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# The Institute for Behavioral and Household Finance



## White Paper Series

### *Scamming Grandma:*

### *Financial Fraud and the Impact on Households*

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## Overview

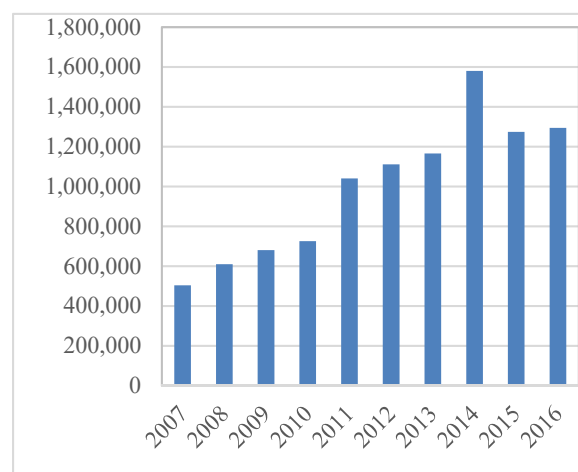
Many Americans have experienced or know of a person who has fallen victim to a financial scam, and as social media platforms, online databases, and internet services expand, reports of these scams become more widespread. While word-of-mouth stories and news vehicles raise awareness, there is limited existing research analyzing the financial impact of these scams on households.

Figure 1 illustrates the total number of annual fraud reports in the United States. From 2007 to 2016, an increase of 157% was seen in the number of reported financial scams. More recently, in 2018, there were 1,427,563 fraud reports, which is up 25% from 2017. The amount of 2018 reports with a monetary loss increased 48% to 358,755 from the year prior, and the median monetary loss for all fraud reports was down \$375 in 2018, 13% less than the year prior.<sup>1</sup>

When we look at fraud reports by age group, a significant increase in frauds reported by older age cohorts is identified. The data in Figure 2 show that ages 40-59 historically have had the highest annual number of fraud reports, and ages 60+ have seen a substantial increase in the number of reported fraud cases in the past 10 years. The heightened reporting activity amongst older adults may be because they are targeted

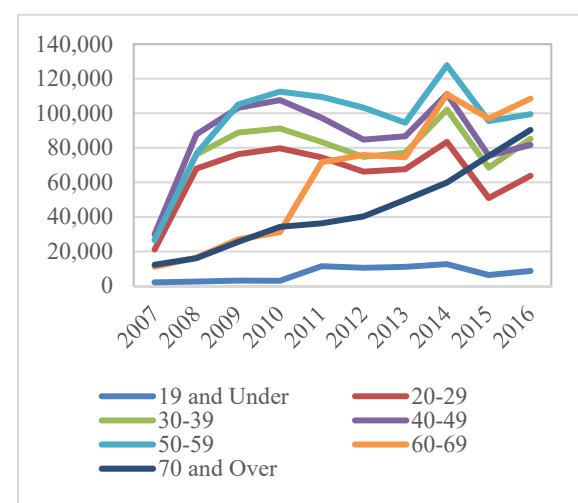
more by scammers, are more educated on where to file a complaint, are more interested in combatting fraud, or a combination of these or other factors.

**Figure 1: Historical Household Financial Fraud Reports**



Source: Consumer Sentinel Network, 2007-2016

**Figure 2: Fraud Reports by Age Group**



Source: Consumer Sentinel Network, 2007-2016

<sup>1</sup> Data from the Consumer Sentinel Network Data Books. Since 1997, the Federal Trade Commission (FTC) annually has released a Consumer Sentinel Network Data Book containing detailed information on fraud and identity theft

consumer reports for that year, including reporter demographics, contact method, amount lost, type of fraud, payment method, and nearly thirty other categories.

Recently, the elderly are being targeted by what has been branded by the media as the “Grandparent Scam,” in which a con artist contacts a victim posing as the victim’s grandchild, claims to be in distress or in need of help, and scams the grandparent into wiring the “relative” funds to be used for hospital bills, lawyer fees, bail money, or some other expense. A Wall Street Journal article indicates “U.S. banks reported a record 24,454 suspected cases of elder financial abuse to the Treasury Department” in 2018, which is “up 12% from 21,839 cases in 2017...and more than double the number in 2013” (Hayashi 2019). The “Grandparent Scam” is just one example of the many phone, e-mail, Internet, and other scams that pose a growing risk to elderly consumers today.

Kircanski et al. (2016) offer an explanation for the recent spike in the cases of elderly fraud victims. This study analyzes whether inducing high-arousal positive and high-arousal negative emotions in the laboratory increases fraud susceptibility in older adults (ages 65 to 85) versus younger adults (ages 30 to 40). The study finds that adults aged 65+ are more susceptible to fraud than younger adults when in a state of high emotional arousal, whether positive or negative. On the other hand, younger adults demonstrate a significant positive relationship between the credibility of an “advertisement,” or scam, and the intent to purchase a good (Kircanski et al., 2016). Fraud types such as the “Grandparent Scam” or charity scams, when successful, induce

a heightened emotional state in the target. In this heightened emotional state, not only is the target more likely to fall victim to a financial loss from the scam, but also may suffer a larger loss due to the belief that this money is going to help a family member or charity in need.

A study performed by Fenge and Lee (2018) also shows scammers’ use of emotional manipulation attracts victims and allows the financial abuse to be sustained. This study finds that most victims engage with scammers in the belief they are helping the (apparent) needs of loved ones or in an attempt to satisfy their own desires. Fenge and Lee (2018) also identify loneliness amongst older adults as a significant factor when falling victim to and maintaining involvement in scams.

Boyle et al. (2017) find that a person’s overconfidence in his/her personal financial knowledge is a large risk factor for older adults (ages 65+) falling victim to financial fraud. The study also identifies increased risk-taking tendencies resulting from fraud victimization, placing previous fraud victims in a more vulnerable position for subsequent fraudulent exploitation. Boyle et al. (2017) also show that decreasing cognition is predictive of higher scam susceptibility and future fraud incidence.

A study by Finke et al. (2011) finds that financial literacy scores decline by about 1% each year after age 60, and this decline is associated with poor financial decisions (Finke et al., 2011). This finding is supported by a study by Gamble et al.

(2015) which finds that decreases in cognition are associated with decreases in financial literacy.<sup>2</sup> Scammers take advantage of this decrease in cognition and financial decision making in older adults for illegal financial gain, which has resulted in household fraud disproportionately negatively impacting older adults in comparison to the rest of the population.

This white paper aims to illustrate the trends of household financial fraud over time. Further, the study explores potential explanations for the trends and identifies specific age cohorts most at risk of falling victim to fraud.

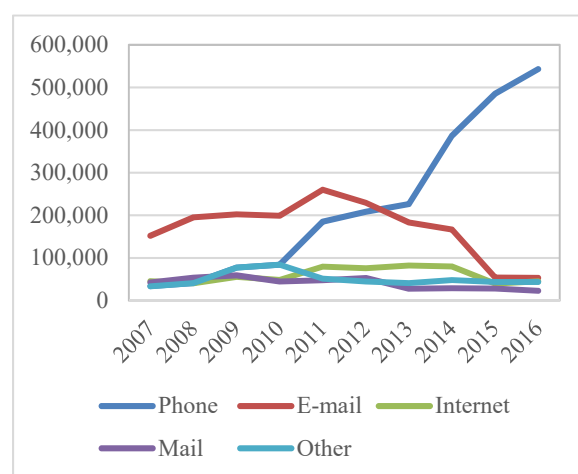
### Technology and Trends

Victims of financial fraud can be targeted through many vehicles including phone calls, e-mail, websites, and traditional mail. Over the past two years, the most common reported fraud contact method was by phone, seeing an increase of 27% in phone reports from 2017 to 2018. The fastest growing scamming contact method reported from 2017 to 2018 was via websites or other Internet services, which saw an increase in reporting of 86%. E-mail scams also rose in 2018 by 30%, while traditional mail scams fell by 16% from 2017.

Figure 3 illustrates the trends in fraud reports by contact methods from 2007 to 2016. While most categories saw a slight decrease in the number of reports over this ten-year span, phone scams saw

an increase of over 16 times the 2007 level. The reason for the growth in telephone scams may be due to the diversity of ways in which the potential victim can be “hooked”, including travel packages, credit/loans, charitable causes, extended car warranties, “free” trial offers, and more (The Federal Trade Commission, February 2015).

**Figure 3: Fraud Reports by Fraud Method**



Source: Consumer Sentinel Network, 2007-2016

Technological advances, such as phone number spoofing, phishing emails, and fake or unsecure websites may offer an explanation for the growth in phone, e-mail, and Internet services scams. In recent years, the Federal Trade Commission (FTC) has reported a significant increase in the number of illegal robocalls resulting from internet-powered phone systems that make it cheap and easy for scammers to make illegal calls from anywhere in the world. These systems also allow scammers to manipulate caller ID information as a means of hiding from law

<sup>2</sup> Older adults are not found to be less confident when managing their own finances (Gamble et al., 2015).

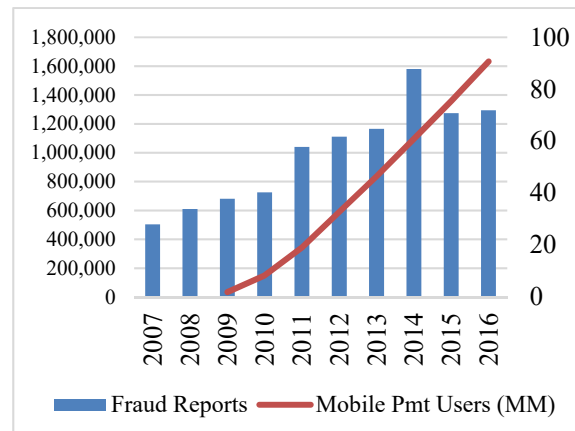
enforcement (The Federal Trade Commission, February 2019). These robocalls often appear to be from local area codes (called “neighbor spoofing”), claim to be from well-known brands or companies, or transfer the target to speak with a live operator.

In May 2018, the Federal Communications Commission issued a \$120 million verdict against Adrian Abramovich for a massive phone fraud scheme in which he spoofed 96 million robocalls aimed at selling timeshares and other travel packages to consumers (The Federal Communications Commission, November 2018). Mr. Abramovich’s scheme serves as an example of the many phone fraud schemes occurring across the globe.

As technology continues to advance at a rapid pace, consumers share increased amounts of their private and personal information online through social media platforms, mobile banking or other services accounts, and unsecure websites. The growth of the online world may offer an explanation for the recent growth in fraud reporting throughout the United States.

Mobile payments (paying for products or services using mobile devices) is highly attractive to consumers due to the swiftness and ease-of-access (Statista, TechCrunch). As seen in Figure 4, the number of mobile payment users in North America has increased from 1.9 million

**Figure 4: Trends in Fraud Reporting and North American Mobile Payment Users (MM)**



*Source: Mobile payment data retrieved from Statista, fraud data retrieved from the Consumer Sentinel Network, 2007-2016*

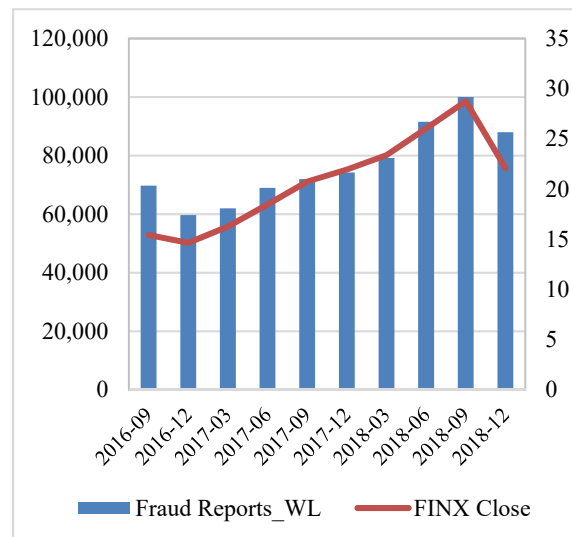
users in 2009 to 90.7 million users in 2016. This growth in the number of mobile payment users has a correlation of 0.83 with the growth in fraud reporting from 2009 to 2016 (Appendix Table A1).

Beyond mobile payments, mobile banking and online consumer-to-consumer payment services such as PayPal or Venmo also have seen large growth in the past decade. From 2009 to 2016, PayPal’s payment volume increased from \$0.03B to \$102B (Statista, PayPal). In addition, the proportion of mobile banking users in the U.S. increased from 18% to 51% between 2009 and 2016 (Statista, MCUL). Historical PayPal payments by volume (\$) and the proportion of mobile bankers in the U.S. have correlations of 0.72 and 0.88, respectively, with the growth in reported fraud cases over the past decade (Appendix Table A1).

The core of mobile banking lies in investment in financial technology, “FinTech,” which aims to make money management more accessible for consumers’ everyday use.<sup>3</sup> The performance of the Global X FinTech ETF (FINX) captures the growth and profitability of the FinTech industry, and its historical performance has demonstrated strong correlation with the fraud report numbers in the past few years. Figure 5 illustrates the quarterly closing FINX prices and quarterly number of fraud reports with monetary losses for the period from 2016 to 2018. The closing FINX price at the end of each quarter during this time period has a correlation of 0.77 with the number of fraud reports that resulted in a financial loss. The FINX quarterly closing prices also were found to have a strong positive correlation with the total number of reported fraud cases (0.74) (See Appendix Table A2).

Since the FINX ETF will perform well when consumers trust in the technology enough to buy products from or invest in this industry, the high correlation between the FINX ETF and fraud reports could suggest that increasing consumer trust in technology makes consumers more susceptible to falling victim to financial scammers.

**Figure 5: Fraud Reports with \$ Loss and FINX Quarterly Closing Prices**



Source: FINX data retrieved from Yahoo Finance, fraud data retrieved from the Consumer Sentinel Network, 2016-2018

### Household Fraud by Age Cohort

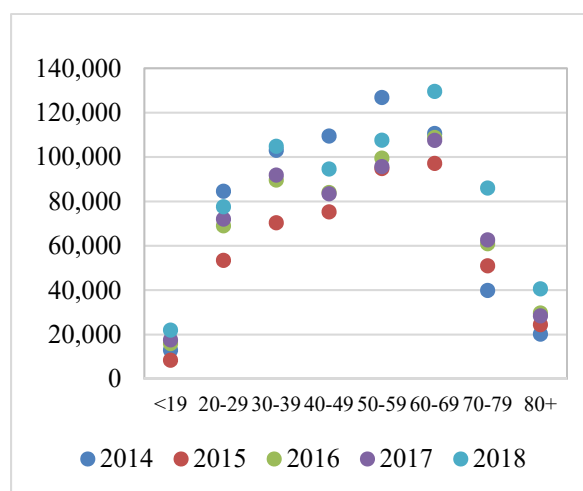
When analyzing the relationship between the age group of the reported victim (indexed from 1 to 8 - youngest age group to oldest age group), the number of reported scams, and the median monetary loss amount for each age group for a given year from 2014 to 2018, we find several key correlations with age (Appendix Table A3). While there is a low *overall* correlation (0.09) between age group and the total number of reported fraud cases, this is due to the parabolic relationship of reports by age, as demonstrated in Figure 6, which details the number of historical reported fraud cases by age group.

<sup>3</sup> FinTech has been defined as any technological innovation in financial services with the goal of disrupting traditional

banking practices and optimizing consumers’ banking experience.  
<https://www.investopedia.com/terms/f/fintech.asp>

Figure 6 also illustrates the majority of age groups under 60 reported fewer scams than were reported five years ago, whereas fraud victims ages 60+ filed 78% more reports in 2018 than five years ago. Ages 50-59 saw the largest decrease in reported fraud cases from 2014 to 2018 with a decrease of 15%, while ages 70-79 saw the largest increase in reported fraud cases from 2014 to 2018 with an increase of 116%.

**Figure 6: Number of Fraud Reports by Age Cohort**

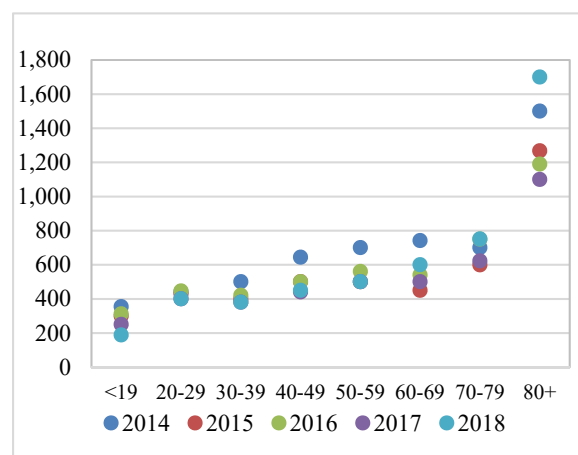


Source: Consumer Sentinel Network, 2014-2018

Figure 7 presents the historical median losses suffered by age cohort. This figure illustrates a large spike in median financial losses from fraud for ages 80+; this age group faced an average median loss of \$1,351 over the past 5 years while all other age groups only faced average median losses between \$200 and \$800. In addition, most age groups below 70 saw a decrease in median

loss by an average of 26% from 2014 to 2018, whereas ages 70+ saw an increase in median loss by an average of 10% over this five-year span. Notably, age group has a strong positive correlation (0.79) with median monetary loss faced by fraud victims. An increase in median monetary loss from fraud is strongly associated with an increase in a victim's age (Appendix Table A3).<sup>4</sup>

**Figure 7: Median Fraud \$ Loss by Age Cohort**



Source: Consumer Sentinel Network, 2014-2018

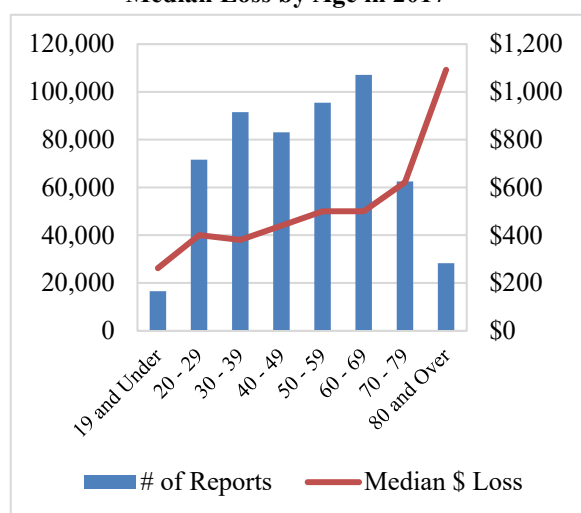
The more recent data show that most age groups either held constant or saw an increase in median monetary loss resulting from financial fraud from 2017 to 2018. Ages 20-29, 30-39, and 50-59 saw no change in the median amount lost at \$400, \$380, and \$500, respectively. Ages 60+ suffered substantial increases in the median amount lost when falling victim to scammers. From 2017 to 2018, median loss increased by 20% to \$600 for ages 60-69, increased by 21% to \$751 for ages

<sup>4</sup>Some limits to this analysis include the self-reporting nature of the fraud data to the Consumer Sentinel Network, and the short time frame of this analysis.

70-79, and increased by 56% to \$1,700 for ages 80+. The median amount lost by individuals 19 and under declined by 28% from \$262 in 2017 to \$188 in 2018.

The distribution in the number of reports and median loss per age group in 2017, illustrated in Figure 8, is consistent with historical trends and identifies adults ages 60-69 as being the largest victim group with 107,107 fraud reports filed. Adults ages 80+ suffered the largest median financial loss from fraud at \$1,100.

**Figure 8: Total Number of Fraud Reports and Median Loss by Age in 2017**



Source: Consumer Sentinel Network, 2017

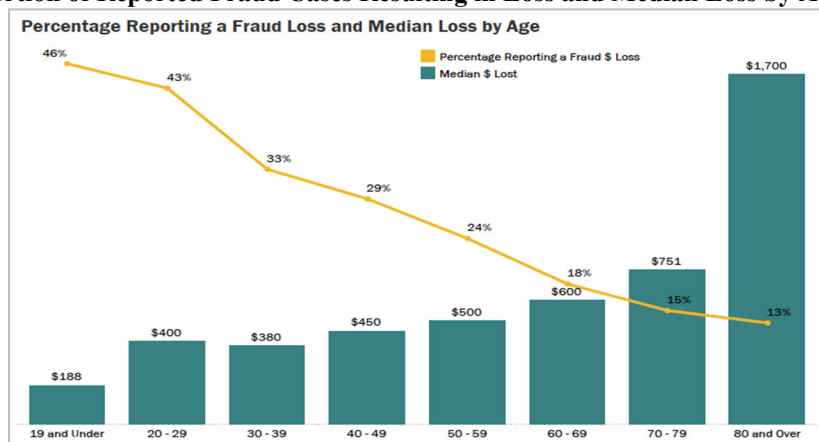
Figure 9 displays the proportion of reported fraud cases resulting in monetary loss by age group, and the median loss by age in 2018. Consistent with historical data, younger age groups are more likely to face a monetary loss when targeted by scammers, while older age groups report a higher median loss conditional of the occurrence of financial loss. In 2018, 46% of ages 19 and under and 43% of ages 20-29 reported a financial loss

when targeted by scammers, with median losses of \$188 and \$400, respectively. Ages 70-79 and ages 80+ face much higher median losses than younger age groups, suffering losses of \$751 and \$1,700, though monetary losses are only reported to occur in 15% and 13% of all reported fraud cases for each age group, respectively. Across the age groups, there is a correlation of -0.73 between the proportion of individuals reporting a monetary loss and the median loss by age group.

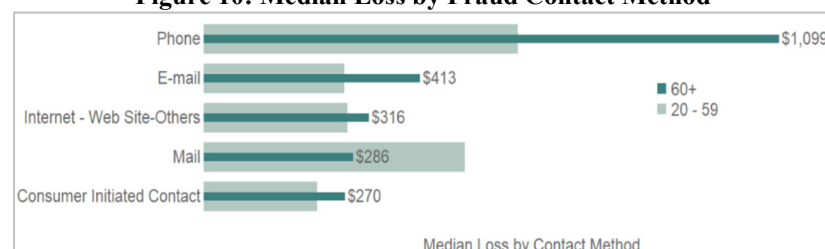
The high proportion of monetary loss resulting from fraud in younger age groups is likely the result of differences in reporting behavior. The FTC shows in its 2018 report to Congress, *Protecting Older Consumers*, that older adults are more likely to report fraud than younger people, regardless of a monetary loss being incurred. Ages 60-69 file about 3,000 reports per million people in comparison to ages 20-29 who only file about 1,500 reports per million (The Federal Trade Commission, October 2018).

Figure 10 displays the median loss by fraud type for older adults (ages 60+) and younger adults (ages 20-59). In four out of five contact methods, adults ages 60+ suffer a larger median loss compared to younger adults. For all ages, phone scams pose the largest financial threat to consumers. A large jump is seen in the monetary loss of \$1,099 suffered by older adults from phone scams, which is over double the median loss suffered by older adults by any other scamming contact method.



**Figure 9: Proportion of Reported Fraud Cases Resulting in Loss and Median Loss by Age Cohort in 2018**

Source: Consumer Sentinel Network, 2018

**Figure 10: Median Loss by Fraud Contact Method**

Source: Protecting Older Consumers, 2017-2018

## Implications

In the past decade, there has been a growing trend in financial scamming, with substantial growth in the number of phone scams reported. Based on reported information, younger adults are proportionally more likely to fall victim to financial loss when targeted by scammers relative to other older age groups. However, the FTC suggests that this is the result of younger consumers being less likely to report scams than older adults when no financial loss is incurred. Conditional on a loss being incurred, older adults report the highest median financial loss as a result of financial scams. This is likely because scammers manipulate the emotions of older

consumers when targeting them in a scam, making them more likely to give away a larger sum of money. Older consumers may be at additional risk to scammers given their increased susceptibility to psychological influences (Kircanski et al., 2016; Boyle et al., 2017), decreased financial literacy (Finke et al., 2011), and decreases in cognition (Gamble et al., 2015).

In addition to identifying the higher fraud risks for older individuals, this paper demonstrates strong evidence of the correlation between financial technology and the increasing trend in reported fraud cases. Technology provides many easily accessible routes for scammers to seize consumers' personal information and take

advantage of this information to exploit a potential victim. As technology advances, people must be more aware of the personal data they share on online sites, mobile devices, and other technology vehicles that are at risk of being hacked.

### **What to Do**

Scams can come from unsolicited fraudsters, family, or close friends. Consumers must protect themselves through financial literacy education and increased fraud awareness. When sharing personal information, consumers are urged to ask companies how this information will be used and find out how this information will be protected from data breaches and hackers. Consumers should identify privacy statements on websites, sales materials, and forms that request this information. Further, consumers must protect confidential personal information and be cautious of what information they share on social media (USA.gov February 2019). Some red flags for fraud include, but are not limited to: the request for wired money (an irreversible act); selling an object for anything besides cash; threats; “too good to be true” offers; unsecured websites<sup>5</sup> that request personal or financial information that can be easily stolen; and e-mails that include spelling/grammar mistakes, or require a person to click on a link (Pritchard 2019). Being aware of

these red flags can reduce the likelihood of consumers falling victim to scammers.

The FTC has many online resources that aim to educate and protect consumers of all demographics from fraudsters, including information on various scam types; shopping and advertising; privacy and identity; and online safety and security. In its latest campaign, “Pass It On,” the FTC has put together various articles, presentations, videos, and activities in order to “start the conversation” on fraud and encourage individuals to “pass on some information that could help someone [they] know” (The Federal Trade Commission, February 2019). Should someone fall victim to a money scam, this campaign also encourages people to file complaints with the FTC, either online or by calling the FTC at 1-877-FTC-HELP. The campaign also encourages people to help FTC investigators by reporting scams when they are spotted. The FTC urges consumers to hang up on robocalls and be skeptical of caller ID as scammers can easily fake this information. Further, individuals are advised never to send money or give out personal information in response to an unexpected request, and do more research prior to revealing any information (The Federal Trade Commission, August 2018).

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<sup>5</sup> Websites that do not have a lock or “https” in the address bar.

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## Appendix

**Table A1: Correlations among Fraud Reports, Consumer Mobile Banking Use, and PayPal's Annual Payment Volume**

	<i>Total Fraud Case Reports</i>	<i>Mobile Banking %</i>	<i>PayPal Pmt Vol (\$B)</i>	<i>Mobile Pmt Users (M)</i>
Total Fraud Case Reports	1.0000			
Mobile Banking %	0.8772	1.0000		
PayPal Pmt Vol (\$B)	0.7164	0.9143	1.0000	
Mobile Pmt Users (MM)	0.8259	0.9846	0.9633	1.0000

*Fraud data retrieved from the Consumer Sentinel Network. Proportion of mobile bankers in the U.S. data retrieved from MCUL, Statista. PayPal payment volume data retrieved from PayPal, Statista. Mobile Payment Users data retrieved from TechCrunch, Statista.*

**Table A2: Correlations among Fraud Reporting and FINX Closing Stock Price**

	<i>Total Fraud Case Reports</i>	<i>Cases with Financial Loss</i>	<i>FINX Close</i>
Total Fraud Case Reports	1		
Cases in which Victims Suffered Financial Loss	0.770119836	1	
FINX Close	0.738927164	0.932082662	1

*Fraud reporting data retrieved from the Consumer Sentinel Network. FINX price data retrieved from Yahoo Finance.*

**Table A3: Correlations among Consumer Confidence, Age Group, Reported Scams, and Median Loss**

	<i>Average_CCI</i>	<i>AgeGroup_Index</i>	<i>Reported Scams</i>	<i>Median Loss</i>
Average_CCI	1			
AgeGroup_Index	0	1		
Reported Scams	0.022186713	0.086136766	1	
Median Loss	-0.128781858	0.787280286	-0.233323595	1

*CCI data retrieved from Yahoo Finance. Reported scam, age group, and median loss data retrieved from the Consumer Sentinel Network.*