UNDERSTANDING FRAUD VICTIMS: USING BIG DATA TO EXPLORE REPEAT VICTIMIZATION, NEIGHBORHOOD CHARACTERISTICS, AND THE ROLE OF EMOTION ON THE MAGNITUDE OF LOSS

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UNDERSTANDING FRAUD VICTIMS USING COMPLAINT DATA AND SCAMMER'S DATA

….PLUS SCAM PREVENTION

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ABOUT ME

I am a gerontologist and Assistant Research Professor at the University of Minnesota School of Social Work. My research centers on:

- Predicting vulnerability to consumer scams and elder financial exploitation.
- Evaluation of fraud prevention and intervention effectiveness.
- Retirement security and advance financial care planning.

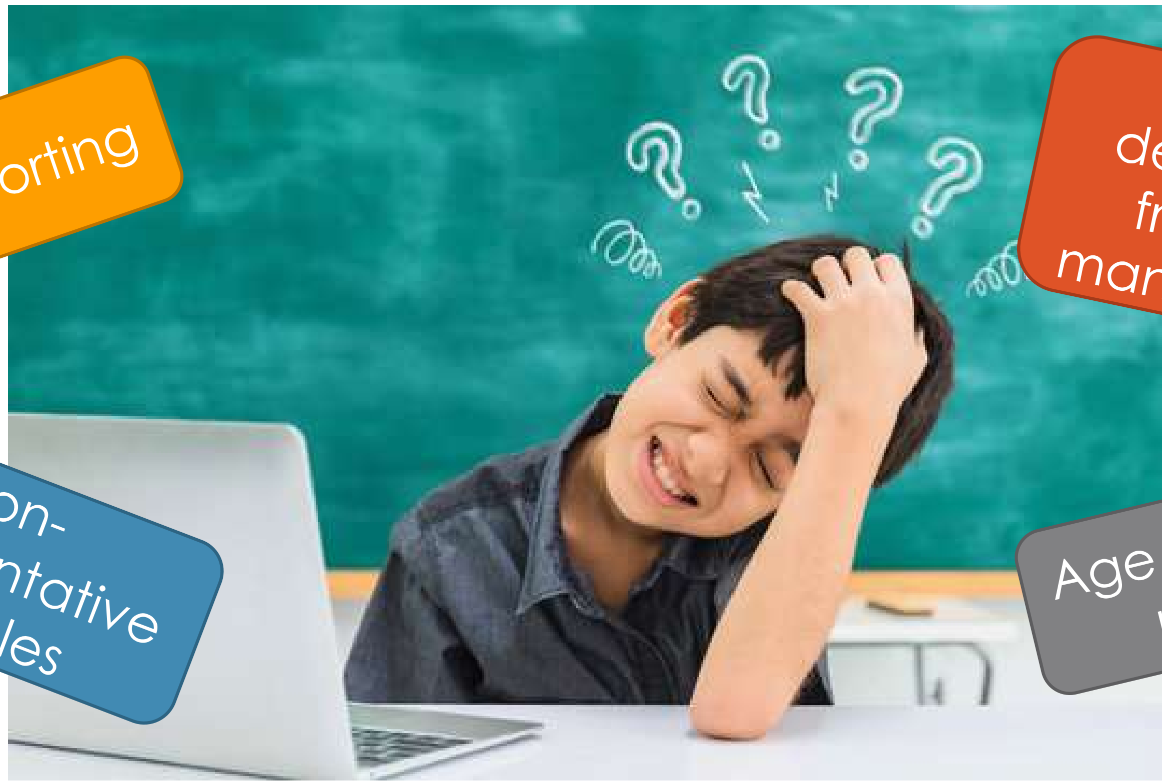
Agenda

1. Overview of fraud, fraud data sources, and research objectives
2. Study 1: Consumer complaint data from the FTC
3. Study 2: Victim data from scammers' "customer" relationship data
4. What do the findings mean for fraud research, intervention, and prevention?
5. Thinking Ahead Roadmap – Advance finanical care planning as a primary prevention strategy

Here's what I want to know:

Who experiences fraud?

Fraud victimization is hard to measure



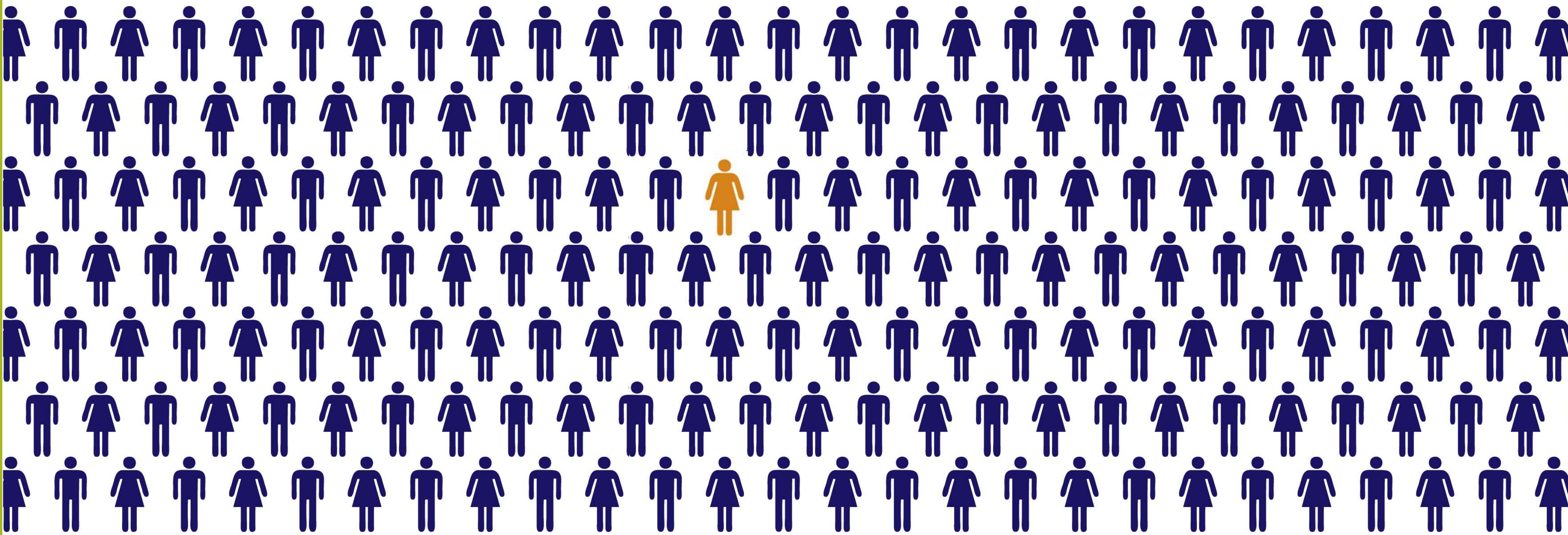
Underreporting

Different definitions of fraud and many subtypes

Non-representative samples

Age can impact reporting

So how underreported is fraud?



Other data sources to examine fraud victim characteristics

Consumer Sentinel

Advantages

- Many scam types represented
- Federal, state, private-sector and nonprofit data contributors
- Includes a description of the fraud incident from the consumer

Disadvantages

- Not representative of all victims (only those who reported fraud)
- Information is self-reported

Scammer databases

Advantages

- Underreporting not an issue
- Accurate information on finanical losses
- Can identify repeat victimization

Disadvantages

- Only a few scam types represented
- Inconsistent data quality

Other data sources to examine fraud victim characteristics

Consumer Sentinel

Advantages

Scammer databases

Advantages

Both databases can be subset with neighborhood characteristics using consumer or victim zip code.

STUDY 1

Using consumer complaint data from the Consumer Sentinel to examine victim risk factors and the role of emotion

Paul Witt | FTC

Marti DeLiema | UMN

Funding & acknowledgement

The research reported herein was derived in whole or in part from research activities performed pursuant to a grant from the U.S. Social Security Administration (SSA) funded as part of the Retirement and Disability Research Consortium.

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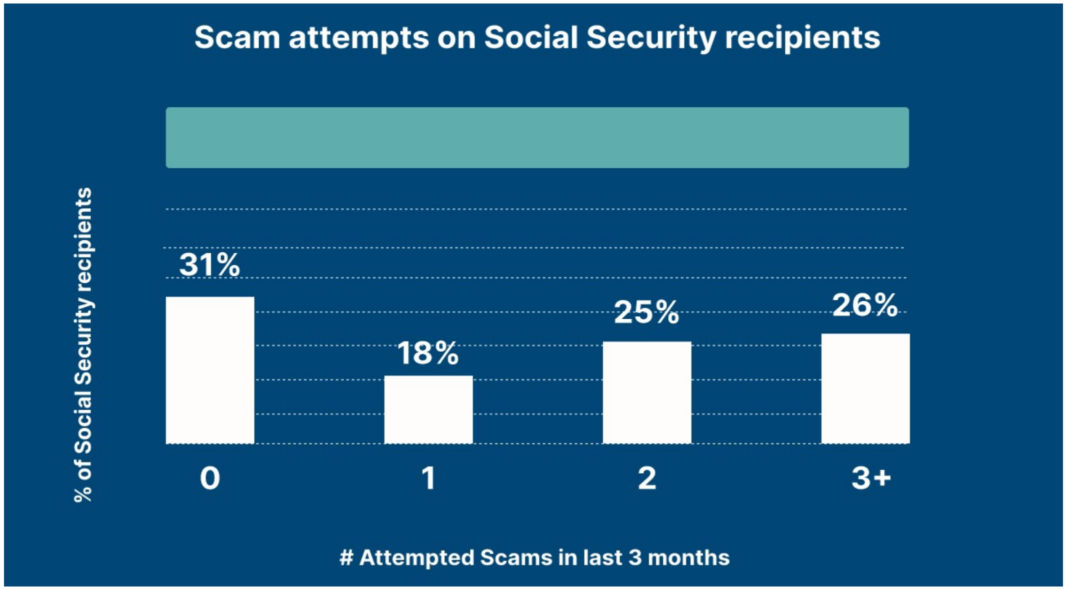
The SSA imposter scam has targeted millions of Americans

- 46% of Americans age 18+ experienced an attempted Social Security scam between Oct-Dec 2020
- A full 69% of Social Security beneficiaries have experienced at least one Social Security scam between Oct-Dec 2020



SimplyWise (January 2021). Retirement Confidence Index. SimplyWise Retirement Confidence Index | SimplyWise

SSA imposter scam complaints in the Sentinel

273,862

Total reported SSA scams

98%

Of all complaints are reported to FTC call center, FTC mobile, or FTC online complaint portal

Cases include consumer’s address, method of contact, method of payment, payment amount, and a narrative of what happened

Research questions

Among those who reported the SSA imposter scam to the FTC:

1. What are the demographic and contextual correlates of victimization?
2. What are the demographic and contextual correlates of reported loss amount among victims?
3. What is the role of emotion on the likelihood and magnitude of financial loss?

Method

- Logistic regression analysis predicting victimization and OLS regression predicting losses (loss amount was log transformed)
- N=209,334
- Quantified emotions in case narratives using the National Research Council Canada (NRC) affect lexicon*
    - Trust
    - Sadness
    - Fear
    - Anger
    - Anticipation

**Models control for number of characters in case narratives*

- Applied a "gender guesser" algorithm to assign sex based on consumers' first names
- Brought in neighborhood data from the 2018 American Community Survey

Variables

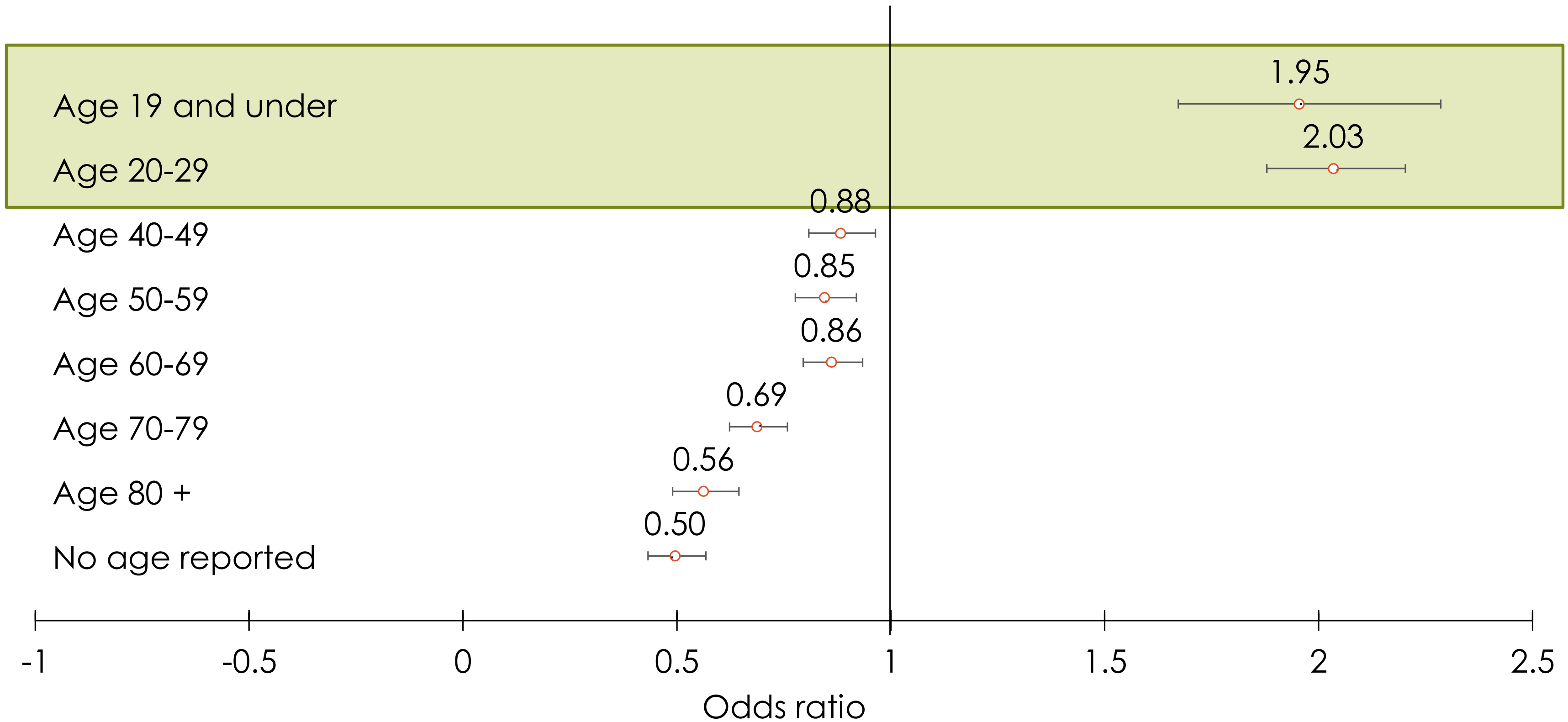
Outcomes predicted

- (1) Reported a loss (victimization) & (2) Amount of loss in US dollars

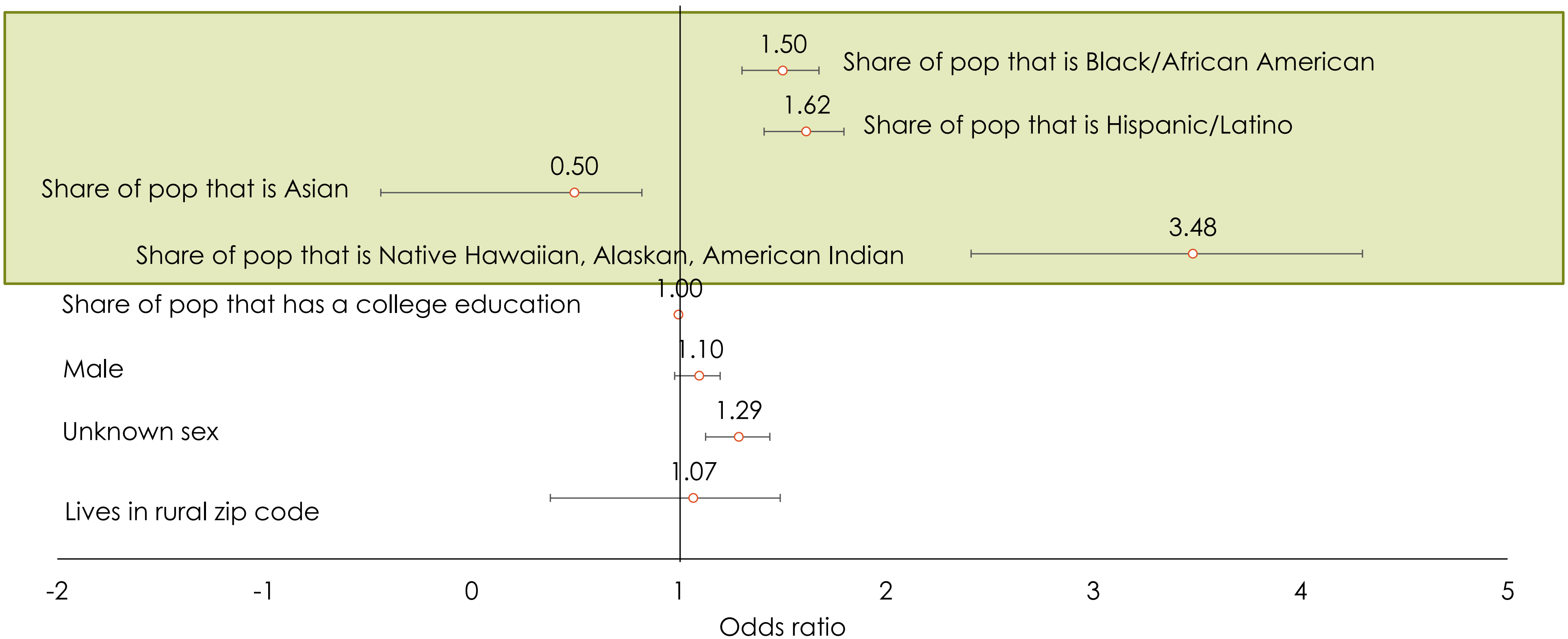
Correlates

- Age group (30-39=ref)
- Year complaint filed (2018=ref)
- Season (Spring=ref)
- Zip code characteristics
  race/ethnicity/college education
- Complaint rate by population
- Sex (proxy) (female=ref)
- Narrative character length
- # of emotion words
  -- trust, anticipation, fear, anger, sadness

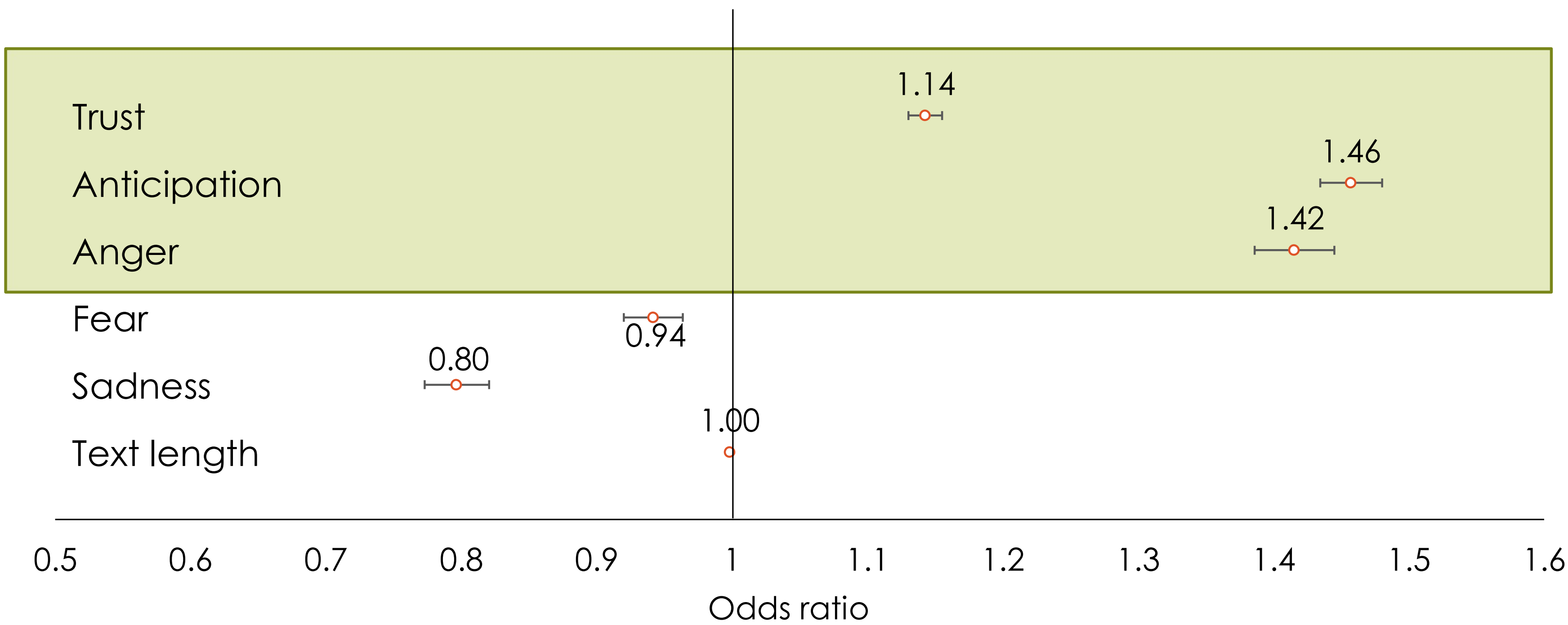
Relative to 30-39-yr.-olds, young adults/teens significantly more likely to report victimization



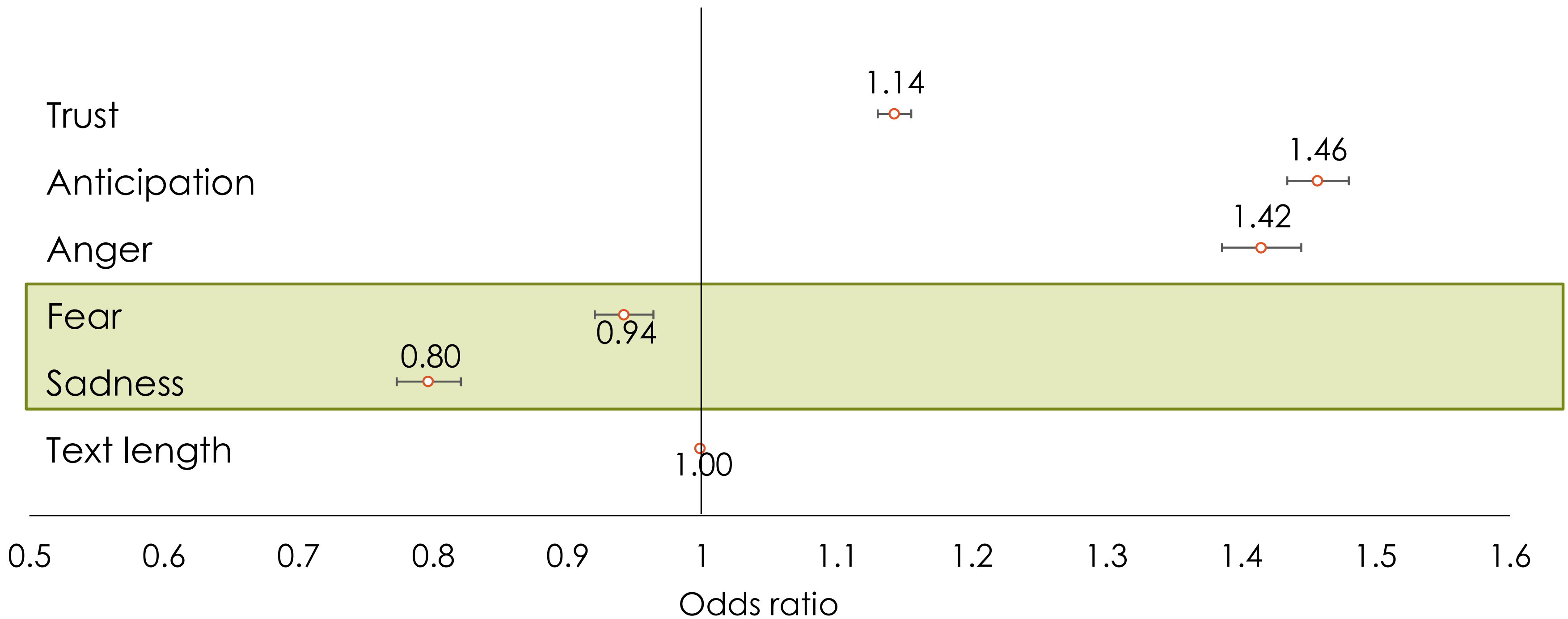
Zip codes with majority minority populations are more likely to report victimization(aside from majority Asian zip codes)



Trust, anticipation, and anger positively associated with reports of victimization



Fear and sadness negatively associated with reports of victimization



Who reports the greatest fraud losses?

- ($N_{victims}$=8,777) ~4.2% of total
- Consumers ages 70 and older reported losing significantly more than consumers in their 30s, and consumers in their teens and 20s reported losing significantly less.
- Consumers residing in more Black communities lose less money, on average, than consumers residing in primarily white or Asian communities.
- Consumers residing in more college educated areas lose more money, on average.

Gift cards most common payment method for SSA imposter scam

Method of payment	Proportion of total sample	Median loss
Gift card/reload card	69.7%	$1,500
Bank account/debit card	1.9%	$1,000
Credit card	1.1%	$1,000
Cash	3.0%	$13,000
Cryptocurrency	6.4%	$4,900
Wire transfer	1.2%	$18,000
Other method	16.6%	$1,990

Consumers paying using wire transfer, cash, and cryptocurrency experienced the greatest losses.

Key points

- Younger adults more likely to report victimization, but older adults report greater losses, on average
- Consumers residing in Black and Hispanic communities more likely to report victimization by the SSA imposter scam, but report lower losses on average
- Emotions associated with trust, anticipation, and anger are associated with fraud victimization and loss amount, even when reported following the incident

Limitations

- Findings not representative of the entire universe of scam targets and victims, only represents those who reported the SSA scam
- Don’t have actual data on consumer race, education, or gender
- Victims (relative to non-victims) likely over-represented in the Sentinel
- Can’t infer causality, e.g., consumer feels angry when filling out the narrative but maybe not when interacting with scammers

STUDY 2

Using victim databases seized from scammers to identify the characteristics of repeat fraud victimization

Lynn Langton | RTI Ed Preble | RTI Marti DeLiema | UMN

Funding & acknowledgement

- The views expressed herein are my own and do not necessarily reflect the views of the U.S. Postal Service or Postal Inspection Service
- This project was supported by Award No. 2019-R2-CX-0053, awarded by the National Institute of Justice, Office of Justice Programs, U.S. Department of Justice. The opinions, findings, and conclusions expressed in the presentation are those of the authors and do not necessarily reflect those of the Department of Justice.

Americans mailed more than $558 million to fraud criminals from 2011-2016

- Mass marketing scams use one or more mass-communication methods – such as the internet, telephone, and mail – to fraudulently solicit or extract payment from numerous prospective victims
- Mass marketing fraud using the postal service is common
  - Mail scams typically involve bogus sweepstakes, lotteries, charities, and psychic readings
  - Victim may be targeted by phone initially, but instructed to send payment by mail

CONFIRMATION ... COUPON AND AFFIX TO THE PRIZE CONFIRMATION CERTIFICATE

WINNER ... CHECK

[redacted]

...TION CERTIFICATE

...dline (within 10 days)!

...NL-3600 BE Maarssen, The Netherlands

[redacted] *here is the letter that Patrick Guerin has asked me to pass on to you*

My dear [redacted],

We have never met yet I know <u>so many things about you</u>!

Yes, I had very clear visions and I know your life is going to change very soon, but only if you make the right decisions <u>today</u>.

I know the life you're leading right now is not all you hoped for… I know you're currently immersed in serious problems that are casting a shadow over your existence… I also know you need URGENT help sorting out your money problems so that you can have a decent standard of living… And, finally, I know you deserve MUCH MORE out of life than you're currently getting.

I've seen you winning an initial, very large, sum of money… I've seen all your most urgent problems find a solution, one after the other… I've seen a new life taking shape on your horizon, more wonderful and fulfilling that you could ever imagine… I've seen joy and happiness light up your face… I've seen a person full of energy, getting the absolute most out of life … And that person is you [redacted]!

3019791567 08412483.0.15 762

MR RICHARD [redacted]

ALLENTOWN PA 18104-4842

RICHARD [redacted] YOU HA...

HERE IS YOUR CASH PRIZE OF $...

URGENT

THE CASH RELEASE CERT...

MUST BE PROCESSED IMM...

402

FNL7LU1C

FIRST AND FINAL NOTICE

OVER £2,249,366.00 Prize Portfolio for Ms Barbara [redacted]

Ms Barbara [redacted]

[redacted] HEREFORDSHIRE

UNITED KINGDOM

...ST & FINAL NOTICE

...of the guaranteed eligibility of Ms Barbara [redacted] for specific ...io.

... Ms Barbara [redacted] will receive regarding this opportunity. ...ued and is for your use alone to claim eligibility.

...ACCEPTANCE document below - with signature and fee - for Priority Dispatch of the ...our Hereford home.

.../2013 to receive the most current information.

...S NOT SPONSOR ANY SWEEPSTAKES, MAKE AN AWARD OF CASH OR PRIZES OR ENTER YOU INTO ANY ...OCEDURES AND DIRECTIVES OF AVAILABLE SWEEPSTAKES AND CONTESTS THAT ARE CONDUCTED BY ... INFORMATION INCLUDING SPONSOR SET DEADLINES. THIS IS NOT A SWEEPSTAKES OR AWARD ...Y WINNINGS. YOU HAVE NOT YET WON A PRIZE AND THIS IS NOT A PRIZE NOTIFICATION. UIS USES ALL ...D THE ENTRY PARTICULARS REQUIRED BY THE INDEPENDENT SPONSORS. YOU DO NOT NEED OUR ...E VARIETY OF CASH CONTESTS PUBLISHED IN OUR REPORT ARE RIGHT AT YOUR FINGERTIPS AND CAN ...ME. UIS SAVES YOU TIME BY RESEARCHING SWEEPSTAKES AND CONTESTS FOR YOU. IF YOU WISH TO ...O: UIS 3875 TELEGRAPH RD. STE. A PMB 408 VENTURA, CA 93003-3419 USA. AMS6DU1A

...ACH AND RETURN IN THE ENCLOSED ENVELOPE. FIN2ZU1C - FN1EMB

...249,366.00 FINAL ACCEPTANCE **NON-TRANSFERABLE**

...r: Ms Barbara [redacted] of Hereford

...DIATELY IN ENVELOPE PROVIDED

...confirm as correct. ...delivery to your home. ...cash, cheque or money

MS BARBARA [redacted]

[redacted] HEREFORDSHIRE

UNITED KINGDOM

(4) Return this document in the envelope supplied by 10/06/2013.

[ ] YES - my details are correct. 61067844268
(Append any changes below)

Your signature:

X

FNL7LU1C FIN2ZU1C - FN1EMB

U.I.S. 3875 TELEGRAPH RD. STE. A PMB 408 VENTURA, CA 93003-3419 USA

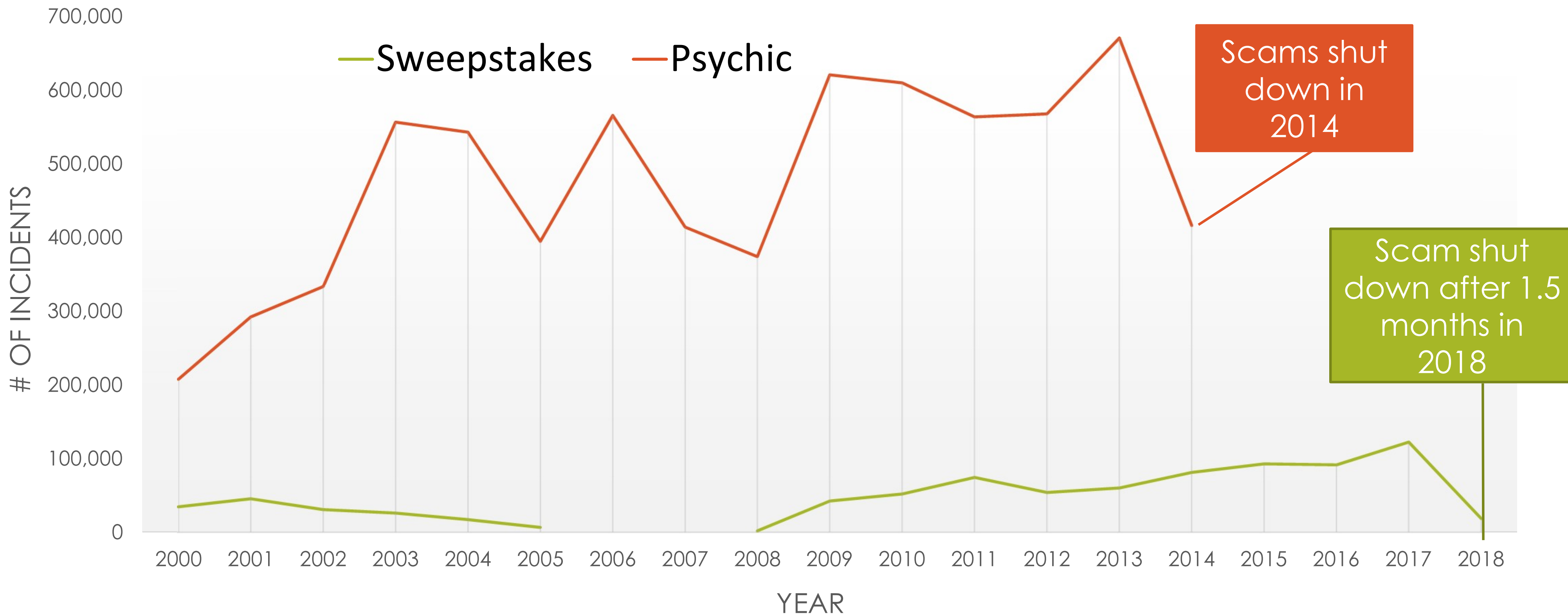
[redacted] Att. B


OFFICIAL CLAIM DOCUMENT
PAYMENT DATA RELEASE AUTHORIZATION
$ * * * * * * * 2,274,000
B-41

USPIS Administrative Datasets

Name	Date Range	Scam Type	Size	Variables
Maria Duval	2004–2014	Psychic	1.45 million unique victims; 6 million transactions	Victim age, address, place of birth, number of payments or other correspondence, date of payment, total payment amount, mode of payment, total funds recovered
Maria Rochefort	2000-2014	Psychic	250K victims; 1 million transactions	Victim age, address, place of birth, number of payments or other correspondence, date of payment, total payment amount, mode of payment, total funds recovered
Fennel-Kern Syndicate	2014–2018	Fraudulent sweepstakes	160K victims; 850K transactions	Victim name, address, amount paid, mode of payment, scam type, date of victimization, some age data

Victimization incidents (transactions) by year



Research questions

1. What is the incidence of repeat mail fraud victimization?
2. What is the overlap in victims between scams?
3. What victim characteristics are associated with repeat victimization?
4. What is the average duration of time between victimization experiences?

First step: Data cleaning

- Add 11-digit zip codes to the data – unique to specific street address
- Clean data entries – names, addresses
- Drop non-US addresses
- De-duplicate (combine) victims with same 11-digit zip codes, addresses and/or names
- Merge different scam databases – use machine learning to link victims by their 11-digit zip codes, street address, and names

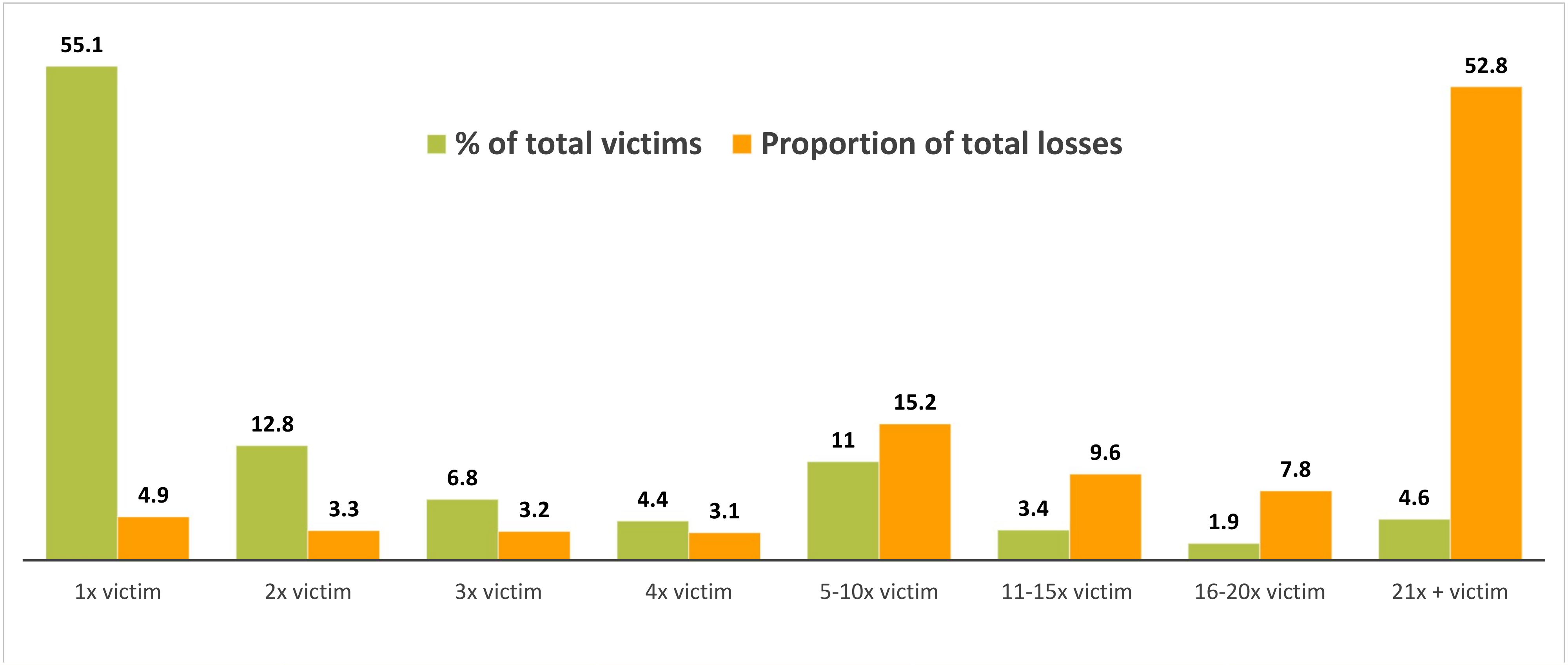
Summary statistics

	Sweepstakes scam	Psychic scams
Number of unique victims	163,659	1,562,211
Number of incidents / transactions	848,210	7,206,217
Mean incidents per victim	9	5
Mean losses per incident	$21	$30
Mean total losses per victim	$107	$139
Total fraud losses for entire scam(s)	$17,498,840	$217,396,981

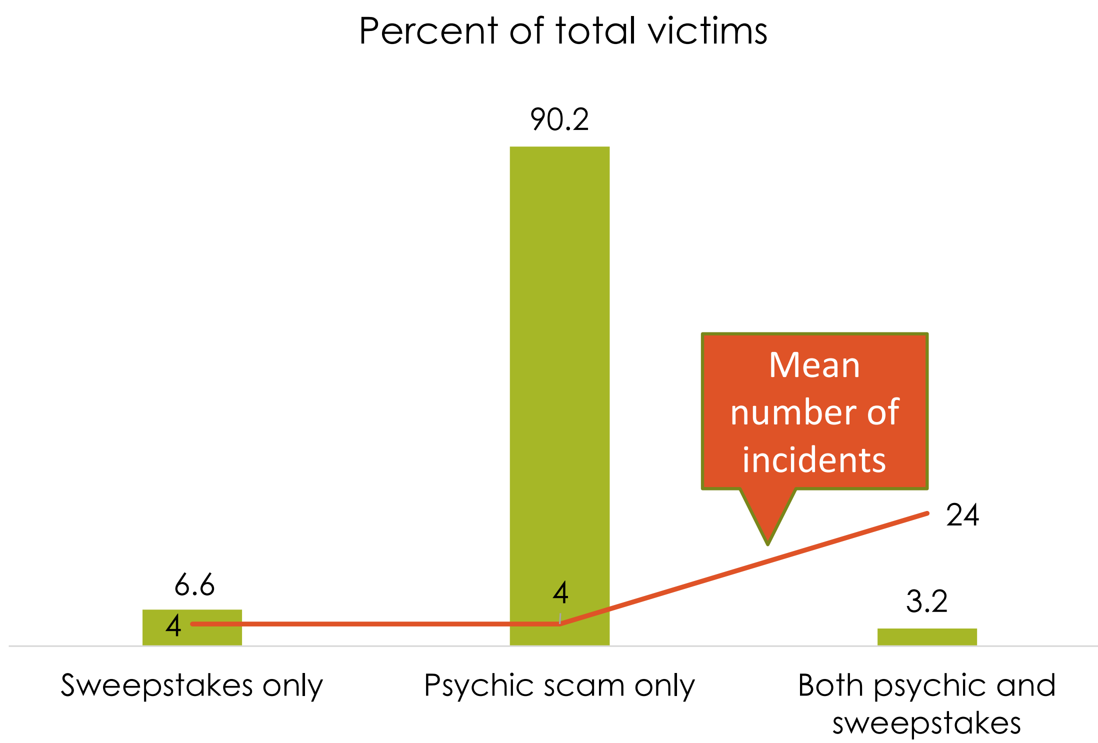
At least 45% of sample are repeat victims

- 55.1% responded to only one scam
- 12.8% responded to 2 scams
- 6.8% responded to 3 scams
- 4.4% responded to 4 scams
- 11.0% responded to 5-10 scams
- 3.4% responded to 11-15 scams
- 1.9% responded to 16-20 scams
- 4.6% responded to 21+ scams

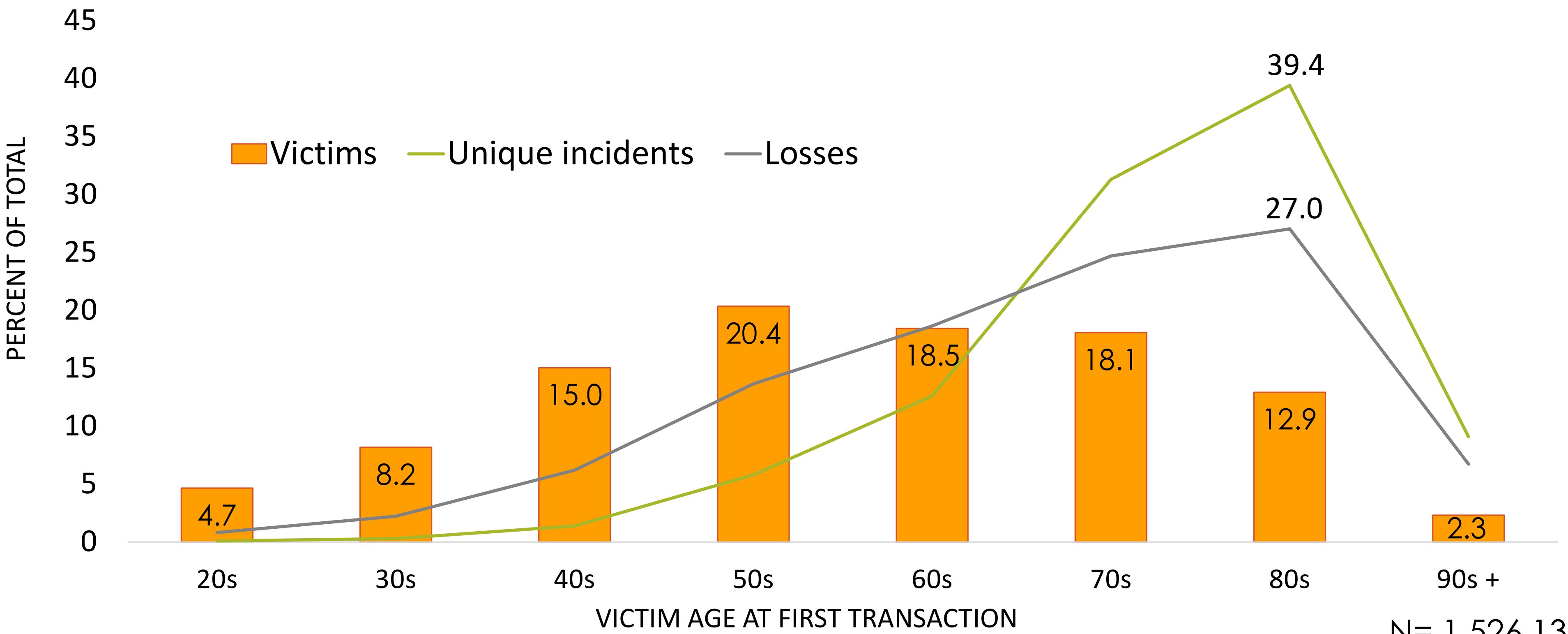
4.6% of victims account for 53% of losses



There is some victim overlap across scams and scam types

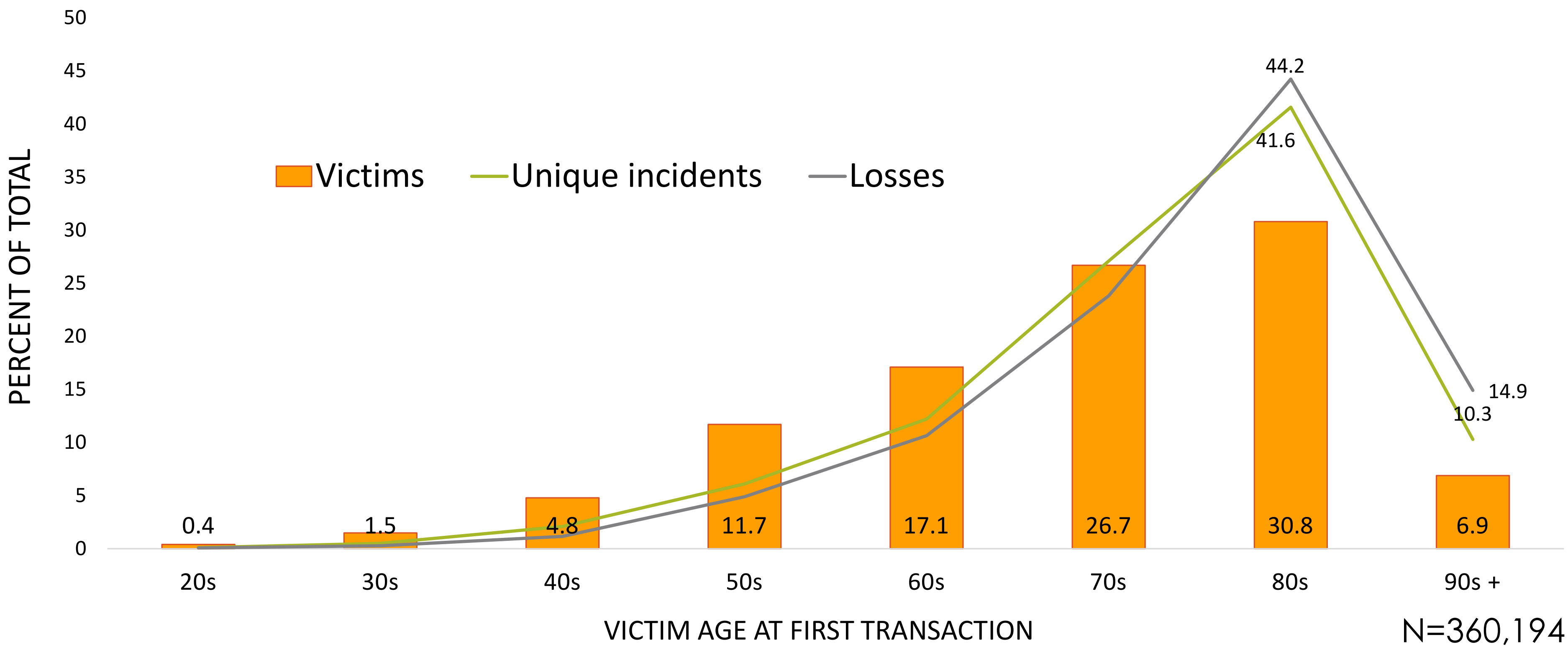


Older victims account for a greater share of total losses ($) and victimization incidents



N= 1,526,131

Sweepstakes scam victims are relatively older than psychic scam victims



N=360,194

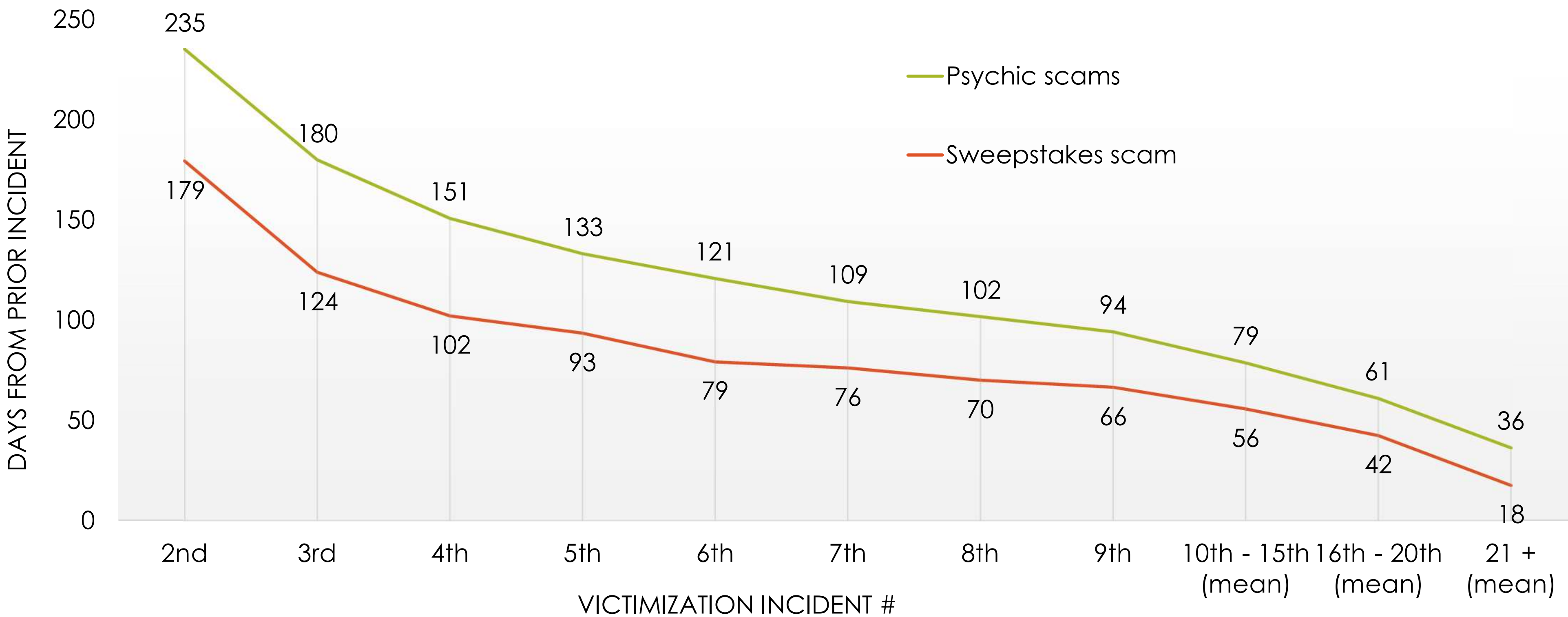
Average losses and frequency of victimization incidents increase with age

N= 1,526,131

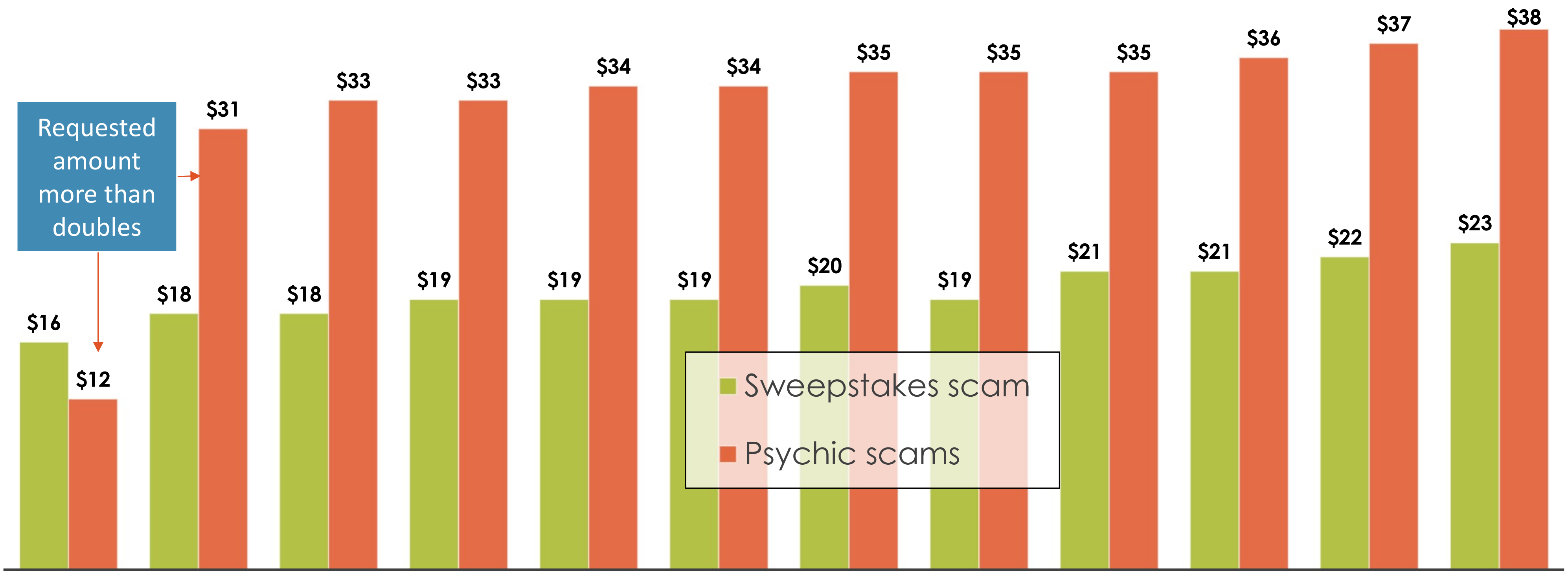
Controlling on other factors…

- Females are **~7% *<u>less</u>* likely** to be repeat victims than males.
- Odds of repeat victimization are **20x higher for sweepstakes scams** than psychic scams, although psychic scams are significantly more costly.
- Victims age 65+ are approx. **2x as likely** to be repeat victims than those under age 50, and they lose hundreds of dollars more, on average.
- Victims in more impoverished neighborhoods are less likely to be repeat victims and lose less money, on average.

Time between victimization incidents gets shorter the more times a victim responds



Mean amount paid per incident relatively consistent over time, but lower for sweepstakes



Key points

- First study to systematically examine repeat fraud victimization in an applied sample (NOT self-report)
- Repeat victimization is incredibly common, especially among older adults
- Chronic victims account for the greatest share of fraud losses
- Older adults have higher total losses, on average
- Time between victimization experiences grows shorter the more a victim responds to scam solicitations
- Mail fraud criminals do not ask for substantially more money each time a victim responds

IMPLICATIONS

… for fraud research, intervention, and prevention.

Implications for research

- Diverse data sources create a clearer picture of who is being harmed by fraud
- Older victims may be underrepresented in traditional self-report surveys and in complaint data
- Future research should examine what differentiates chronic victims from one time victims
- Need to partner with community organizations to better understand fraud risk factors and fraud prevalence in minority populations.

Implications for intervention

- Interventions should aim to protect first time victims from subsequent scams – i.e., prevent chronic victimization
- Victims need to be encouraged to report fraud
- Older victims lose substantially more money on average and should be a primary focus for finanical recovery and assistance efforts

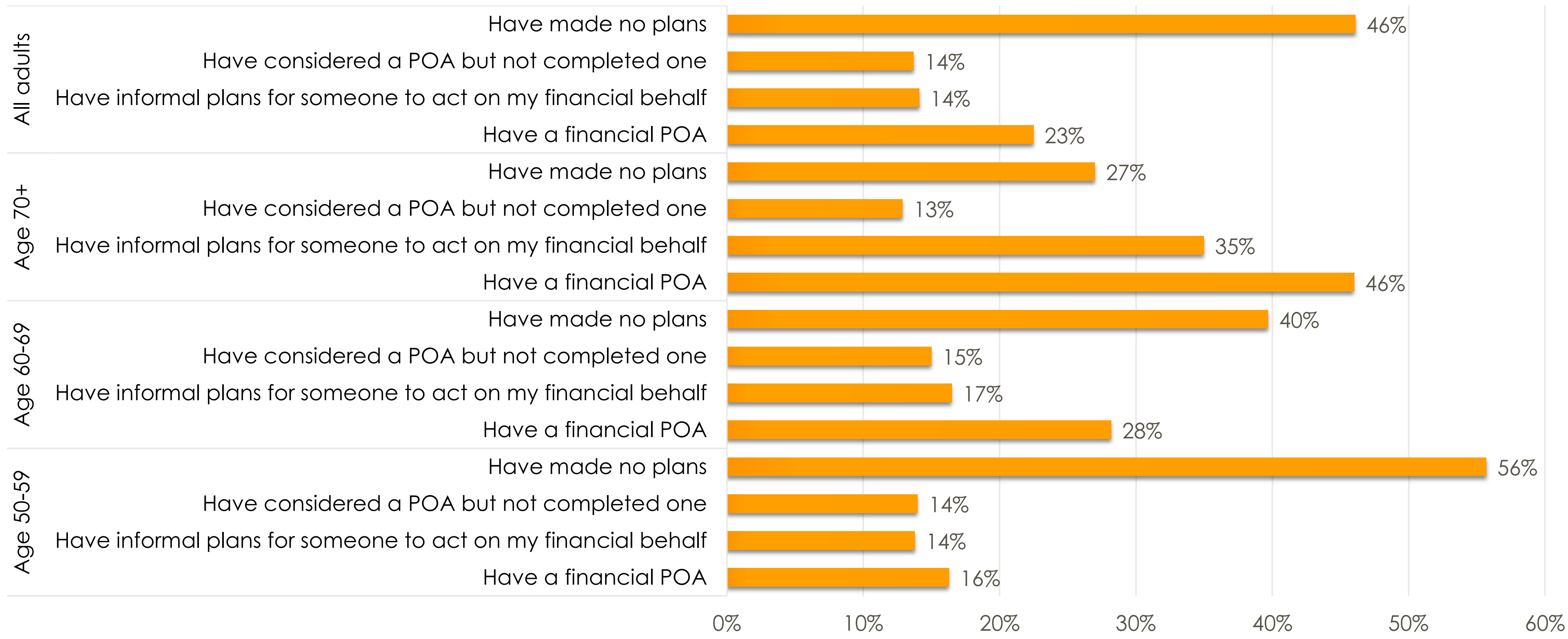
Implications for prevention

- Gift cards, cryptocurrency exchanges, and wire transfers need additional regulation and enforcement to curb their use in scams. These payment methods are driving the majority of losses.
- Individuals need to consider adding financial guardrails to protect their savings as they age.

PREVENTION THROUGH PLANNING

How advance finanical care planning can protect our future selves from fraud victimization

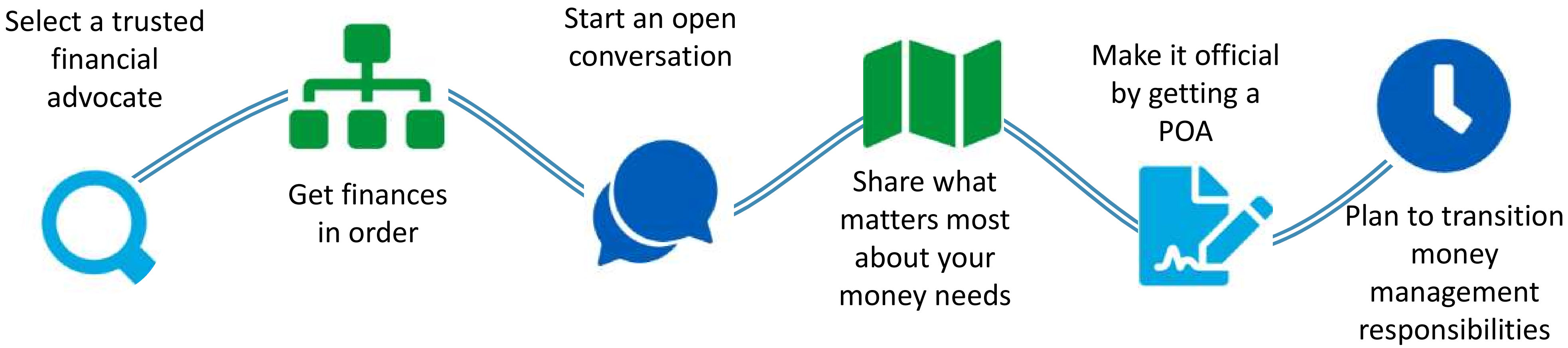
Majority of Americans do not plan for financial incapacity

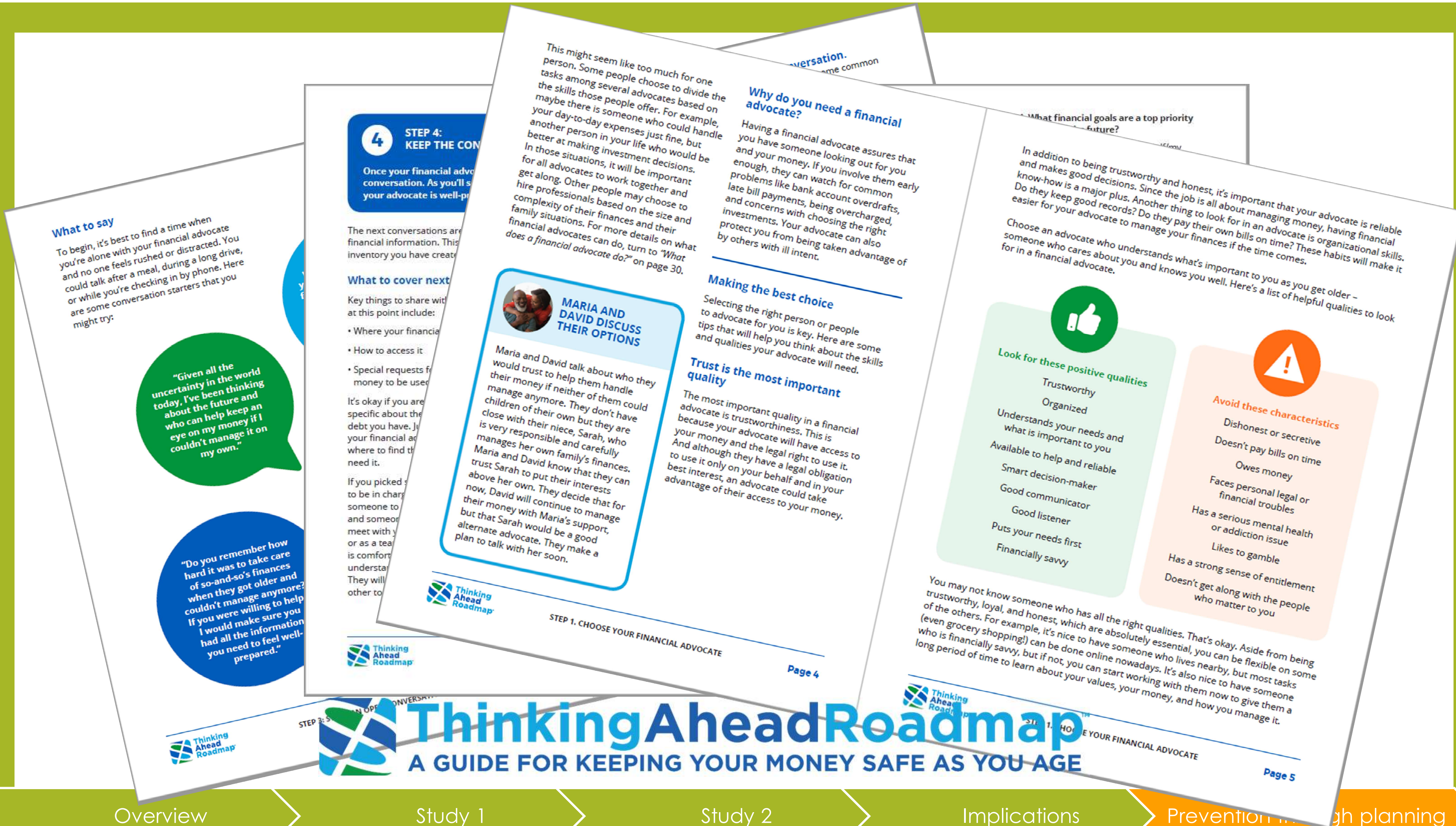


Research activities

IN-DEPTH INTERVIEWS	FOCUS GROUPS	ONLINE DISCUSSION FORUM
14 professionals (elder law attorneys, financial advisors, daily money managers, neuropsychologists, physicians, geriatric care managers)	1. African American 2. Latino/Hispanic	120 adults age 60+
4 older adults 6 caregivers	3. Low-income (< $30K) 4. Middle income ($30-75K)	2-week long engagement

What does advance financial planning entail?




This might seem like too much for one person. Some people choose to divide the tasks among several advocates based on the skills those people offer. For example, maybe there is someone who could handle your day-to-day expenses just fine, but another person in your life who would be better at making investment decisions. In those situations, it will be important for all advocates to work together and get along. Other people may choose to hire professionals based on the size and complexity of their finances and their family situations. For more details on what financial advocates can do, turn to *"What does a financial advocate do?"* on page 30.

Why do you need a financial advocate?

Having a financial advocate assures that you have someone looking out for you and your money. If you involve them early enough, they can watch for common problems like bank account overdrafts, late bill payments, being overcharged, and concerns with choosing the right investments. Your advocate can also protect you from being taken advantage of by others with ill intent.

Making the best choice

Selecting the right person or people to advocate for you is key. Here are some tips that will help you think about the skills and qualities your advocate will need.

Trust is the most important quality

The most important quality in a financial advocate is trustworthiness. This is because your advocate will have access to your money and the legal right to use it. And although they have a legal obligation to use it only on your behalf and in your best interest, an advocate could take advantage of their access to your money.

MARIA AND DAVID DISCUSS THEIR OPTIONS

Maria and David talk about who they would trust to help them handle their money if neither of them could manage anymore. They don't have children of their own but they are close with their niece, Sarah, who is very responsible and carefully manages her own family's finances. Maria and David know that they can trust Sarah to put their interests above her own. They decide that for now, David will continue to manage their money with Maria's support, but that Sarah would be a good alternate advocate. They make a plan to talk with her soon.

STEP 1. CHOOSE YOUR FINANCIAL ADVOCATE

Page 4

In addition to being trustworthy and honest, it's important that your advocate is reliable and makes good decisions. Since the job is all about managing money, having financial know-how is a major plus. Another thing to look for in an advocate is organizational skills. Do they keep good records? Do they pay their own bills on time? These habits will make it easier for your advocate to manage your finances if the time comes.

Choose an advocate who understands what's important to you as you get older – someone who cares about you and knows you well. Here's a list of helpful qualities to look for in a financial advocate.

Look for these positive qualities

- Trustworthy
- Organized
- Understands your needs and what is important to you
- Available to help and reliable
- Smart decision-maker
- Good communicator
- Good listener
- Puts your needs first
- Financially savvy

Avoid these characteristics

- Dishonest or secretive
- Doesn't pay bills on time
- Owes money
- Faces personal legal or financial troubles
- Has a serious mental health or addiction issue
- Likes to gamble
- Has a strong sense of entitlement
- Doesn't get along with the people who matter to you

You may not know someone who has all the right qualities. That's okay. Aside from being trustworthy, loyal, and honest, which are absolutely essential, you can be flexible on some of the others. For example, it's nice to have someone who lives nearby, but most tasks (even grocery shopping!) can be done online nowadays. It's also nice to have someone who is financially savvy, but if not, you can start working with them now to give them a long period of time to learn about your values, your money, and how you manage it.

STEP 1. CHOOSE YOUR FINANCIAL ADVOCATE

Page 5

ThinkingAheadRoadmap

A GUIDE FOR KEEPING YOUR MONEY SAFE AS YOU AGE

ThinkingAheadRoadmap™

A GUIDE FOR KEEPING YOUR MONEY SAFE AS YOU AGE

www.thinkingaheadroadmap.org

THANK YOU!

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