Neurological changes associated with aging can have a profound effect on the financial well-being of older adults. Cognitive aging — the process by which cognitive abilities decline with age — can lead to poor judgment, an inability to perform daily financial tasks, and an increased susceptibility to third-party fraud and financial exploitation by familiar people, even family members. Even more devastating are the cognitive changes caused by brain diseases such as Alzheimer’s disease. The cost of financial damage to older Americans is estimated between $3 billion and $36 billion per year. As the baby boomer generation ages into retirement, increasing numbers of older adults will experience the effects of cognitive aging or brain diseases on household financial decisions. This CFI in Focus examines the link with changes in cognition, diminished financial capacity — the progressive loss of the ability to manage banking and investment decisions — and elder victimization, with a focus on how the financial services industry can help improve the financial well-being of older adults.

This article is organized as follows. Section II provides additional background on cognitive changes associated with aging, diminished financial capacity, and financial victimization. Section III discusses the aging of the baby boom generation and points out some implications for the incidence of financial victimization, both self-inflicted and induced by others, in the elder population. Section IV explores the role that the Federal Reserve Bank of Philadelphia is playing in promoting awareness of elder banking issues and financial health, including cohosting Aging, Cognition, and Financial Health: Building a Robust System for Older Americans, a two-day conference in November 2017. Highlights and key takeaways from the conference are presented in Section V. Section VI concludes with some thoughts on the future of elder financial well-being and the ways in which the Philadelphia Fed will continue its work to build awareness and encourage collaborative solutions.

The Reality of Aging

As humans, we tend to hold our future selves to higher standards than our current selves. While we find it difficult to commit to exercising more, quitting smoking, or saving more money in the present, our future self is poised to tackle any challenge, no matter how difficult it seems today. Behavioral economists have demonstrated the presence of this phenomenon, known as present bias, in a wide variety of settings. Thus, it should come as no surprise that we have a hard time believing that, at some
point, our future selves may have to rely upon others to accomplish financial tasks such as paying the bills or deciding how much of our paycheck to direct into a 401(k) account.

In fact, Figure 1 shows that about 12 percent of people aged 70 to 74 will be diagnosed with mild cognitive impairment (MCI) or dementia, terms that describe cognitive declines that are noticeable in day-to-day life and detectable by a clinical exam. The most common causes of MCI and dementia are brain diseases such as Alzheimer’s disease. The difference between them is the severity of their impact on day-to-day life. People with MCI may make some errors or take longer to complete tasks, whereas those with dementia need someone else to help them. MCI and dementia are stages along a continuum, and the point in which MCI ends and dementia begins is often indeterminate. Each of these conditions affects financial decision-making. The prevalence of these conditions increases with age: 37 percent of people age 85 or older will be diagnosed with MCI and 27 percent with dementia.

Figure 1. Incidence of Cognitive Impairment and Dementia, By Age

![Figure 1: Incidence of Cognitive Impairment and Dementia, By Age](chart.png)

Source: Geoffrey Sanzenbacher’s calculations, based on data from the University of Michigan, Health and Retirement Study (1994–2014).

As high as these estimates are, they may understate the severity of the problem. Recent research suggests that some adults who do not have MCI or dementia display many of the same neurological changes as those who have as well as the same deficiencies in judgment that may make them more susceptible to fraud. These changes, which have been ascribed to aging, have been detected in people

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5 Belbase and Sanzenbacher, “Cognitive Aging and the Capacity to Manage Money.”

as young as 45, suggesting that adults should establish a plan for financial management before retirement and long before they experience any type of diminished capacity.\(^7\)

Cognitive changes disrupt human decision-making by impairing the *executive function* processes in the brain, which are responsible for facilitating self-regulation, planning, and task completion.\(^8\) A person with impaired executive functioning may find it difficult to plan things, manage their time, evaluate new information, or keep a mental record of multiple things at once. Impaired executive functioning can wreak havoc on household finances, even with people who have a long history of household or professional financial management.\(^9\) It can also make humans more vulnerable to *financial fraud* — deceiving someone with promises of goods, services, or financial benefits that may not exist — and *financial exploitation*, which includes cashing someone’s checks without permission, forging signatures, or improperly using the authority of conservatorship, guardianship, or power of attorney.\(^10\)

### A Demographic Time “Boom”

The aging of the baby boom generation (people born between mid-1946 and 1964) is having profound effects on the demographic composition of the United States. In 1900, people aged 65 and older represented 4.1 percent of the U.S. total population. By the turn of the century, the proportion had grown to 12.4 percent, implying an average annual growth rate of about 1 percent. The U.S. Census Bureau estimates that, from 2010 to 2030, the share of the population 65 and older will grow by over 2.5 percent annually, so that by 2030, 1 out of 5 Americans will be 65 or older. Figure 2 plots their population share over time (red dotted line, right axis) with population counts (blue columns, left axis). The Census Bureau expects approximately 72.3 million people to be 65 and older in 2030 and nearly 84 million by 2050.\(^11\)

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\(^7\) Archana Singh-Manoux et al., “Timing of Onset of Cognitive Decline: Results from Whitehall II Prospective Cohort Study,” *BMJ* 344 (2012), d7622.


As discussed in the previous section, the prevalence of MCI and dementia increases with age. Thus, a significant fraction of the older population will experience diminished financial capacity and increased risk for elder financial crime.\textsuperscript{12} A 2010 study by Investor Protection Trust found that 1 out of 5 adults over 65 had been a victim of financial fraud or exploitation.\textsuperscript{13}

\textbf{The Philadelphia Fed: Working to Build Awareness}

Researchers at the Federal Reserve Bank of Philadelphia are working to shed light on the financial needs and well-being of older Americans. By organizing and hosting conferences, initiating public debate through speeches and writing, conducting research into important questions, and supporting industry initiatives, the Philadelphia Fed is helping to foster a national discussion on an often overlooked, but increasingly important, topic.


\textsuperscript{13} A 2009 telephone survey of persons over the age of 60 found that 5 percent of the respondents were currently being financially exploited by a family member. See Ron Acierno, Melba Hernandez-Tejada, Wendy Muzzy, and Kenneth Steve, \textit{The National Elder Mistreatment Study}, National Institute of Justice, 2009.
In November 2017, the Bank held a conference on the effects of cognitive aging on financial well-being. Cosponsored by the University of Pennsylvania’s Penn Memory Center and Healthy Brain Research Center, the event brought together brain researchers, financial institution executives, industry regulators, and elder advocates to discuss the ways in which financial institutions can help safeguard the savings of older adults. The conference is discussed in detail in Section V.

In a recent Bloomberg View opinion column, Philadelphia Fed President Patrick T. Harker urged industry leaders to step up efforts to monitor and curtail elder fraud and exploitation, noting that they “can help prevent financial crime against elders at all levels of wealth and income, starting by raising awareness of the problem within their own walls.” Financial institutions, explained Harker, should encourage their customers to designate emergency contacts, secure powers of attorney, and, whenever possible, consult with a knowledgeable and experienced financial manager. Harker suggested that financial institutions provide age-friendly banking tools such as read-only account access that could enable a trusted contact or financial manager to monitor account activity. He also recommended that financial institutions make a habit of reporting suspicious activity to the U.S. Financial Crimes Enforcement Network (FinCEN), adult protective services, and law enforcement agencies.

Researchers in the Bank’s Consumer Finance Institute (CFI) are working to identify and evaluate new ways to prevent elder fraud and financial exploitation. A recent CFI paper weighed the benefits and consequences of enabling financial institutions to work directly with each other to resolve suspected fraud and exploitation cases and to prevent new occurrences. The related opinion piece for WHYY highlighted the role cognitive decline plays in elder financial abuse and highlighted some ways financial institutions are tackling the problem.

CFI staff is also studying the role home equity plays in the financial decisions of older adults. Economist Lauren Lambie-Hanson and coauthors recently examined the popularity of reverse mortgages and their performance in Philadelphia and in other U.S. regions. Makoto Nakajima, senior economist, has written several papers on reverse mortgages, including a comprehensive primer. Along with coauthor Irina Telyukova, Nakajima has also made significant contributions to our understanding of how consumers manage their home equity in retirement.

Interest in the financial well-being of older adults extends beyond the Bank’s CFI. In March 2016, the Community Development Studies & Education Department (CDS&E) hosted a conference to discuss the ways in which the financial services industry could better meet the financial needs of older adults. Participants learned about trends in the growth of the older adult population as well as new ways to improve older adults’ economic security and financial capability through age-friendly banking partnerships, products, and services.

Takeaways from the Conference on Aging, Cognition, and Financial Health

On November 28–29, 2017, the Bank cohosted a conference titled Aging, Cognition, and Financial Health: Building a Robust System for Older Americans. In this section, we discuss seven key takeaways from the event.

1. **Financial institutions should encourage older adults to plan for diminished financial capacity.**

After decades of financial independence, many adults are unable or unwilling to envision a future in which they are no longer able to independently pay their bills, deposit checks, or make sound

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14 The video of President Harker’s opening remarks at the Aging, Cognition, and Financial Health: Building a Robust System for Older Americans conference (November 2017) is available here.
investment decisions. Thus, they are often unprepared for diminished financial capacity and cognitive decline. They may enter old age lacking legal and financial safeguards, including a power of attorney for finances, a system to detect problems such as unpaid bills, and a trusted contact listed on all financial accounts.

Financial institutions are in a position to nudge older adults to establish these safeguards. For some institutions, doing so is now a requirement. Effective on February 5, 2018, an amendment to Rule 4512 required all members of the Financial Institution Regulatory Authority (FINRA) to make reasonable efforts to obtain the name and contact information of a trusted contact person when an account is opened for a noninstitutional customer or when a customer’s account information is updated.15

Based on his experience, conference participant John Ellis, principal at Edward Jones (EJ), believes that FINRA Rule 4512 will benefit both clients and their financial institutions. In his experience, the process of requesting contact information enables EJ advisers to engage the client on a personal level during a conversation that would otherwise focus on the topics of investment goals and risk attitudes. Having personal knowledge of clients and their immediate family gives the adviser a way to confirm a customer’s current contact information and health status or of identifying the existence of a legal guardian, executor, trustee, or power of attorney.

Conference participant Paul Tramontozzi, wealth advisor at KBK Wealth Management, said that advisers do not often have trusted contact information prior to becoming aware of a client’s diminished financial capacity, fraud, or exploitation. “Far too often in this industry,” said Tramontozzi, “people come to us when they’re reacting to an unfortunate [event]. We need to have this conversation much sooner so we can plan for [such events].” In his experience, his firm also encourages clients to secure a durable power of attorney, which then allows clients’ agents to manage their financial decisions even when clients become incapacitated. Tramontozzi cautioned against writing a springing clause16 into a power of attorney, since the agent must first secure a determination of incapacity from a doctor before being able to exercise their power. He noted that “when that power is actually triggered may be well after someone has cognitive decline ... [and] a lot of damage could be done before that point.”

Since FINRA membership is limited to individual and corporate brokers and broker-dealers, commercial banks not engaged in securities transactions are not required to adhere to Rule 4512.17 This creates a significant coverage gap, particularly for older adults who maintain savings in traditional bank accounts (savings accounts, money market accounts, or certificates of deposit). Regardless of which type of institutions older adults bank with, they should ensure that a trusted contact is listed on each account and that the trusted contact is aware of his or her responsibility.

2. Cognitive decline contributes to financial exploitation and fraud susceptibility.

Diminished financial capacity can often be a signal of cognitive decline and may occur long before a doctor is able to detect and diagnose a problem. Patricia Boyle, a neuropsychologist at the Rush University Medical Center in Chicago, noted that, “changes in financial behavior are an early sign that

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17 A broker is a person or company that buys and sells securities on behalf of its customers; a broker-dealer buys and sells securities on behalf of its customers for its own account (as dealer), or both. See FINRA, “Brokers.”
age-related changes may be negatively affecting the brain and that an older person may be at risk for developing Alzheimer’s disease.”

Boyle’s research has found that lower levels of cognitive function and financial literacy in older adults can make them susceptible to financial exploitation and scams. Indeed, any medically diagnosed neurological condition, such as MCI or Alzheimer’s disease — the leading cause of dementia — can make someone more susceptible to scams than someone with normal cognitive abilities.

3. **A banker or financial adviser may be the first to identify changes in a client’s financial capacity or suspect that fraud or financial exploitation is occurring.**

Since changes in financial behavior often precede a medically diagnosed cognitive disorder, a well-trained bank employee or financial adviser may notice an older client exhibiting atypical banking behaviors or initiating transactions consistent with fraud victimization or financial exploitation. For example, the client’s recent transaction history may contain unexplained withdrawals, wire transfers, or debit transactions, ACH transactions to new accounts, or checks issued to new or unusual recipients. Clients may call their financial adviser several times a day with the same question, asking for the same information, or requesting a password reset. Signs of more nefarious activity may include visits to a branch accompanied by a new friend or caregiver who will not allow the older client to speak without them being present.

With more banking being done online, financial institutions could employ monitoring software to detect diminished financial capacity, fraud, and financial exploitation. Laurel Sykes, chief risk officer at Montecito Bank & Trust, identified a variety of ways in which financial institutions can leverage existing systems and resources for this purpose. For example, Montecito Bank & Trust embedded a set of automated alerts into its fraud and Bank Secrecy Act/Anti-Money Laundering software to identify suspicious account activity, including new ACH activity from accounts where none existed previously, sudden and rapidly diminishing account balances, out-of-pattern ATM transactions, and velocity alerts on check fraud systems.

Elizabeth Lowey, cofounder and general counsel at EverSafe, a financial monitoring services company, discussed how more sophisticated monitoring and analytical tools such as machine learning can be used to create customized alerts. EverSafe’s machine learning system continuously observes the client’s personal financial behavior and can identify deviations from that behavior that could be indicative of diminished financial capacity, fraud, or exploitation.

4. **Consumer financial data can be used to help doctors diagnose cognitive decline.**

Bankers and physicians are just beginning to recognize the link between money and cognitive health. Financial difficulties do not exist in isolation, but they are a key component and an early predictor of cognitive decline. Once they occur, it can worsen the effects. In 2015, Jason Karlawish, professor of medicine, medical ethics and health policy, and neurology at the University of Pennsylvania, coauthored a *Forbes* column introducing the concept of *whealthcare*, a system in which financial institutions share early warning indicators of declining cognitive health with medical professionals. In his conference remarks, Karlawish noted that, “if routine business meant that bankers and financial services providers

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18 Bryan D. James, Patricia A. Boyle, and David A. Bennett, “Correlates of Susceptibility to Scams in Older Adults Without Dementia,” *Journal of Elder Abuse & Neglect* 26:2 (2014), 107–122.


could reach out to trusted others, or refer clients to doctors at a memory center, older adults could receive medical attention before they and their families — as well as the institutions that once had responsibility for their money — were mired in problems that ruined their wealth.”

While scientists are working to develop tests to predict the likelihood of developing MCI or dementia, no single, highly predictive test has been produced yet. Thus, a positive diagnosis typically requires a neurologist or memory specialist to evaluate a variety of tests alongside the patient’s medical history and conversations with immediate family. Data from financial transactions provide real-world information describing how well an older adult is managing in his or her environment. Knowing a patient’s financial account activity — such as errors or missed payments — would provide doctors with a means to assess the patient’s cognitive health.21

5. **Financial institutions needn’t reinvent the wheel — or incur significant costs — when developing an elder fraud and financial abuse program.**

Industry executives joined representatives from the Consumer Finance Protection Bureau (CFPB) and AARP during the conference to address common misconceptions in the financial services industry regarding the cost and difficulty of developing a program to detect and prevent diminished financial capacity, fraud, and exploitation.

Naomi Karp, senior policy analyst with the CFPB’s Office for Older Americans, shared some of the CFPB’s recommended best practices for financial institutions. Karp said that each recommendation was relevant to organizations of all sizes and that many of them did not involve costly expenditures.22 In particular, Karp noted the importance of developing internal protocols for staff training, reporting, and escalation procedures as well as having a means of securing advance consent for information sharing with trusted third parties when the financial institution believes the client may be at risk. She also suggested that financial institutions make it a policy to report suspected elder fraud and exploitation to federal, state, and local law enforcement agencies and adult protective services, regardless of whether it is required by state law, and developing collaborative partnerships with those organizations.

Jilenne Gunther, director of AARP’s BankSafe Initiative at the Public Policy Institute (PPI), introduced PPI’s new online training program, developed from more than 170 interviews with bankers and credit union employees. The program trains bank staff to understand, identify, and report financial exploitation. The program is currently being piloted by more than 100 financial institutions in 12 states. Gunther noted that, prior to going live, program content was reviewed by more than 40 financial institutions. To evaluate the program’s efficacy and to quantify its financial benefit to participating financial institutions, the new training program will be accompanied by a study, conducted in partnership with researchers at Virginia Tech.

Addressing the perception that a new program might be too costly for smaller banks to develop, Laurel Sykes from Montecito Bank & Trust, a California-based commercial bank with $1.3 billion in assets and ten branches, pointed out that financial institutions already possess many of the resources needed to develop a program, including fraud detection and anti-money laundering tools.

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21 Alzheimer’s Association, “[What Is Dementia?”](#)

In describing his bank’s experience, Scott Dueser, CEO of First Financial Bankshares in Abilene, TX, explained that, “the cost is not there. The benefit is there. Doing the right thing for your customers is the most important thing, but secondly, it’s just good business.”

6. **Data privacy laws can inhibit financial institutions’ ability to assist older clients.**

At the federal level, the Gramm-Leach-Bliley Act governs the circumstances under which a financial institution can share a client’s nonpublic personal information (NPI) with nonaffiliated third parties.\(^{23}\) Although it provides five exceptions under which sharing data is permitted, many financial institutions have taken a cautious approach to interpretation. In his opening remarks at the Fed’s Aging, Cognition, and Financial Health conference, Philadelphia Fed President Patrick T. Harker noted that financial institutions are “reluctant to share information about potentially suspicious account activity with other institutions for fear of violating federal and state privacy laws.”

Interagency guidance issued in 2013 attempted to clarify the exceptions, stating that a financial institution is permitted to share a client’s personal information with federal, state, and local investigators as well as adult protective services agencies when it suspects elder financial fraud or exploitation has occurred.\(^{24}\) However, the guidance made no mention of sharing information with family members not listed on an account or with another financial institution to prevent future financial losses to the client.

In situations in which the financial institution is concerned for the financial security of one of its clients, a representative may attempt to reach a trusted contact person. If the client does not have a trusted contact listed on his or her account, the financial institution may wish to contact a family member whose name is not listed on the account. The financial institution may also want to contact that person if it suspects the trusted contact is the person financially exploiting the client.

If the financial institution suspects the client is being coerced into sending or transferring money as part of a scam, it may attempt to place a hold on the transaction until it can speak with the client and any trusted contacts. If no trusted contact is listed and the client is unwilling to believe he or she is being scammed, the financial institution may have to permit the transaction to go through.

In other situations, a financial institution may want to contact another financial institution regarding a common client. EverSafe’s Elizabeth Loewy recounted her experience as Manhattan District Attorney, during which time her unit prosecuted about 800 elder financial exploitation cases per year. Loewy stressed that the common element in those cases was that, “the exploiters […] didn’t just take one amount from one financial institution […] they [stole] across accounts, across institutions, and they [picked] on the right people.” Thus, if financial institutions were permitted to share client data between each other under a set of appropriate circumstances, a financial institution that identified a financially vulnerable client could notify other institutions, decreasing the likelihood of the client experiencing losses in accounts held at other institutions.

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7. **Policymakers should evaluate the costs and benefits of leveraging FinCEN (Financial Crime Enforcement Network’s existing reporting platforms to develop a dedicated interbank data sharing network for elder financial crimes.**

Title III of the USA PATRIOT Act of 2001 (PATRIOT Act) directed the U.S. Department of Treasury to establish a secure electronic network for communication between financial institutions and law enforcement agencies. That system, known as the Secure Information Sharing System (SISS), is a web-based network administered by FinCEN. Financial institutions participating in SISS are provided a safe harbor from liability for disclosing NPI to another financial institution in matters of potential money laundering or terrorist activities.

In addition to maintaining SISS, FinCEN collects data on elder financial exploitation. Among the better-known provisions of the Bank Secrecy Act (BSA; 31 U.S.C. §5311 et seq.) is the Suspicious Activity Report (SAR) requirement. While it is primarily used to prevent money laundering, tax evasion, and — since 2001 — the financing of terrorist activities, the SAR requirement has become an important component in the reporting and investigation of elder financial abuse. In 2011, FinCEN issued an alert that encouraged financial institutions to file a SAR when they suspected that elder financial exploitation had occurred. Then, in 2013, FinCEN created an electronic filing form that included a specific check box for financial institutions to indicate suspicion of elder financial exploitation.

Integrating the SAR reports within the SISS data sharing system is one way the federal government could provide the financial services industry with a low-cost, federally administered framework for inter-institutional information sharing.

Such a system would not be without its own complications. Here are four major risks to such a system:25

- **Data security**, since some element of confidential consumer data would have to reside outside the financial institution’s data systems, creating additional access points for hackers;
- **Oversharing**, or unintentionally sharing more customer information than what is required, exposing the financial institution to the possibility of legal action from the client or their estate;
- **Inaction**, in which an financial institution takes no action in response to an alert, after which the client experiences a financial loss that might have been prevented; and
- **Overreaction**, in which a financial institution responds to a potential threat by freezing a client’s accounts, exposing the client to new financial risks such as missed payments and late fees.

These and other potential risks should be evaluated as part of a comprehensive cost-benefit analysis.

**Continuing the Conversation**

The Philadelphia Fed is working with the financial sector to investigate safeguards for older, vulnerable adults. A working group of attendees from the November 2017 conference at the Philadelphia Fed has helped create a new multidisciplinary unit dedicated to improving the health and wealth of older adults.

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25 During his presentation at the November 2017 conference on Aging, Cognition, and Financial Health, the author highlighted these four major risks to developing a low-cost, federally administered framework for interinstitutional information sharing.
The group will collaborate with key stakeholders across the financial services and health-care industry to explore ways to create a system that connects financial and medical professionals to one another. This will enable them to more easily, securely, and legally share information.26

Over the next year, researchers at the Bank will continue their efforts to inform the public about the financial risks of cognitive decline and to encourage the financial community to work to better secure the financial health of older adults. For example, in June 2018, the Bank will host a special event for World Elder Abuse Awareness Day. Organized by the Philadelphia Financial Exploitation Prevention Task Force, the event will feature the debut of a new guide for bankers to assist them in working with law enforcement and adult protective services in matters of elder financial abuse.

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26 For more information on the working group, or to become a member, contact Terrence Casey at Terrence.Casey@uphs.upenn.edu.