities (Cialdini 2001) and organizational/industrial settings (Rhoades and Eisenberger 2002). Given the effectiveness of reciprocity, it is not surprising that fraudsters use the technique. An example would be a fraudster giving you a 'break on his commission'. Similarly, free meal seminars are another common tactic that relies on the norm of reciprocity. A meal is provided, after which the fraudster expects that attendees will invest in his scheme in return for the meal. Not all free meal seminars are frauds, but a report by the Securities Exchange Commission, the North American Securities Administrators Association, and the Financial Industry Regulatory Authority found that, in half the cases they examined, the sales materials contained claims that were exaggerated, misleading, or otherwise unwarranted (Securities and Exchange Commission et al. 2007). Moreover, 13 percent of the seminars appeared to involve fraud, ranging from unfounded projections of returns to sales of fictitious products. While little empirical work has been done on the efficacy of free meal seminars, their ubiquity lends credence to their effectiveness: 64 percent of adults indicated that they were contacted to attend a free lunch sales pitch (FINRA Investor Education Foundation 2013a).

By its very nature, investing typically involves taking on some degree of risk, ranging from the risk of returns failing to keep pace with inflation, to the risk of incurring losses on investments, or even losing one's entire investment. Whether applied individually or collectively, these and similar tactics can greatly, and often subconsciously, impact the psychological and emotional state of the intended fraud target, which can affect perceptions of

risk and lead to compromised decision making. For example, according to the risk-as-feelings hypothesis, emotional reactions to risky situations often drive behavior (Loewenstein et al. 2001). Newly emerging research has also found that inducing either a positive or a negative emotional state in older adults increased their intention to purchase items marketed with misleading advertisements (Kircanski et al. 2016). In short, social influence tactics may be effective because they can change a person's emotional state and, consequently, affect their willingness to take on risk and their ability to make sound decisions.

### Combating Investment Fraud

Early campaigns to prevent investment fraud focused on warning investors about some perils associated with investing. One unintended consequence of warning campaigns, however, is that they may inspire fear in the target audience. And while fear has been identified as a powerful motivator—as explained in the examples of the scarcity tactic—it is thought to be largely ineffective in behavior change campaigns (Job 1988).

In recent years, investment fraud prevention campaigns have become more sophisticated and incorporate the knowledge and understanding of social influence tactics in an effort to empower consumers to spot and avoid fraud. As discussed earlier in this chapter, emerging research on social influence techniques employed by con criminals has revealed specific tactics that are used to harness emotion and ultimately influence their targets' financial decisions. Given this, some campaigns have shifted from warning investors about specific scams to educating investors about their vulnerability, the various social influence tactics that fraudsters use, and the types of resources they may use for vetting both sellers and products prior to investing.

This shift aligns with recommendations outlined in an Organisation for Economic Co-operation and Development review of anti-scam consumer behavior change campaigns (OECD 2005). The study concluded that a 'lack of data about the impact of anti-scam campaigns makes it difficult to be conclusive about the value of the campaigns that have been run to date'.<sup>6</sup> For this reason, the OECD examined a series of social marketing campaigns that did provide evidence of effectiveness. Through this analysis, the OECD concluded that successful campaigns must identify a clear target market; try to change behavior by specifying specific strategies and steps; use an authoritative tone; identify and communicate consumer benefits; tell stories; and engage partners. While information campaigns and targeted warnings have some utility, the OECD hypothesized that their value was limited by the reactive, specific, short-term nature of the prevention approach. They

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suggested that a more strategic, long-term, skills-based approach to tackling scams was required.

To combat investment fraud, organizations such as AARP, the US Securities Exchange Commission (SEC), the US Commodity Futures Trading Commission (CFTC), and the FINRA Investor Education Foundation have engaged in efforts that not only increase investor awareness of possibly fraudulent activities but also look to the science of social influence and the promise of social marketing to empower investors to resist fraud. The investor protection strategy of the FINRA Investor Education Foundation, for example, is built upon three key pillars: investors need to know that they are vulnerable; investors need to learn to recognize the red flags of fraud; and investors need to take simple protective steps, including asking questions and independently verifying answers.

Fraud prevention campaigns, like many other consumer protection campaigns, ultimately seek to change the behavior of consumers such that they may identify a scam prior to falling victim. Behavior change is rarely a discrete, single event (Zimmerman et al. 2000). An individual usually moves from being uninterested or ambivalent (the pre-contemplation stage), to considering a change (contemplation stage), to deciding and preparing to make a change. This can lead to the desired action stage, but often some type of maintenance and relapse prevention program is required to sustain the impetus to change (Zimmerman et al. 2000). Most individuals find themselves cycling through the various stages before the behavior change is ingrained.

During the pre-contemplation stage, in particular, many people may not see that advice on how to avoid investment fraud applies to them: that is, they have the illusion of invulnerability. This illusion poses a hurdle for investor protection efforts; consumers who do not believe the information applies to them are less likely to advance to the next stage, contemplation. Though some demographic groups are more likely to be victims of investment fraud, nearly everyone is at risk. If a person has money, he or she will likely come across someone who will try to coax him or her to 'get in on the ground floor of a great investment' or 'strike while the iron is hot'. In fact, one study found that over eight out of ten US adults age 40+ had been contacted in some fashion to participate in a likely fraudulent activity (FINRA Investor Education Foundation 2013a). Thus, campaigns that address the illusion of invulnerability and help investors recognize that they—like others—are at risk of falling victim to a scam may be more likely to succeed in moving investors to take action to prevent it.

Identifying the red flags of fraud is, not surprisingly, tightly linked with understanding the social influence tactics used by fraudsters. Accordingly, efforts to build the investors' skills to identify the questionable use of persuasion and influence have been undertaken. Influence techniques



identified through social influence research in the context of financial fraud—including phantom riches, scarcity, source credibility, social consensus, and reciprocity (Consumer Fraud Research Group 2006)—are powerful in building emotion and convincing people to act without evaluating the risks of these actions. Teaching an investor to recognize these tactics is intended to heighten awareness of the emotional impact of the techniques, and consequently, to limit the impact of the techniques on financial decision making. In other words, by learning to recognize when decision making is clouded by emotion, investors may be better equipped to make less emotional, more cognitive decisions.

Beyond recognizing vulnerability and learning to spot persuasion, investors are encouraged to take specific proactive steps to protect themselves. One suggested step involves encouraging people to reduce their exposure to pitches. Some behaviors associated with fraud risk include openness to information and buying investments recommended by a friend, relative, co-worker, or neighbor (FINRA Investor Education Foundation 2007). As noted earlier in this chapter, targeting is highly predictive of investment fraud victimization. In reducing their exposure to pitches, investors may limit the number of fraud attempts to which they are exposed. Fraud prevention efforts also encourage investors to closely examine the background of those trying to sell them investments, and the legitimacy of the investments themselves. This step can assist investors in verifying whether the tactic of source credibility is being used in a deceptive manner. A legitimate securities salesperson must be properly licensed, and his or her firm must be registered with FINRA, the SEC, or a state securities regulator (depending on the type of business the firm conducts). FINRA's BrokerCheck provides information for investors checking the background of broker-dealers, and the SEC's Investment Advisor Public Disclosure (IAPD) database provides information on the background of investment advisors. The CFTC offers SmartCheck to help investors check backgrounds, as well. And each state has resources for helping investors research the background of investment professionals. The North American Securities Administrators Association (NASAA) is a one place to start to learn about state-level investment fraud prevention efforts.

Regulators also recommend that investors check to be sure the investment that he or she is being sold is properly registered with the SEC. Although not all investments are required to be registered, most investments are—and if they are registered they can be found in the SEC's EDGAR Database. Investors should be cautioned that there is an additional level of risk to investing in investments that are not registered with the SEC.

Evidence on the effectiveness of the fraud prevention education initiatives described above is limited and is difficult to obtain. The FINRA Investor Education Foundation and AARP conducted two rounds of field tests in an

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attempt to examine the effectiveness of a ninety-minute investor protection program. *Outsmarting Investment Fraud* (OIF), a program developed by the FINRA Investor Education Foundation and AARP to help investors resist fraud, was tested in a quasi-experimental fashion. The OIF program emphasizes the skills-building, investor protection strategy noted earlier in this chapter—accepting vulnerability, recognizing red flags, and taking simple steps prior to investing. Individuals who attended the OIF workshop were contacted three days later by a telemarketer who had experience with high-pressure sales, and the telemarketer asked if he could send the individual information about an oil and gas investment (oil and gas investments are often rife with fraud). To serve as a control group, the telemarketer also randomly contacted individuals who were registered to attend the OIF program the following week but had not yet been exposed to the program. The results showed that individuals who received the OIF training were significantly less likely to respond to a fraud appeal than individuals who had not received the training. Thirty-six percent of the control group agreed to send the telemarketer their contact information compared to 18 percent of the group that took the training—a significant improvement in resistance to high-pressure investment sales (Shadel et al. 2010). In short, the field test demonstrated that the OIF program—and the investor protection strategy on which it is developed—may change behavior and help protect investors from fraud.

Outbound call centers have also been used to proactively contact people who might be at risk of lottery fraud and offer counseling to help the potential victim avoid victimization. A study conducted by AARP and the US Department of Justice (AARP 2003) found that the call centers were effective at reducing responsiveness to fraudulent pitches, and a follow-up field study conducted by Stanford University found similar results (Scheibe et al. 2014). Yet, neither of these studies focused specifically on investment fraud, so it is unclear if this approach would generalize to helping protect investors from investment fraud.

## Conclusions

Our review of the literature suggests that investment fraud is a significant problem in America. It is also a problem that may become worse as the Baby Boomers retire and significant assets move out of their employer-provided retirement plans. While several demographic characteristics are associated with fraud victims (e.g., age, sex, and income), it is unclear whether certain demographic groups are more susceptible to investment fraud, more targeted by fraudsters, or both. Further, psychographic variables like risk

tolerance, financial literacy, and the inability to identify the red flags of fraud are also associated with investment fraud victimization.

The science of social influence, which refers to how people change the thoughts, feelings, and behaviors of others through a variety of methods, has been used to help explain how fraudsters con their victims. Phantom riches, source credibility, social consensus, reciprocity, and scarcity are all among the social influence tactics commonly used by fraudsters, and their effectiveness at influencing behavior is supported by survey-based financial fraud research and experimental social psychological research. Educational initiatives aimed at getting people to understand the social influence tactics fraudsters use have been effective in increasing the ability of individuals to resist fraud pitches.

Given that the goal of many of the social influence tactics is to make potential fraud victims emotional, and that emotions have been tied to compromised financial decision making, one way to reduce the likelihood of falling victim to investment fraud is to wait a period, such as 24 hours, after being approached with an investment before making any investment decisions. This will enable potential victims' emotions to subside and give them the opportunity to discuss the possible investment with friends and family. Additional recommendations include checking the background of the person trying to sell you the investment and checking to see if the investment is a registered investment. Nevertheless, more work needs to be done to understand if these educational initiatives and fraud prevention strategies are robust across fraud types. In addition, policymakers and stakeholders may need to build a broader network of organizations to assist fraud victims—in part due to the high level of re-victimization (Hume and Canan 2016). For example, organizations such as the National Center for Victims of Crime are beginning to offer training to staff of adult protective services agencies, senior support groups, and other community-based consumer protection organizations, to build their capacity to assist fraud victims.

Research aimed at understanding the causes and consequences of fraud is in its early stages, so gaps in our knowledge exist. For instance, Deevy et al. (2012) posit a number of questions on a variety of topics that need to be addressed, including more accurately measuring the prevalence and costs of financial fraud, improving the reporting of financial fraud, assessing susceptibility to fraud, and identifying the motivations of fraudsters, to name a few. Since this list of research questions has been published, progress has already been made on more accurately measuring the prevalence and costs of fraud.

A collaborative effort of the US Department of Justice's Bureau of Justice Statistics, the Stanford Center on Longevity, and the FINRA Investor Education Foundation is trying to more accurately categorize and measure financial fraud. Working in coordination with other organizations and researchers, they have created a taxonomy of fraud that can be used to

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categorize the many different types of financial frauds including investment fraud (Beals et al. 2015). The goal of the project is to include a survey as a supplement to the Department of Justice's National Crime Victimization Survey, which would provide researchers, policymakers, and stakeholders with accurate baseline prevalence estimates of the various types of financial fraud and, potentially, an improved understanding of financial fraud. In addition, inclusion of fraud victimization questions in an upcoming wave of the Health and Retirement Study will provide researchers with a rich longitudinal data source to better understand the prevalence and predictors of financial fraud. The increased attention that these projects and others like them bring to the problem of investment fraud—and to financial fraud, more generally—offers promise that in the coming years researchers and policymakers will have a better understanding of investment fraud and effective interventions for protecting investors.

### **Appendix**

This Appendix contains information on the variables included in the regression analyses that are reported in Table 10.2 and Table 10.3.

#### **Dependent Variable**

Respondents were shown nine descriptions of financial offers, all of which are known to be rife with fraud, but which were not identified as fraudulent in the descriptions—for example, lottery scams, oil and gas scams, and free-meal financial seminars. For each of these potentially fraudulent offers, respondents were asked whether they had ever been solicited with such an offer, whether they had engaged with the offer (e.g., made an investment or responded to the solicitor), and whether they had lost a significant amount of money after investing in the offer. Respondents who said they lost a significant amount of money investing in at least one of the nine offers were coded with a 1 to indicate they lost money in a potentially fraudulent activity; all other respondents were coded with a 0.

#### **Demographic Independent Variables**

The regressions included the following demographic variables.

- (1) Age—measured continuously
- (2) Household income—greater than or equal to \$50,000 = 1 otherwise 0

- (3) Sex—male = 1 and female = 0
- (4) Education—college degree or higher = 1 otherwise 0
- (5) Marital status—married = 1 otherwise 0
- (6) Non-Asian minority—white and Asian = 0 otherwise 1
- (7) Presence of dependants in the household—dependants present = 1 otherwise 0
- (8) College educated—college degree or higher = 1 otherwise 0
- (9) Widow—widow = 1 otherwise 0

### **Psychographic Independent Variables**

The regressions included the following psychographic variables.

- (1) Financial literacy—measured using a five-question financial literacy quiz of questions covering fundamental concepts of economics and finance that may be encountered in everyday life, such as calculations involving interest rates and inflation, principles relating to risk and diversification, the relationship between bond prices and interest rates, and the impact that a shorter term can have on total interest rate payments over the life of the loan.
- (2) Risk tolerance—measured by asking respondents how willing they are to take investment risk (1 equals not at all willing and 10 equals very willing).
- (3) Inability to identify common red flags of investment fraud—measured using a ten-point scale where 1 indicated that the respondent had no interest in a typically fraudulent advertising statement and 10 indicated extreme interest (the mean of six ‘red flag’ advertising statements was used in the regression).
- (4) Perception of debt—measured using a seven-point scale where 1 indicated that they strongly disagreed with the statement ‘I have too much debt right now’ and 7 indicated that they strongly agreed with this statement.

### **Targeting Variable**

The regression included a variable that quantified the number of different investment frauds that the respondent was targeted for. Targeting was measured in the same manner that victimization was measured—that is, by showing respondents nine descriptions of financial offers which are known to be rife with fraud. For each of these potentially fraudulent offers, respondents were asked whether they had ever received such an offer.

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Respondents who said they did—regardless of whether or not they responded to the offer or participated in the solicited investment—were coded with a 1 to indicate they were solicited for the particular type of fraud being assessed, and 0 otherwise. The nine variables, one for each type of fraud, were then summed and the measure of fraud solicitation could range from 0 (never being solicited) to 9 (being solicited for all nine forms of investment fraud examined).

### Notes

1. This chapter focuses on investment fraud, though much of the extant research examines more general financial fraud. Complicating the issue further, some researchers conflate the terms consumer fraud, personal fraud, telemarketing fraud, or fraud—often without providing explicit definitions. Research studies cited in this chapter cover all areas of fraud, but an attempt is made to focus on investment fraud. Further, when describing the results of a study, we typically used the same terminology that the authors use.
2. Financial elder abuse and elder financial exploitation are general terms that include the financial targeting of older people, often by someone in a position of trust. This chapter focuses on financial scams targeting all Americans, including the elderly, but does not focus specifically on older people or on different types of abuse by someone in a position of trust. See DeLiema and Deevy (Chapter 9, this volume) for more information on financial elder abuse.
3. Unlike marginal probabilities, odds ratios are invariant to the values of the independent variables (Liao 1994).
4. Survey respondents were asked if they were contacted to participate in or lost money in the following types of investment frauds: Cold Call Scam, Free Lunch Seminar, Oil & Gas Scam, Promissory Note Scam, Pump & Dump, Pre-IPO Scam, High-Yield Investment Program Scam, Multi-Level Marketing, and Digital Currency Purchase. For more information on the methodology used to collect these data, see FINRA Investor Education Foundation (2013a).
5. The results of these analyses are promising, but they suffer from two limitations. First, the survey methodology assumes that, in order to be victimized by investment fraud, the respondent had to be targeted or solicited to participate in a potentially fraudulent investment. As a result, respondents who said they were not contacted for fraud were not asked if they were ever victimized by fraud. Yet, it is possible that victims actually sought out interaction with the person who ultimately defrauded them. Second, the survey questions asked if respondents had ever been victimized by different types of investment fraud, so older respondents could have been targeted and victimized by investment fraud more often than younger respondents, simply because they had more time to be targeted and victimized. Nevertheless, research on memory decay suggests that respondents

cannot think back too far when recalling events, which may lessen the impact of this limitation (Jenkins et al. 2002).

6. The lack of evaluative reports might be attributed to the scarcity of time and resources for many of the campaigners, who likely have to focus on their other program activities instead of extensive evaluation. They may also lack the research expertise to conduct evaluations. Further, while academia has a high demand for publishing results, most non-profits have little incentive for making public any evaluations which they do complete. Notable exceptions came from evaluations of publicly funded programs, academic case studies, and professional associations working to improve best practices.

### References

- AARP (1996). *Telemarketing Fraud Victimization of Older Americans: An AARP Survey*. Washington, DC: AARP.
- AARP (2003). *Off the Hook: Reducing Participation in Telemarketing Fraud*. Washington, DC: AARP.
- AARP (2007). *Stolen Futures: An AARP Washington Survey of Investors and Victims of Investment Fraud*. Washington, DC: AARP.
- AARP (2008). *Consumer Fraud: A 2008 Survey of AARP Colorado Members' Experiences and Opinions*. Washington, DC: AARP.
- AARP (2011). *AARP Foundation National Fraud Victim Survey*. Washington, DC: AARP.
- Anderson, K. (2004). *Consumer Fraud in the United States: An FTC Survey*. Washington, DC: Federal Trade Commission.
- Anderson, K. (2007). *Consumer Fraud in the United States: The Second FTC Survey*. Washington, DC: Federal Trade Commission.
- Anderson, K. (2013). *Consumer Fraud in the United States, 2011: The Third FTC Survey*. Washington, DC: Federal Trade Commission.
- Asch, S. (1956). 'Studies of Independence and Conformity: A Minority of One Against a Unanimous Majority'. *Psychological Monographs* 70(9): 1–70.
- Barber, B. and T. Odean (2001). 'Boys Will Be Boys: Gender, Overconfidence, and Common Stock Investment'. *Quarterly Journal of Economics* 116(1): 261–91.
- Beals, M., M. DeLiema, and M. Deevy (2015). 'Framework for a Taxonomy of Fraud'. Working Paper. Palo Alto, CA: Stanford Center on Longevity.
- Brehm, S. and J. Brehm (1981). *Psychological Reactance: A Theory of Freedom and Control*. New York: Academic Press.
- Button, M., C. Lewis, and J. Tapley (2014). 'Not a Victimless Crime: The Impact of Fraud on Individual Victims and Their Families'. *Security Journal* 27(1): 36–54.
- Castle, E., N. Eisenberger, T. Seeman, W. Moons, I. Boggero, M. Grinblatt, and S. Taylor (2012). 'Neural and Behavioral Bases of Age Differences in Perceptions of Trust'. *Proceedings of the National Academy of Sciences* 109(51): 20848–52.
- Cialdini, R. (2001). *Influence: Science and Practice*. Boston, MA: Allyn & Bacon.
- Consumer Fraud Research Group (2006). *Investor Fraud Study Final Report*. Washington, DC: NASD Investor Education Foundation.

## 210 Financial Decision Making and Retirement Security

- Deevy, M. and M. Beals (2013). 'The Scope of the Problem: An Overview of Fraud Prevalence Measurement'. Working Paper. Palo Alto, CA: Stanford Center on Longevity.
- Deevy, M., S. Lucich, and M. Beals (2012). 'Scams, Schemes and Swindles: A Review of Consumer Financial Fraud Research'. Working Paper. Palo Alto, CA: Stanford Center on Longevity.
- DeLiema, M. (2015). 'Using Mixed Methods to Identify the Characteristics of Older Fraud Victims'. Unpublished dissertation. Los Angeles, CA: University of Southern California.
- Federal Bureau of Investigation (2014). *Fraud Target: Senior Citizens*. Washington, DC: FBI.
- FINRA (2015). *2015 Exam Letter*. Washington, DC: FINRA.
- FINRA Investor Education Foundation (2007). *National Risk Behavior Study*. Washington, DC: FINRA Foundation.
- FINRA Investor Education Foundation (2013a). *Financial Fraud and Fraud Susceptibility in the United States*. Washington, DC: FINRA Foundation.
- FINRA Investor Education Foundation (2013b). *Financial Capability in the United States: Report of Findings from the 2012 National Financial Capability Study*. Washington, DC: FINRA Foundation.
- FINRA Investor Education Foundation (2015). *Non-Traditional Costs of Financial Fraud*. Washington, DC: FINRA Foundation.
- Gamble, K., P. Boyle, L. Yu, and D. Bennett (2014). 'The Causes and Consequences of Financial Fraud Among Older Americans'. Working Paper. Boston, MA: Boston College Center for Retirement Research.
- Ganzini, L., B. McFarland, and J. Bloom (1990). 'Victims of Fraud: Comparing Victims of White Collar and Violent Crime'. *Journal of the American Academy of Psychiatry and the Law Online* 18(1): 55–63.
- Gouldner, A. (1960). 'The Norm of Reciprocity: A Preliminary Statement'. *American Sociological Review* 25(2): 161–78.
- Graham, W. (2014). *A Quantitative Analysis of Victims of Investment Crime*. London: Financial Conduct Authority.
- Hume, C. and S. Canan (2016). *Older Consumers Targeted by Fraudsters Not Once, But Twice!* Consumer Financial Protection Bureau [website]. <<http://www.consumerfinance.gov/about-us/blog/older-consumers-targeted-by-fraudsters-not-once-but-twice>>.
- Jenkins, P., G. Earle-Richardson, D. Slingerland, and J. May (2002). 'Time Dependent Memory Decay'. *American Journal of Industrial Medicine* 41(2): 98–101.
- Job, S. (1988). 'Effective and Ineffective Use of Fear in Health Promotion Campaigns'. *American Journal of Public Health* 78(2): 163–7.
- Kahneman, D. and A. Tversky (1979). 'Prospect Theory: An Analysis of Decision Under Risk'. *Econometrica* 47(2): 263–92.
- Kerley, K. and H. Copes (2002). 'Personal Fraud Victims and Their Official Responses to Victimization'. *Journal of Police and Criminal Psychology* 17(1): 19–35.
- Kircanski, K., N. Notthoff, D. Shadel, G. Mottola, L. Carstensen, and H. Gotlib (2016). 'Emotional Arousal Increases Susceptibility to Fraud in Older Adults'. Working Paper. Palo Alto, CA: Stanford Center on Longevity.



- Knutson, B. and G. Samanez-Larkin (2014). 'Individual Differences in Susceptibility to Investment Fraud'. Working Paper. Palo Alto, CA: Stanford University.
- Lee, J. and H. Soberon-Ferrer (1997). 'Consumer Vulnerability to Fraud: Influencing Factors'. *Journal of Consumer Affairs* 31(1): 70–89.
- Lerner, J., D. Small, and G. Loewenstein (2004). 'Heart Strings and Purse Strings: Carryover Effects of Emotions on Economic Decisions'. *Psychological Science* 15(5): 337–41.
- Liao, T. (1994). *Interpreting Probability Models: Logit, Probit, and Other Generalized Linear Models*. London: Sage.
- Loewenstein, G., E. Weber, C. Hsee, and N. Welch (2001). 'Risk as Feelings'. *Psychological Bulletin* 127(2): 267–86.
- Lusardi, A. and O. Mitchell (2006). 'Baby Boomer Retirement Security: The Roles of Planning, Financial Literacy, and Housing Wealth'. *Journal of Monetary Economics* 54(1): 205–24.
- McCannon, T., C. Asaad, and M. Wilson (2015). 'Financial Competence, Overconfidence, and Trusting Investments: Results from an Experiment'. *Journal of Economic Finance* 40(3): 590–606.
- Milgram, S. (1965). 'Some Conditions of Obedience and Disobedience to Authority'. *Human Relations* 18(1): 57–76.
- Milgram, S. (1974). *Obedience to Authority*. New York: Harper & Row.
- Mottola, G. (2015). *A Snapshot of Investor Households in America*, Washington, DC: FINRA Foundation.
- Myers, D. (1993). *Social Psychology*. New York: McGraw-Hill.
- Organisation for Economic Co-operation and Development (2005). 'Examining Consumer Policy: A Report on Consumer Information Campaigns Concerning Scams'. OECD Digital Economy Working Papers No. 103. Paris: OECD.
- Pratkanis, A. (2007). 'Social Influence Analysis: An Index of Tactics'. In A. Pratkanis (ed.), *The Science of Social Influence: Advances and Future Progress*. New York: Psychology Press, pp. 17–82.
- Pratkanis, A. and P. Farquhar (1992). 'A Brief History of Research on Phantom Alternatives: Evidence for Seven Empirical Generalizations about Phantoms'. *Basic and Applied Social Psychology* 13(1): 103–22.
- Rhoades, L. and R. Eisenberger (2002). 'Perceived Organizational Support: A Review of the Literature'. *Journal of Applied Psychology* 87(4): 698–714.
- Ross, M., I. Grossmann, and E. Schryer (2014). 'Contrary to Psychological and Popular Opinion, There is no Compelling Evidence that Older Adults are Disproportionately Victimized by Consumer Fraud'. *Perspectives on Psychological Science* 9(4): 427–42.
- Scheibe, S., N. Notthoff, J. Menkin, L. Ross, D. Shadel, M. Deevy, and L. Carstensen (2014). 'Forewarning Reduces Fraud Susceptibility in Vulnerable Consumers'. *Basic and Applied Social Psychology* 36(3): 272–9.
- Schoepfer, A. and N. Piquero (2009). 'Studying the Correlates of Fraud Victimization and Reporting'. *Journal of Criminal Justice* 37(2): 209–15.
- Securities and Exchange Commission, North American Securities Administrators Association, and the Financial Industry Regulatory Authority (2007). *Protecting Senior Investors: Report of Examinations of Securities Firms Providing Free Lunch Sales Seminars*. Washington, DC: Securities and Exchange Commission.

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- Shadel, D., K. Pak, and J. Gannon (2010). 'The Effects of Investment Fraud Workshops on Future Investor Resistance'. Presentation at National Academy of Sciences meeting on Elder Mistreatment and Abuse and Financial Fraud, Washington, DC, June 22.
- Shadel, D., K. Pak, J. Mathisen, B. Carlson, and J. Edwards (2007). *Inside the Con Man Mind: Advanced Training for Fraud Fighters*. Seattle, WA: AARP.
- Titus, R., F. Heinzelmann, and J. Boyle (1995). 'Victimization of Persons by Fraud'. *Crime and Delinquency* 41(1): 54–72.
- Van Dijk, J., J. Van Kesteren, and P. Smit (2007). *Criminal Victimization in International Perspective: Key Findings from the 2004–2005 ICVS and EUICS*. The Hague: Ministry of Justice, Wetenschappelijk Onderzoeken Documentatiecentrum.
- Van Wyk, J. and M. Benson (1997). 'Fraud Victimization: Risky Business or Just Bad Luck?' *American Journal of Criminal Justice* 21(2): 163–79.
- West, S. (1975). 'Increasing the Attractiveness of College Cafeteria Food: A Reactance Theory Perspective'. *Journal of Applied Psychology* 60(5): 656–8.
- Worchel, S., J. Lee, and A. Adewole (1975). 'The Effects of Supply and Demand on Ratings of Object Value'. *Journal of Personality and Social Psychology* 32(5): 906–14.
- Zimmerman, G., C. Olsen, and M. Bosworth (2000). 'A Stages of Change Approach to Helping Patients Change Behavior'. *American Family Physician* 61(5): 1409–16.