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COGNITIVE AGING AND THE CAPACITY TO MANAGE MONEY

BY ANEK BELBASE AND GEOFFREY T. SANZENBACHER*

Introduction

While Americans often worry about not having enough money in retirement, they seldom worry about their capacity to manage that money.¹ At first glance, this lack of concern appears justified because many financial activities are so routine – like paying the monthly bills on time. Such activities draw on “crystallized” intelligence, which is accumulated knowledge that increases with age. But normal cognitive aging can lead to financial mistakes because people lose much of their “fluid” intelligence – the capacity to process new information – by the time they reach their 70s or 80s. And a minority develop a cognitive impairment that severely erodes financial capacity.

This *brief*, the third in a series of three, reviews the literature to assess how cognitive aging affects the capacity to manage money during ages 70-90. The first *brief* provided a primer on cognitive aging, and the second *brief* assessed its effects on the ability to work during ages 50-70.

The discussion proceeds as follows. The first section explains how cognitive aging could potentially affect the ability to manage personal finances. The second section examines the impact of normal cogni-

tive aging on financial capacity. The third section explores the effects of cognitive impairment on financial capacity. The final section concludes that: 1) most people who experience normal cognitive aging can continue managing their money in their 70s and 80s, but some, especially financial novices who take over money management after the death of a spouse, will need help; 2) most people with a cognitive impairment will need help managing their money to prevent fraud or abuse; and 3) providing this assistance effectively will require overcoming several obstacles.

How Cognitive Aging Could Affect Financial Capacity

Financial capacity is the ability to manage financial affairs in one’s own best interest, and involves a range of activities – from carrying out procedures, such as bill paying, to exercising judgment, such as assessing an investment’s potential return relative to its risk.² Table 1 on the next page shows the types of abilities assessed by a popular measure of financial capacity.

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TABLE 1. TYPES OF ABILITIES MEASURED BY TESTS OF FINANCIAL CAPACITY

Type of ability	Example of tasks
Basic money skills	Identify and understand relative value of bills and coins.
Cash transactions	Assess cost of an item and understand sales receipt.
Checkbook management	Know when/how to use a check.
Bill payment	Understand how to read, pay, and dispute bills.
Bank statement management	Find deposits, withdrawals, and balances in a bank statement.
Asset and estate management	Identify assets and income.
Knowledge of financial concepts	Understand concepts like debt, insurance, and asset returns.
Financial judgment	Assess what an asset is worth, detect fraud and other risks.

Source: Adapted from Marson et al. (2009).

Researchers use two main types of tests to assess financial capacity: 1) performance-based assessments of common tasks – like reading an electric bill and writing and sending in the check; and 2) clinical assessments, which include both an interview and cognitive tests to assess an individual's capacity to make sound decisions.³ Both types of tests are typically performed in-person, require 30-60 minutes, and can gauge whether a person is capable of managing his finances independently, needs help on some tasks, or is incapable of controlling his finances.⁴

Financial capacity relies on two key abilities: 1) performing financial tasks, which mostly requires crystallized intelligence, or knowledge; and 2) making financial judgments, which requires a mix of knowledge and fluid intelligence like memory, attention, and information processing. Knowledge remains largely intact into one's 70s and 80s for those experiencing normal cognitive aging, but fluid ability starts to decline as early as one's 30s.⁵ This pattern means that individuals experiencing normal aging are more likely to develop deficits in their financial judgment than in their ability to carry out financial tasks. But how seriously does this decline in fluid ability affect financial capacity?

Financial Capacity and Normal Cognitive Aging

Normal cognitive aging generally does not affect financial capacity enough to warrant intervention. While studies suggest that some people over 70 who are not cognitively impaired might make more mistakes due to declining judgment, the consequences of these mistakes appear to be relatively minor.⁶

Retirees in their 70s and 80s are often just as able to pay the bills, handle debt, and maintain good credit as workers in their 50s and 60s. For example, one study that directly measured financial capability using a standardized test found that 95 percent of adults without cognitive impairment were fully able to manage their own finances.⁷ And the evidence suggests that accumulated knowledge explains how people handle money effectively despite decreased fluid ability. For example, a study of adults ages 18-86 found that, for each decade lived, credit scores increased by an average of 13 points, controlling for factors like income and education.⁸ This study also found evidence that financial knowledge, which does not decline with age, explained the resiliency in creditworthiness.⁹

The flip side of the role of knowledge in preserving financial capability is that those without such knowledge are vulnerable. These financial novices are typically individuals who take over the responsibility of managing their household's finances after a spouse dies or becomes incapacitated. They are likely to need help with all aspects of financial management – from paying bills on time to updating a will – until they have gained enough knowledge. Unfortunately, the learning curve will be challenging for them due to normal cognitive aging, which diminishes the capacity to assimilate new information.¹⁰ If people in these situations lack the support they need, they could make mistakes, with consequences ranging in severity from lower credit scores to prematurely running out of money.

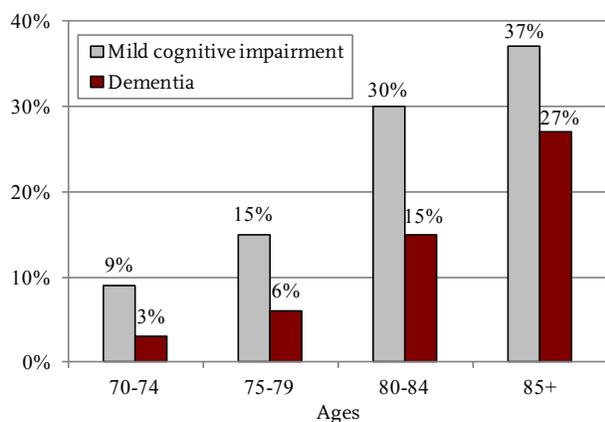
These financial novices are clearly noticeable in longitudinal studies, which have found that a number of individuals in their 70s and 80s switched to becoming a financial respondent for the household for the first time, which means that they likely assumed responsibility for financial matters.¹¹ The people who took on this role are predominantly those who lost a spouse and over two-thirds are women.

Individuals who inherit financial responsibilities will need varying degrees of assistance: a person with some relevant knowledge might need informal help from a family member, while someone with no financial knowledge might need more formal assistance. Unlike people with cognitive impairment, most financial novices with preserved cognitive abilities will eventually gain enough knowledge to handle most financial matters without help.

Financial Capacity and Cognitive Impairment

Unlike the normal cognitive changes associated with aging, cognitive impairment, which is increasingly likely for those in their 80s, can rapidly erode financial capacity. This type of condition exists on a continuum from mild cognitive impairment (MCI) to severe dementia. MCI primarily affects financial judgment, is widespread even among people in their 70s, and can be either temporary or an early sign of dementia. In contrast, dementia, which becomes common only among people in their 80s and 90s, starts out with mild symptoms but inevitably results in severe deficits in a wide range of cognitive functions.¹² The prevalence and severity of impairment rises exponentially with age, with more than half of the population over 85 experiencing some form of this condition (see Figure 1).

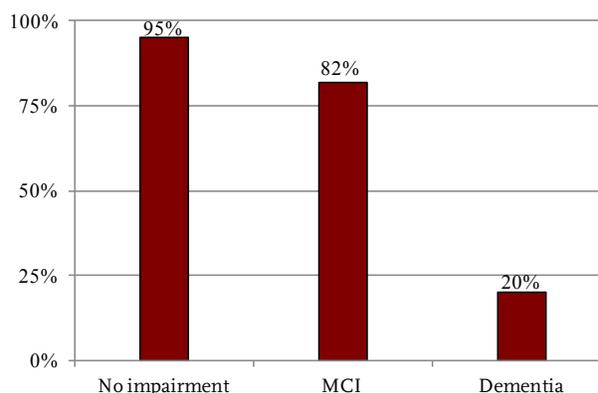
FIGURE 1. INCIDENCE OF MILD COGNITIVE IMPAIRMENT AND DEMENTIA, BY AGE



Source: Authors' calculations from the University of Michigan, *Health and Retirement Study* (1994-2014).

As noted above, a recent study assessing financial capacity among the elderly found that 95 percent of participants without any impairment were capable of independently managing their finances. In contrast, this proportion drops to 82 percent of adults with MCI and just 20 percent of adults with dementia (see Figure 2).¹³ While participants with dementia experienced widespread losses in financial capacity overall, those in the early stages of the disease struggled to perform tasks requiring financial judgment, while those in the late stages had trouble even with tasks requiring only procedural knowledge.¹⁴

FIGURE 2. PERCENTAGE OF ADULTS CAPABLE OF MANAGING THEIR FINANCES, BY IMPAIRMENT STATUS



Note: The average age of participants across all groups was 70; financial novices were excluded.

Source: Recreated from Marson et al. (2009).

A crucial characteristic of cognitive impairment is that people are usually unaware that they are slipping. Several studies have shown that people with MCI to full-blown dementia continue to feel confident about handling financial matters.¹⁵ The combination of high self-confidence, intact knowledge of financial procedures, and impaired financial judgment makes people with MCI more likely to be victims of fraud.¹⁶ For people with moderate to severe dementia, their vulnerability is clearer because they are usually unable to carry out financial transactions. Thus, many of these individuals rely on a caregiver, which creates a different type of risk – that of financial abuse by the caregiver rather than financial fraud.¹⁷

Conclusion

While most people will be able to manage their own finances in their 70s and 80s despite declining fluid intelligence, a significant share of retirees will need help. Retirees with normal cognitive aging could need assistance if they are financial novices – most likely due to the death or disability of a spouse who handled the household’s finances. Without access to experts they can trust, these individuals will be at risk of making potentially serious mistakes.

Retirees with cognitive impairment face greater challenges. Mild forms of impairment affect financial judgment but not the ability to carry out financial decisions, which puts people at risk of fraud. More serious forms of cognitive impairment completely erode the ability of retirees to handle their own financial affairs, which makes it more likely that someone more capable takes over their finances. But this dependence puts dementia patients at risk of financial abuse from caregivers.

While the need for help is clear, several obstacles prevent its provision. Experts disagree on what should trigger an assessment of financial capacity and who should conduct such an evaluation. Even with a well-defined assessment process, the legal framework to determine who should assume fiduciary responsibility for an incapacitated person needs to be more clearly defined. An additional obstacle is that responsible caregivers who manage someone’s finances often must comply with a patchwork of federal and state regulations designed to prevent financial abuse. Addressing these topics will require further research as well as coordination between institutions in the public and private sectors that may be unaccustomed to working together.

Endnotes

- 1 Steiner (2015).
- 2 Financial capacity is often used in the legal domain to determine whether a person is capable of performing fiduciary duties. In this context, financial capacity requires the ability to execute a contract, make a will, and make a financial gift (Caboral-Stevens and Medetsky, 2014). In research, financial capacity is considered to be an instrumental activity of daily living (IADL), or a complex activity that one must perform to live independently in a community (Schaie and Willis 2016).
- 3 See Schaie and Willis (2016).
- 4 Engel et al. (2016). Performance-based tests result in a continuous score that is converted into a rank that is comparable to clinical assessments using cut-off scores.
- 5 Standardized test performance among people over 70 should be taken with a grain of salt for several reasons: 1) studies often do not distinguish between people with early symptoms of dementia and those experiencing non-pathological cognitive decline; 2) studies usually involve trivial and hypothetical tasks, which the elderly do not perform well on – tests that try to mimic real world tasks show less severe decline in ability; and 3) the majority of the elderly end up with enough cognitive capacity to carry out daily tasks, albeit more slowly and deliberately than when they were young. With adequate nutrition, exercise, and stimulation, a disease-free brain should be able to maintain the ability to respond appropriately to familiar situations until the end of life. See Craik and Salthouse (2008), chapter 6, for a summary of research suggesting decline might not be as severe as generally reported.
- 6 Several studies show that, on average, knowledge of financial concepts and financial judgment might decline after 70, but caution should be exercised in using the results of such studies to conclude that most people experiencing normal cognitive aging cannot handle their own money: 1) such studies often do not exclude people with early stages of dementia in their analysis (e.g. Korniotis and Kumar, 2011); 2) the errors reported are often driven by a small share of participants who make mistakes, so the majority of

participants in their 70s and 80s handle their money just as well as younger participants (e.g. Agarwal et al., 2009); and 3) tests of financial knowledge or economic judgment often involve questions that require recalling specific facts or performing mathematical operations that people might not be familiar with – which are not representative of the types of tasks that most people must perform to handle their finances reasonably well (e.g. Gamble et al. 2014 and Kariv and Silverman 2015).

7 Marson et al. (2009). This analysis excluded participants who did not have experience managing money.

8 Li et al. (2015).

9 Another way in which the non-impaired elderly appear to compensate for deficits in their ability to perform specific financial tasks is by delegating (to an adult child or financial planner, for example). See Schaie and Willis (2016) for a list of non-cognitive factors that affect financial capacity.

10 Craik and Salthouse (2008).

11 Hsu and Willis (2013) have found that becoming a financial respondent in a survey is a reliable proxy for someone assuming responsibility for a household's finances.

12 Roughly half of people who experience MCI go on to develop dementia (Gauthier et al. 2006).

13 The reason that 20 percent of people with dementia still had the capacity to manage their own money is that those with dementia experience an uneven change in ability in the early stages of the disease. Excluding participants with early-stage dementia, only about 4 percent of people with dementia have the capacity to manage their finances.

14 Marson et al. (2009).

15 Okonkwo et al. (2008).

16 Riggs and Podrazik (2014).

17 Peterson et al. (2014).

References

- Agarwal, Sumit, John C. Driscoll, Xavier Gabaix, and David Laibson. 2009. "The Age of Reason: Financial Decisions over the Life-Cycle with Implications for Regulation." *Brookings Papers on Economic Activity* Fall 2009: 51-101.
- Caboral-Stevens, Meriam and Mark Medetsky. 2014. "The Construct of Financial Capacity in Older Adults." *Journal of Gerontological Nursing* 40(8): 30-37.
- Craik, Fergus I. M. and Timothy A. Salthouse. 2008. *The Handbook of Aging and Cognition*. New York, NY: Psychology Press.
- Engel, Lisa, Yael Bar, Dorcas E. Beaton, Robin E. Green, and Deirdre R. Dawson. 2016. "Identifying Instruments to Quantify Financial Management Skills in Adults with Acquired Cognitive Impairments." *Journal of Clinical and Experimental Neuropsychology* 38(1): 76-95.
- Gamble, Keith Jacks, Patricia A. Boyle, Lei Yu, and David A. Bennett. 2014. "Aging and Financial Decision Making." *Management Science* 61(11): 2603-2610.
- Gauthier, Serge, Barry Reisberg, Michael Zaudig, Ronald C. Petersen, Karen Ritchie, Karl Broich, Sylvie Belleville, Henry Brodaty, David Bennett, Howard Chertkow, Jeffrey L. Cummings, Mony de Leon, Howard Feldman, Mary Ganguli, Harald Hampel, Philip Scheltens, Mary C. Tierney, Peter Whitehouse, and Bengt Winblad. 2006. "Mild Cognitive Impairment." *The Lancet* 367(9518): 1262-1270.
- Hsu, Joanne W. and Robert Willis. 2013. "Dementia Risk and Financial Decision Making by Older Households: The Impact of Information." *Journal of Human Capital* 7(4): 340-377
- Kariv, Shachar and Dan Silverman. 2015. "Sources of Lower Financial Decision-making Ability at Older Ages." Working Paper 2015-335. Ann Arbor, MI: Michigan Retirement Research Center.

- Korniotis, George M. and Alok Kumar. 2011. "Do Older Investors Make Better Investment Decisions?" *The Review of Economics and Statistics* 93(1): 244-265.
- Li, Ye, Jie Gao, A. Zeynep Enkavi, Lisa Zaval, Elke U. Weber, and Eric J. Johnson. 2015. "Sound Credit Scores and Financial Decisions Despite Cognitive Aging." *Proceedings of the National Academy of Sciences* 112(1): 65-69.
- Marson, Daniel C., Roy C. Martin, Virginia Wadley, H. Randall Griffith, Scott Snyder, Patricia S. Goode, F. Cleveland Kinney, Anthony P. Nicholas, Terri Steele, and Britt Anderson. 2009. "Clinical Interview Assessment of Financial Capacity in Older Adults with Mild Cognitive Impairment and Alzheimer's Disease." *Journal of the American Geriatrics Society* 57(5): 806-814.
- Okonkwo, Ozioma C., Virginia G. Wadley, H. Randall Griffith, Katherine Belue, Sara Lanza, Edward Y. Zamrini, Lindy E. Harrell, John C. Brockington, David Clark, and Rema Raman. 2008. "Awareness of Deficits in Financial Abilities in Patients with Mild Cognitive Impairment: Going Beyond Self-Informant Discrepancy." *The American Journal of Geriatric Psychiatry* 16(8): 650-659.
- Peterson, Janey C., David P. R. Burnes, Paul L. Caccamise, Art Mason, Charles R. Henderson Jr., Martin T. Wells, Jacquelin Berman, Ann Marie Cook, Denise Shukoff, Patricia Brownell, Mebane Powell, Aurora Salamone, Karl A. Pillemer, and Mark S. Lachs. 2014. "Financial Exploitation of Older Adults: A Population-Based Prevalence Study." *Journal of General Internal Medicine* 29(12): 1615-1623.
- Riggs, Ann T. and Paula M. Podrazik. 2014. "Financial Exploitation of the Elderly: Review of the Epidemic: Its Victims, National Impact, and Legislative Solutions." In *Aging and Money: Reducing Risk of Financial Exploitation and Protecting Financial Resources*, edited by M. Ronan Factora, 1-18. New York, NY: Springer Publishing.
- Schaie, K. Warner and Sherry L. Willis. 2016. *Handbook of the Psychology of Aging: Eighth Edition*. Boston, MA: Academic Press.
- Steiner, Sheyna. 2015. "Americans Racked by Retirement Fears." (February 15). New York, NY: Bankrate.
- University of Michigan. *Health and Retirement Study, 1994-2014*. Ann Arbor, MI.

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