

## **Financial literacy and financial responsibility in the financial technology (FinTech) era: capabilities and challenges\***

**Anahita Zandi**

Ph.D of Accounting and Islamic Azad University lecturer  
zandi\_anna@yahoo.com

**Submit: 28/06/2020    Accept: 06/10/2020**

### **Abstract**

Extensive evidence shows that financial literacy plays an important role in financial well-being, and differences in financial knowledge acquired in the early stages of life play a very important role in financial and general well-being in adulthood. Financial technologies (FinTech) have revolutionized the financial services industry at Unmatched speed. Opinions about the impact of financial technologies (FinTech) vary, and these may include individual financial planning, welfare, and social conditions. In the present era, increasing information in the field of digital finance and examining the existing threats such as financial fraud (online), financial training and improving appropriate financial advice policies, lead to financial promotion and overall well-being. Given that rapid developments in financial technology (fintech) highlight the need to improve financial literacy and financial accountability for the use of innovative financial products and services, In this study, by providing new perspectives on new articles related to these specific topics (FinTech programs and financial capability; finance and financial well-being; financial literacy and financial results; and knowledge, financial advice and fraud detection), to expand evidence about the capacities and challenges in this area will be discussed.

### **Keywords**

financial literacy, financial responsibility, FinTech.

---

\* Advisor: Dr. Fereydoun Rahnamay Roodposhti

## 1. Introduction

Financial literacy and understanding its implications is effective for all people. Because financial decisions made by individuals can have a significant impact on their financial situation. One of the most important issues in many societies is financial literacy and financial skills. Financial literacy is defined as the ability of an individual to use his or her knowledge and skills to effectively manage his or her financial resources for financial security over a lifetime (Morgan and Long 2020). In fact, financial literacy is one of the most important determinants of financial well-being. Conscious financial decisions can be one of the most important factors in financial choices. Differences in financial knowledge acquired early in life represent an important part of the wealth inequalities that form during retirement (Losardi, Mishad, and Michelle 2017). Extensive evidence shows that, the progress of fintech has helped consumers to availability financial markets and services much more easily than ago. The number of financial products reported has increased, as well, such products have become more intricate. This requires consumers to have adequate knowledge and ability to make financial decisions. This indicates that an sufficient level of financial literacy is necessary (Morgan and Trinh 2020).

Financial technologies (FinTech) have revolutionized the financial services industry. From mobile payments and online investment platforms to online banking solutions. FinTech developments have had a huge impact on financial planning, financial well-being and economic inequality. In fact, financial technologies, by expanding their work in various dimensions, have provided a new window for development and convenience in the financial field. Financial technologies have the potential to change customer expectations and provide a newer and far better user experience. Financial technologies can also affect and enhance financial capabilities. (Yoshino and Morgan 2020). Start-ups and platforms that use these technologies to simplify personal finance and improve financial planning processes, Not only are they shaping the next generation of financial instruments,

but they have also encouraged and strengthened financial education. Improving financial literacy and other awareness (technology, political and environmental health) has enabled people to engage better than AI. (Panos and Wilson 2020). Losardi et al. (2015) believe that research on financial literacy and related methods should seek to understand how financial education can be most effective by improving the design and delivery of this information. Given that we are now in the era of financial technologies (FinTech), the imagery and accessibility and user-friendliness of these tools play a very important role in developing their application among the people. Therefore, understanding the relationship between financial literacy and fintech acceptance should be of interest not only to researchers but also to policy makers. On the other hand, while there is a considerable body of theoretical and empirical research on financial literacy, less attention has been paid to how people acquire and apply financial literacy. In the last few years, however, a few authors have begun to explore the decision to acquire financial literacy and the links between programs (FinTech) and financial ability; Finance and financial welfare; Financial literacy and financial results; And knowledge, financial advice and fraud detection including Panos and Wilson (2020), Shaban, Girardone, and Sarkisyan (2020), Urban and Collins (2020), Philippas and Avdoulas (2020), Artavanis and Kara (2020) and.... One of our goals in this paper is to provide an assessment of the need to improve financial literacy and financial accountability for the use of financial products and services in the era of financial technology. We focus specifically on financial literacy, and we mean "the ability of individuals to process economic information and make informed decisions in the era of information technology." The following is a summary of recent theoretical research that shows the potential and challenges of financial literacy and financial responsibility in the era of financial technology.

## 2. Literature Review

The concept of financial literacy has been used by different researchers in different fields. Huhmann and McQuitty (2009) applied the construct of financial numeracy which is a combination of financial literacy and financial capability in their study. It highlighted the impact of financial numeracy on financial management outcomes such as savings, borrowings, taxes and higher order decisions like credit score, retirement security and financial well-being. FinTech is a term that combines the concepts of "finance" and "technology" and refers to the application of technology and innovative business models in the field of financial services. Financial technology refers to companies that use technology to try to make financial services more efficient. Financial technology companies are generally Start-ups that try to position themselves in financial systems and challenge traditional companies( Gai2018). The format of financial information presentation can have a huge impact on the choices of people with low financial literacy. The development of financial techniques may also harm financial well-being by changing consumer behavior when interacting with financial technologies and operating systems. (Mitchell 2018). For example, mobile apps could attract impulsive and unsophisticated individuals, who lack the necessary skills to forecast future preferences. Likewise, mobile apps cause people to make poor decisions in sensitive or stressful situations, and in such cases, end-use of financial services is likely to be detrimental to the well-being of the consumer. Hundtofte and Gladstone (2017) provide evidence that mobile users are more likely to engage in impulsive purchasing behaviour and more likely to use payday loans. Mobile loan products are often *too accessible* and allow fleeting preferences to be acted upon. This indicates that mobile applications and operating systems should be complemented by training. In a recent cross-country study, Panos and Karkkainen (2020) found that financial literacy was negatively correlated with ownership of cryptocurrencies. This indicates that financially illiterate consumers have a limited understanding of the greater risk and reward of

cryptocurrency transactions than other financial classes. Dominant market dominance by investors is a possible factor in creating cryptocurrency fluctuations. McKillop, French, and Stewart (2020) assessed whether smartphone applications could be used to improve optimal financial performance. The authors offer four smartphone apps to working-age members (ages 16 to 65) from Northern Ireland's largest credit union. These programs include a loan interest comparison program, a cost comparison program, and a cash calendar program; And is a debt management program. In a randomized controlled trial, the authors found significant improvements in "financial knowledge, understanding, and basic skills" and "attitudes and motivations" for a group of people using the programs. Those who use these programs are more likely to track their income and expenses and are more resilient when faced with a financial shock.

Shaban, Girardone, and Sarkisyan (2020) Shaaban, Girardon, and Sarkisian (2020) provide evidence for the period 2004-2005, indicating an overall increase in access to and use of financial services. At the macroeconomic level, the authors found that financial inclusion was positively correlated with economic development, banking system conditions, human development, and Internet use, and government integration. Based on these findings, the authors suggest that the level of economic development should be considered in policies to increase financial capacity.

Urban and Collins (2020) assess the importance of financial well-being in overall economic well-being. Using a large cross-sectional US dataset, the authors found that the standard financial well-being score generally tracks income, wealth, and investment market participation. However, financial well-being measures differ from general measures of mental well-being and financial literacy throughout life.

Philippas and Avdoulas (2020) examine the relationship between financial literacy and financial well-being using the primary data set of Greek university students living in financial crisis. The authors found that male students were more financially literate than female students. They also find Relation between students' financial literacy and parents'

education and income. Their findings suggest that students with higher financial literacy are more likely to cope with unexpected financial shocks. In general, financial literacy is a major factor in financial well-being among Greek university students.

The next study was conducted by Artavanis and Kara (2020) on student debt using a new data set of US students from a large public university in Massachusetts. Here the authors examine the level of student financial literacy and its implications for student debt repayment. They found low levels of financial literacy among female, minority, and first-generation students, respectively. In addition, students with a lack of financial literacy are more likely to underestimate future student loan payments. The authors also cite the financial literacy gap as an important point. Students with low financial literacy expect to be paid less to start work than their highly educated counterparts. As a result, illiterate students are vulnerable to unexpected shocks to their pay-as-you-go income, which in turn undermines their future credibility and ability to serve after graduation.

Migliavacca (2020) examines financial advice. The author claims that the readiness, effectiveness, and impact of educational programs aimed at increasing financial literacy are not yet well documented. His findings suggest that financial advisors are effective in increasing investor financial awareness. He establishes this relationship using three criteria of financial literacy (basic, advanced and general) and also tests distinct examples of consultants. He showed that the presence of independent financial advisors leads to an increase in "advanced" financial literacy skills of clients. Based on these findings, the author highlights the important role of enlightened financial advice as a complement to financial education programs.

Engels, Kamlesh, and Philip (2020) examined financial fraud, which is likely to cause significant losses in terms of consumer sentiment and fundamental trust in financial institutions. The authors show that when people have more knowledge, they have a greater ability to detect fraud. Increasing a standard deviation in financial knowledge increases the probability of detecting fraud by three percent. It is

interesting to note that the prudent financial behavior associated with money base management has little effect on detecting fraud. The findings confirm that fraudulent tactics are increasingly complex; So that more financial knowledge provides the necessary facilities to detect fraud. This article outlines the policy implications for consumer education programs beyond developing money management skills, and providing the advanced financial knowledge needed to combat fraud.

In a related study, Carlin et al. (2018) examine how a new technology (which provides better access to financial information) changes financial behavior. The authors use the introduction of a smartphone application for personal financial management as a source of external change in access to financial information. In this study, they show that the adoption of financial technologies reduces the payment of financial costs and penalties, but it is cross-sectional. After using the new technology, research team members incur lower financial costs and fines, while novices do not enjoy these benefits.

Brown et al. (2019) show that increasing financial literacy increases the financial range of households and leads to long-term improvements in credit scores and consequently household financial conditions.

Behrman et al. (2012) found that health shocks affect a person's life situation more than financial shocks.

Lusardi et al. (2017) show that differences in financial literacy can explain about 35-40% of retirement wealth inequality in the United States. The ability of individuals to assess financial risk and make optimal financial decisions entails vast implications for the portfolio allocation, wealth accumulation.

Anderson et al. (2017) showed that low financial literacy is associated with misconceptions about the characteristics of financial products and a lower willingness to accept financial advice.

Von Gaudecker. (2015) believes that households that score high in financial literacy or trust experts for advice will achieve reasonable investment results. The author finds that households with below-median financial literacy that trust their own decision-making

capabilities realize large losses in their investment portfolios.

### 3. Research methodology

The present study provides new perspectives on new articles related to these specific topics (FinTech programs and financial capability; finance and financial well-being; financial literacy and financial results; and knowledge, financial advice and fraud detection). Expands existing capacities and challenges in financial literacy and financial accountability in the age of financial technology (FinTech). In fact, in order to collect the required resources, new and related articles were reviewed and the research literature was identified using the library method.

### 4. Conclusion

In recent decades, advances in financial technology (fintech) have helped consumers gain easier access to markets and financial services. The number of financial products offered has increased, and at the same time, such products have become more complex. This requires consumers to have sufficient knowledge and ability to make financial decisions, especially in situations where they are increasingly expected to make financial decisions about retirement and other major financial activities. This shows that having a sufficient level of financial literacy is essential. The new articles, which to date provide training guidelines and policies on research developments in the role of financial literacy and the role of financial technology (FinTech) in enhancing financial capacity in the context of financial accountability, address four broadly related topics. FinTech programs and financial capabilities; Finance and financial welfare; Financial literacy and financial results; And knowledge, financial advice and fraud detection. In this research, by presenting new perspectives from articles related to the mentioned topics, the evidence about the existing capacities and challenges in this field, which is on the academic (political) and political agendas, was expanded. There are several important conclusions from the views of

this research in this article. First, it can be seen that in addition to the use of smart phone applications to improve the desired financial ability, but the format of providing financial information can have a great impact on the choices of people with low financial literacy. The development of financial techniques may also harm financial well-being by changing consumer behavior when interacting with financial technologies and operating systems. On the other hand, smartphone applications can be used to improve the desired financial capacity. In fact, those who use these programs are more likely to track their income and expenses, and are more resilient when faced with a financial shock. Also, people with higher financial literacy are more likely to cope with unexpected financial shocks. High financial literacy significantly reduces the likelihood of underestimating financial debt. The presence of independent financial advisors enhances clients' "advanced" financial literacy skills. In fact, financial literacy and financial advice are complementary, not alternative. Evidence shows that more literate people have better access to financial information and financial advisors. Adoption of financial technologies reduces the payment of financial costs and fines, and high financial literacy leads to optimal financial decisions, accumulation of wealth and ultimately financial well-being. Finally, according to the mentioned results, it can be seen that the interest in this field is related to the concerns that some financial institutions mistakenly sell their products and services to their customers Or take other negative actions that exploit uninformed (low-literate) consumers.

### References

- 1) Artavanis, N., & Karra, S. (2020). Financial literacy and student debt. *The European Journal of Finance*, 26(4-5), 382-401.
- 2) Behrman, J. R., Mitchell, O. S., Soo, C. K., & Bravo, D. (2012). How financial literacy affects household wealth accumulation. *American Economic Review*, 102(3), 300-304.

- 3) Brown, J. R., Cookson, J. A., & Heimer, R. Z. (2019). Growing up without finance. *Journal of Financial Economics*, 134(3), 591-616.
- 4) Carlin, B. I., Olafsson, A., & Pagel, M. (2019). FinTech and consumer financial well-being in the information age.
- 5) Collins, J. M., & Urban, C. (2018). Understanding Financial Well-being Over the Lifecourse: An Exploration of Measures.
- 6) Engels, C., Kumar, K., & Philip, D. (2020). Financial literacy and fraud detection. *The European Journal of Finance*, 26(4-5), 420-442.
- 7) French, D., McKillop, D., & Stewart, E. (2020). The effectiveness of smartphone apps in improving financial capability. *The European Journal of Finance*, 26(4-5), 302-318.
- 8) Gai K, Qiu M, & Xiaotong S. (2018). A survey on FinTech. *Journal of Network and Computer Applications*, 103: PP 262-273.
- 9) Hastings, J., & Mitchell, O. S. (2020). How financial literacy and impatience shape retirement wealth and investment behaviors. *Journal of Pension Economics & Finance*, 19(1), 1-20.
- 10) Huhmann, B. and McQuitty, S. (2009), "A model of consumer financial numeracy", *International Journal of Bank Marketing*, Vol. 27 No. 4, pp. 270-293.
- 11) Lusardi, A., Michaud, P. C., & Mitchell, O. S. (2017). Optimal financial knowledge and wealth inequality. *Journal of Political Economy*, 125(2), 431-477.
- 12) Lusardi, A., A. Samek, A. Kapteyn, and L. Glinert. 2015. "Visual Tools and Narratives: New Ways to Improve Financial Literacy." *Journal of Pension Economics and Finance* 16 (3): 1–27.
- 13) Lusardi, A., & Mitchell, O. S. (2014). The economic importance of financial literacy: Theory and evidence. *Journal of economic literature*, 52(1), 5-44.
- 14) Migliavacca, M. (2020). Keep your customer knowledgeable: financial advisors as educators. *The European Journal of Finance*, 26(4-5), 402-419.
- 15) Morgan, P. J., & Long, T. Q. (2020). Financial literacy, financial inclusion, and savings behavior in Laos. *Journal of Asian Economics*, 68, 101197.
- 16) Morgan, P. J., & Trinh, L. Q. (2020). Fintech and Financial Literacy in Viet Nam.
- 17) Panos, G. A., Karkkainen, T., & Atkinson, A. (2020). *Financial Literacy and Attitudes to Cryptocurrencies* (No. 2020\_26).
- 18) Panos, G. A., & Wilson, J. O. (2020). Financial literacy and responsible finance in the FinTech era: capabilities and challenges.
- 19) Philippas, N. D., & Avdoulas, C. (2020). Financial literacy and financial well-being among generation-Z university students: Evidence from Greece. *The European Journal of Finance*, 26(4-5), 360-381.
- 20) Sha'ban, M., Girardone, C., & Sarkisyan, A. (2020). Cross-country variation in financial inclusion: a global perspective. *The European Journal of Finance*, 26(4-5), 319-340.
- 21) von Gaudecker, H. M. (2015). "How Does Household Portfolio Diversification Vary With Financial Sophistication and Advice?" *Journal of Finance* LXX (2): 489–507.
- 22) Yoshino, N., Morgan, P. J., & Long, T. Q. (2020). Financial Literacy and Fintech Adoption in Japan.