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How FinTech is Reshaping the Retirement Planning Process

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How FinTech is Reshaping the Retirement Planning Process

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The Disruptive Impact of FinTech on Retirement Systems

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Chapter 1

How FinTech is Reshaping the Retirement Planning Process

Julie Agnew and Olivia S. Mitchell

It is indisputable that technology transforms human behavior. Consider how the internet has reshaped work practices, and how mobile phones have changed the ways in which we communicate, purchase goods, save, and bank. Moreover, new technologies focused on financial applications, commonly referred to as FinTech, promise a similar revolution in the retirement planning processes. Robo-advisors and mobile savings apps are a few harbingers of innovations to come. Yet these changes bring with them new ethical and regulatory considerations, design challenges related to promoting adoption by an older population less trusting of technology, and concerns over data security and privacy. This volume takes stock of the disruptive impact of financial technology on retirement planning, saving, investment, and decumulation; and it also highlights issues that regulators, plan sponsors, academics, and policymakers must consider as retirement practices evolve at a rapid pace.

FinTech and the Retirement Marketplace

The enormous market potential for FinTech retirement products is drawing the attention of a multitude of new entrepreneurs in the online marketplace. There are several compelling reasons why. First, the targeted population holds considerable wealth. While consumers age 50+ represent only 35 per cent of the US population, this group controls over half of investible assets (AARP 2017). Second, this market is also largely untapped. The many complex financial challenges facing this ageing group will require many new solutions, and technological innovations are well suited to provide the answers. Third, this generation is not particularly financially literate, which makes it difficult for them to undertake retirement planning efforts (Lusardi and Mitchell 2007). Interestingly, startups may be in a better position to address these concerns relative to existing financial institutions, though this will largely depend on how the regulatory system evolves around new entrants.

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Arguably, robo-advisors are the most well-known of the FinTech innovations, which refer to automated online services that use computer algorithms to provide financial advice and manage customers' investment portfolios. These products are increasingly targeting the retirement marketplace.[1] The advent of a computerized approach to financial advice offers huge promise to provide people access to data they need to make smart retirement plans at very low cost. Currently, robo-advisor algorithms advise people on how much to save, when to claim Social Security, which Medicare plan to buy, and, most importantly, how to manage smart payouts during the decumulation phase of life. Nonetheless, none of the robos available today handle all of these things in one simple system. In view of people's documented low levels of financial literacy and evidence that advice from human advisors is sometimes conflicted, these systems are positioned to fill a substantial gap in advisory services.

Against this backdrop, there has been an upsurge in interest in robo-advisors. At the same time, however, regulations are in flux, competition is increasing, and some recent robo-advisor platform failures raise concerns about the viability of current business models (D'Acunto et al. 2017). To highlight the important role that robo-advisors are already playing in the FinTech revolution, this volume offers several chapters on this topic to provide the reader with a comprehensive overview of the history, issues, and possible future directions of these services. Key questions we address are: How do these systems fit within the current regulatory structure? What are their fiduciary requirements? Will robo-advisors democratize retirement savings by helping ensure that more people will plan for retirement, and plan ahead for decumulation activity once they have entered retirement?

To address several of these issues, Fisch et al. (2019) provides a useful overview of the marketplace for robo-advice, tracing the development of the sector and the services provided. The authors also compare the services, quality, and costs of advice offered by robo-advisors with those provided by human advisors, along with the potential for conflicts of interest. After analyzing the regulatory concerns that arise, the authors conclude that it may be easier to oversee the algorithms used by robo-advisors, compared to the communications of human advisors. The discussion closes with a look at emerging trends, including the move to human–robo hybrids; a transition to more product and service diversification; more vertical integration; and the growing use of robo-advisors by human advisors.

Klass and Perelman (2019) note that digital investment advisory programs account for managed assets in excess of $200 billion globally, and they emphasize that financial advice is fiduciary advice. This is an important regulatory consideration. In the US context, this means that they must act in good faith, to disclose material facts, and to employ 'reasonable care' to avoid misleading clients. They review the duties of loyalty and of care

required by investment law, along with the principles-based regulatory regime followed by the US Securities and Exchange Commission overseeing the industry. The authors conclude that, while robo-advisors compete with traditional advisors, the services they offer are still governed by the traditional advisory framework and its regulatory structure.

FinTech and Retirement Security

Callaway's (2019) interesting chapter explores how initiatives in the life insurance industry may contribute to disruption in the retirement space. She points out that Insuretech investments are already influencing platforms for insurance underwriting, claims payments, and online quoting and application. These changes are informed by new data sources including insurance application histories, prescription drug histories, driving histories, and financial credit records. Such information can also inform retirement planning efforts, including better information on morbidity and mortality projections.

Additional ethical, regulatory and medical considerations stemming from the use of 'big data' in insurance are topics addressed by Klitzman (2019). While at first it may appear that this discussion moves away from the book's main theme, the fact that insurance plays such a key role in people's retirement security makes the chapter an essential component of this volume. Mitchell's (2018) research, along with others, demonstrates that health care cost shocks are a major risk facing aging populations. Yet many may be unaware that even with some insurance, healthcare costs can still be expensive. For example, Fronstin and Vanderhei (2018) have estimated that a US couple aged 65 with both Medicare coverage and median prescription drug expenses would need to save $174,000 merely to have a 50 percent chance of covering their health costs in retirement. They would need to save $296,000 if they wished to boost to 90 percent their probability of having enough financial resources to pay retiree medical expenses alone. (Moreover, this excludes the cost of nursing home care, which can run upwards of $70,000 annually.) Furthermore, lack of health insurance coverage can also impact low-income adults' out of pocket expenditures, thereby imposing a substantial financial burden on this vulnerable group (Kwon et al. 2018). As a result, this chapter provides valuable insight into how an individual's financial security at retirement may be affected by describing how new advances in computing and genomic testing may influence the demand for and pricing of an individual's insurance in the future.

The impact of genetic information on pricing in the insurance market depends on how the information can be used. Klitzman (2019) outlines several key regulatory options from which policymakers might chose. As the

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author notes, one path might be to prohibit all insurers from using any genetic information; alternatively, insurers could be allowed free access to all genetic information. An intermediate and more realistic path, he suggests, would allow insurers access to genetic information only about certain 'pre-defined, well-characterized, highly-penetrant' genes that would help prediction models do a better job. Still a different alternative could make available some modest level of insurance to all, and insurers could require genetic test results from those seeking to buy additional coverage. More generally, as digitalization and access to personal information spreads, the important question is how risk pooling can evolve to offer more efficient ways to share risk, allow for personalization, and provide protection against the key shocks confronting older persons. Among these are health, inflation, investment, and longevity surprises during the retirement period.

Finally, the regulatory issues that Klitzman (2019) raises also have implications for new insurance products. For instance, Mitchell (2018) reviews products to manage these shocks and highlights the potential for hybrids that engage both the insurance and financial markets. One such product is a 'life care annuity,' addressing both longevity risk and healthcare surprises (Brown and Warshawsky 2013). The market for hybrid annuities consistent with this approach is growing fast: Korn (2018) notes that sales of annuities with long-term care riders (annuity LTC combos) are now surpassing sales of simple LTC contracts. Total sales for such LTC combos amounted to $480 million in 2017, more than double the $228 million in sales recorded for standalone LTC contracts. It is likely, of course, that such products will encounter the same type of regulatory debate surrounding the use of genetic information as those discussed in the context of insurance in this chapter. For this reason, readers will find invaluable the chapter's descriptions of the advances in technology and genetics, as well as future possible changes in related regulation.

The rise of digital data also gives rise to concerns about privacy and cybersecurity. Rouse et al. (2019) (Chapter 6 in this volume)reviews efforts by regulators, plan sponsors, and other financial players to focus more time and resources on the security of participant information held by service providers. After reviewing the legal and regulatory history of prudent protections in the US, the authors outline best practice regarding cybersecurity in the context of the FinTech advice arena. They note that it will be essential to conduct due diligence while avoiding disclosures that could benefit malicious actors.

Research by Munteanu et al. (2019) shows that older persons often avoid online activity due to lack of digital confidence and concerns about fraud, leading to digital marginalization. Yet many seniors will need to avail themselves of potentially very helpful and lower-cost robo financial services in the future, giving rise to the question of how to encourage their comfort with such services. The authors propose and implement a theory of mental

models, offering new insights into how to encourage older persons to effectively, and correctly, use online services.

FinTech and Decumulation during Retirement

Polansky et al. (2019) focused on whether robo-advisors can move from their traditional focus on accumulation, to help seniors manage decumulation of their assets in retirement. The authors note that investors can be encouraged toward more sensible investment and payout approaches, and steered away from overconfidence, loss aversion, mental accounting, framing, and more. In short, robos promise to take the emotion out of decumulation. The authors' interviews with a dozen key market players highlight additional challenges retirees face, including greater uncertainty and the need to make timely and highly consequential decisions, despite their limited or complete lack of experience upon which to draw to make these decisions, and inability to learn from their mistakes. In particular, retirement financial planning necessitates a very broad view of retirees' circumstances, including all relevant assets (e.g., potential social security and pension income) and liabilities (e.g., mortgages), as well as many other quantitative and qualitative factors.

While decumulation is arguably one of the most important, and complex, financial decisions facing older households, Baker and Dellaert (2019) in this volume find that relatively few FinTech firms are informative regarding this phase of the life-cycle. Their review of the marketplace finds that no robo-advisor handles all the key decisions required, including when to claim social security benefits, which Medicare plan to select, how quickly to withdraw and spend assets, and whether (and how much) to annuitize. Moreover, consumers exhibit numerous idiosyncratic behaviors that are not necessarily in line with 'rational' economic behavior, making it even more difficult to develop and deliver financial advice.

Most important to the discussion regarding retiree robo-advice is whether such advice will shape investors' consumption, retirement incomes, and overall well-being, and whether robos will help people do better than people following a more conventional path. Theoretical studies do predict improvements (e.g., Kim et al. 2016), yet there is very little real-world evidence on this point. Deschenes and Hammond (2019) summarize studies indicating that saving and investment results are not necessarily superior for those using financial advisors, though users of robo services may do better, mainly due to lower investment costs. Yet available studies are only short term in nature, and none follows robo customers over an entire business cycle. A related question is whether robo-advice will supplant the need for improved financial literacy. Clearly this is an area ripe for research follow-up.

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A Look to the Future

Taken together, the chapters in this volume explore the nascent and evolving market for robo-technology in retirement planning. The only certainty is that change is coming rapidly, and FinTech will drastically alter how consumers prepare for, and move through, their later years. Recognizing that change is ahead provides stakeholders an opportunity to better shape how the technology will integrate with and potentially improve consumers' lives. We conclude with several important points for market constituents to consider, as participants in the sector's development.

As a first point, the long-term development of the US financial sector has not necessarily lead to efficiency. Philippon (2019) shows that technological change in traditional incumbent financial institutions has not led to cost declines, partly because of the global financial system's complex taxes, subsidies, and rents. Moreover, he views the current system as expensive and risky. By contrast, FinTech startups have the opportunity to build a better system, given their culture of efficient operational design and because they are untethered by existing systems.

Secondly, entrepreneurs in this marketplace will need to avoid overspecialization leading to a fragmented market. Consumers are wary of having to search widely for products that address specific needs, and consumers may have difficulty selecting products when offered too many choices or because of limited time. In addition, many people will benefit from a hybrid approach, rather than utilizing products which solve problems only using technology, intended only for a particular life stage (e.g., the accumulation or decumulation phases), or aimed at specific decisions (e.g., claiming social security or Medicare). More appealing may be hybrid services and software that can encompass many financial decisions, making it easier for consumers to integrate this new technology into their life-cycle planning and decision making. Ideally, households would need to devote less time and effort to learn how to work with the various systems involved, and the technology could limit the time spent re-inputting personal data. FinTech's promise is in creating comprehensive platforms to consolidate people's data and advice platforms.

A third consideration is that comprehensive financial service providers will require more detailed and sensitive information from consumers, as the market consolidates. In turn, this can help refine and improve recommendations and services generated by FinTech products. For instance, robo-advisors cognizant of detailed and comprehensive household data can build better algorithms for financial management. These must take into account a household's financial assets, the partners' human capital and earnings, home value, investments, and pension and Social Security benefits. A well-designed plan would also recommend methods for insuring against health

shocks and longevity. With these improvements, of course, there can be increasing danger from storing consolidated and comprehensive private financial information. Accordingly, strong privacy and cybersecurity protections must be top of mind for developers.

A fourth consideration is scalability. FinTech startups have experienced high client acquisition costs, and the history of many robo-advisor firms provides prime examples of the challenges (Kitces 2013). When products are designed to help people of limited means, the cost of engaging these clients can drive ventures under; past robo-advisor causalities include WorthFM, SheCapital, and Hedgeable (Malito 2016; Kitces 2018). These examples demonstrate that, even when robo products are well-designed, they still may not be viable because their survival depends on quickly acquiring a sufficient customer base. This is one reason that FinTech startups have sought out partnerships with large incumbent firms: working together, startups can benefit from the large potential customer base provided by existing financial institutions, while financial institutions can break into areas they otherwise would be excluded from entering.

A fifth observation about the FinTech marketplace is that the industry must consider human behavior when designing products. As Munteanu et al. (2019) point out in their chapter, technological design should be driven by users' needs. Accordingly, startups should consider how the older population interacts with technology and the unique concerns they have, versus Millennials. Furthermore, considerations of culture and gender should help inform developers to create products which can be personalized for subgroups within the older cohort. Treating this population as one homogeneous group ignores important differences within this diverse population (Hodge et al. 2018). The obvious implication is that products may fail to appeal to certain subgroups diminishing the products market potential overall, as well as creating pockets of underserved groups.

A different challenge to the FinTech industry is that purely technological solutions may not work. Several chapters in this volume note that robo-advisors are increasingly moving toward hybrid human/computer approaches, an outcome that is not surprising in light of recent research. For instance, Yeomans et al. (2018) found that humans often do not trust recommendations made by algorithms, even when those recommendations outperform human decision making. While that study did not deal with financial advice, the authors' findings are still relevant in the present context. Specifically, the authors found that trust can be fostered by explaining to clients how the algorithmic recommendations are generated. Clearly, as FinTech entrepreneurs build new advice products for the retirement market, they cannot ignore the importance of carefully testing methods for encouraging acceptance of the products being developed.

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Another broad issue highlighted in Baker and Dellaert (2019) and Philippon (2019) is that regulation will play an important role in the how the FinTech market evolves. In the US, industry support from policymakers seems likely but is not certain. A recent US Treasury department report recommended regulatory changes that would aid entry into the startup market (Akolar 2018), among them, the creation of a 'sandbox,' where firms have a simple process to obtain permits to experiment without running foul of US rules. The Office of the Comptroller of the Currency is also accepting startup applications for bank charters, while new sandbox initiatives have been launched by the Consumer Financial Protection Bureau, the State of Arizona, and the Commodity Futures Trading Commission (CFTC 2017). Yet many of the new recommendations require further action from regulators and/or Congress, before they can be implemented. And some states have voiced concern that federal plans may limit states' influence over the FinTech market within their states (Hayashi 2018). For FinTechs in the retirement space to flourish, a cohesive set of regulations will need to be developed and enacted.

In sum, retirement planning is undergoing a revolution as advances in financial technology proceed, though this future will also bring challenges. This volume provides an overview of the market's potential and discusses some of the significant hurdles that must be carefully considered and overcome. By keeping in mind the lessons from this book, entrepreneurs, policymakers, regulators, and academics can help facilitate the thoughtful evolution of this market, ease the introduction of new products and smooth the transition for retirees learning to adapt.

Note

1. In this volume we generally discuss 'financial advisors' with an 'o' in the spelling. As such, we are referring in broad terms to any broker, financial planner, and/or registered advisor. It is important to note that changing the 'o' to an 'e' changes the context significantly in the US. An 'investment adviser' refers to a particular subset of advisors and is a legal designation used by an individual or a company registered with the US Securities and Exchange Commission (SEC) or a state securities regulator. Robo-advisors in the US can be Registered Investment Advisors (RIAs), who uphold a fiduciary standard and are under the supervision of the SEC. They are also required to adhere to the obligations of the Investment Advisers Act of 1940.

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