



Chapter 6

Summary and conclusion

Making sound financial decisions is crucial in modern society, and these decisions might be becoming increasingly difficult, because people face more and more challenges, such as technological progress in the financial environment and complex financial products and services (Simonse, Van der Werf, & Wilmink, 2017). As a consequence, people can experience problems with managing their money, even in well-developed and rich countries (Klapper, Lusardi, & Van Oudheusden, 2015). Poor financial decisions carry substantial costs for both the individuals themselves, such as adverse psychological and physical health outcomes, and the society as a whole, such as less economic growth and more unemployment (Mian, Sufi, & Verner, 2017; Van Dijk, Van der Werf, & Van Dillen, 2021). On the other hand, sound financial decisions provide benefits, like having more financial room to enjoy life (Allen, 2020), which contributes to financial satisfaction and financial well-being (CFPB, 2015). It is, therefore, imperative for policymakers, educators, practitioners, and service providers to identify what factors predict financial decisions, enabling them to develop strategies that might reduce the dire consequences of poor financial decisions while reaping the benefits of sound financial decisions. With the present dissertation, we add to this effort by testing the relations between financial knowledge, psychological factors (i.e., attitude toward money, future orientation, and control skills), and positive financial behaviours, on the one hand, and financial satisfaction and financial well-being, on the other. In this last chapter of the present dissertation, we address the key findings, implications, and lessons learned of the four empirical chapters.

Key findings, implications, and lessons learned

In Chapter 2, we tested the effectiveness of two modules of a large-scale national financial education program in Dutch primary schools (i.e., the modules Responsible Spending and Performing Transactions). It is possible to increase fifth graders' financial

knowledge and skills with a financial education module. Our findings showed that the effectiveness can differ per module. Whereas the Performing Transactions module was effective in our study, the Responsible Spending module was not. This could stem from the fact that the children who received the Responsible Spending module already knew a lot about the topic and may not have learned anything new. It, however, may also be that this module is effective for younger children (i.e., those in lower grades), who have less knowledge about the topic. Overall, these findings and implications point to two lessons for policymakers and educators. First, financial education programs, such as the one tested here, which enable children to implement what they learn using daily life examples might improve their knowledge and skills regarding certain financial competencies. Second, it is crucial to not only assess children's start level of knowledge and skills during the development stage of a program, but also talk with their parents, caregivers, or guardians to know what they have (already) been teaching the children. This way, it will be possible to create the right content for the program, and decide about the right period for teaching the program.

In Chapter 3, we tested the extent to which the four different combinations of high and low objective and subjective financial knowledge and different types of positive financial behaviours contribute to financial well-being. Objective financial knowledge encompasses people's actual understanding of the financial landscape, and subjective financial knowledge (also termed financial confidence in the current dissertation) concerns their own judgment of what they know (Lind et al., 2020). Positive financial behaviours are those behaviours that lead to effective financial decisions, such as paying bills on time and active saving. Our findings showed that only the combination of high objective and high subjective knowledge was related to more financial well-being compared to the combination of low objective and low subjective financial knowledge. Our findings also showed that some financial behaviours, namely paying bills on time, covering normal living expenses, and active saving,

were associated with more financial well-being. Whereas other financial behaviours, namely budgeting and making considered purchases, were related to less financial well-being. Striving to achieve long-term goals and keeping track of expenses were not associated with financial well-being. The non-significant result for striving to achieve long-term goals can be related to the short-term measure of financial well-being used in our study. Whereas previous research has found either a positive or a negative relationship of keeping track of expenses with financial well-being (Finney, 2016; Xiao et al., 2006, 2009), we found no significant association. It is possible that, in our Dutch sample, the profit generated from keeping track of expenses was too limited to impact the broad construct of financial well-being. The negative relation between some financial behaviours (i.e., budgeting and making considered purchases) and financial well-being can imply at least two things. First, if these behaviours are performed out of necessity, it will generate stress and discomfort, leading to less financial well-being. Second, it might be that the relationship runs in the opposite direction, meaning that some people have low financial well-being and, therefore, feel the urge to perform aforementioned behaviours. Overall, these findings and implications point to three lessons for financial practitioners and service providers to address in the design and communication of financial literacy efforts. First, these efforts should focus on both objective and subjective financial knowledge with the goal to help people achieve a high level of both. Second, the efforts should help people engage in specific financial behaviours (i.e., take action), such as paying bills on time, covering normal living expenses, and active saving. Third, it is important to help people recognize that, although some financial behaviours might be unpleasant in the short term, these could be beneficial in the long term.

In Chapter 4, we tested the extent to which objective and subjective financial knowledge, future orientation and attitude toward money, and spending self-control and perceived behavioural control predict positive financial behaviours, and, in turn, contribute to

financial satisfaction. Future orientation regards people's attitude toward planning and providing for the future (Metcalf & Zimbardo, 2016). A positive attitude toward money corresponds to people's positive view of their finances, whereby they see money as a tool to achieve their financial goals and financial success (Tracy, 2021). Spending self-control concerns people's ability to monitor and regulate their impulses to buy items (Haws, Bearden, & Nenkov, 2012). Perceived behavioural control refers to the level of control that people experience to perform a particular behaviour (Ajzen, 1985), in this study, a financial behaviour. Our findings showed that all included individual factors were associated with one or more positive financial behaviours, and in turn, with financial satisfaction. Perceived behavioural control, future orientation, and financial confidence were the strongest indirect predictors of financial satisfaction. Our findings also showed that financial confidence and future orientation were positively related to adjusting spending, whereas perceived behavioural control was negatively related to it. Similarly, future orientation was negatively related to keeping track. Adjusting spending and keeping track, in turn, were negatively associated with financial satisfaction. Furthermore, our findings showed that all individual factors (i.e., financial confidence, financial knowledge, future orientation, spending self-control, and perceived behavioural control), except attitude toward money, were also directly related to financial satisfaction. Financial confidence was the single strongest direct predictor of financial satisfaction. These results imply that all studied individual factors can increase financial satisfaction, but the strongest contribution comes from financial confidence, followed by future orientation and perceived behavioural control. The negative relation between some positive financial behaviours (i.e., adjusting spending and keeping track) and financial satisfaction can imply at least two things. First, these behaviours are not pleasant to perform, because they are time and energy consuming. Second, it might be that for some people it may be necessary to adjust their spending and check their finances frequently, for

example, because they have financial problems (Madern, 2015). Overall, these findings and implications point to three lessons for financial practitioners. First, current practices should continue to focus on financial confidence to increase people's financial satisfaction. Second, these practices should also draw attention to perceived behavioural control and future orientation. Third, it is useful to help people understand that certain financial behaviours might not be pleasant in the short term, but could be beneficial in the long term.

In Chapter 5, we tested the extent to which executive functions and financial self-efficacy predict positive financial behaviours and, in turn, contribute to financial well-being. Executive functions cover people's mental processes or cognitive skills, such as planning and organizing, which are needed to engage in goal-directed behavior (Diamond, 2013). Financial self-efficacy regards people's belief that they can complete their financial tasks and meet their financial goals (Lapp, 2010). Our findings showed that financial self-efficacy had a strong positive association with both components of financial well-being (current financial stress and future financial security) via positive financial behaviours. We did not find that executive functions were related to these components via positive financial behaviours. Moreover, our findings showed that self-efficacy and executive functioning did not interact to predict both components of financial well-being. Further findings showed that financial self-efficacy had a strong direct positive association with both components of financial well-being, while executive functioning had a moderate direct relation. These results imply that people's beliefs in their skills to engage in positive financial behaviours and achieve financial well-being are more important for financial well-being than people's actual executive skills. Still, it is crucial to focus on both the actual skills and beliefs in those skills, as the latter can be deceptive. Previous research has demonstrated that people with strong beliefs, but weak actual skills are ill-equipped to recognize their lack of sufficient competence (known as 'the Dunning-Kruger effect'; Dunning, 2011), and are more likely to exhibit poor banking

behaviour, skip mortgage payments, and engage in informal debt (Balasubramnian & Sargent, 2020). Such behaviours, resulting from overly strong efficacy beliefs, will in the long run likely have an even greater negative impact on financial well-being. Overall, these findings and implications point to an important lesson for financial practitioners and service providers. Current practices and tools should help people to achieve a high level of both financial self-efficacy and executive functioning, albeit financial self-efficacy is a stronger predictor of financial well-being than executive functioning (similar to the earlier discussed combination of high objective and high subjective financial knowledge).

Conclusion

The present dissertation adds to the current body of literature on sound financial decisions by revealing that these decisions are determined by multiple factors and germane to both financial satisfaction and financial well-being.

The most promising factors to increase financial satisfaction were financial confidence, future orientation, and perceived behavioural control, and the most promising factors to increase financial well-being were the combination of high objective and high subjective financial knowledge and financial self-efficacy. In addition to these factors, we found two observations remarkable. First, not all financial behaviours that could be intuitively regarded as positive were immediately beneficial to financial satisfaction or financial well-being. For example, results of Chapter 3 suggest that budgeting and making considered purchases could be unpleasant and, therefore, adversely affect financial well-being in the short term. Similarly, findings of Chapter 4 indicate that adjusting spending based on changing (financial) circumstances and keeping track of expenses could be painful and, hence, adversely impacted financial satisfaction in the short term. Second, not all control skills that could be expected to help people make sound financial decisions, actually do so.

For instance, in Chapter 4, we found that people with more spending self-control reported working less toward their financial goals. It is possible that these people are so focused on curbing purchase impulses, that they forget what they are doing it for, namely to create financial room to achieve their goals, such as going on vacation or buying a house. Past studies also suggest that exerting self-control might come at the expense of enjoyment. For example, people could choose to buy items that are considered virtuous instead of pleasurable (eating healthy less tasty foods instead of more tasty but unhealthy foods; Milkman, 2012). Recent research, however, questions this line of thought, because people can train themselves to obtain pleasure from virtuous consumption as well (Vosgerau, Scopelliti, & Huh, 2020).

An unanswered question is whether the aforementioned factors and observations will affect people's actual financial decisions. The next step, therefore, should be to encourage, among others, policymakers, educators, practitioners, and service providers to consider these factors and observations in their (existing and new) efforts, including educational programs and coaching practices, as well as products, services, and tools, and assess the effectiveness of these efforts to enable evidence-based improvement. In Chapter 2, for example, we tested the effectiveness of two financial education modules designed for fifth graders. Likewise, policymakers, educators, practitioners, and service providers could design and test interventions for adults that include the aforementioned factors and observations.

It is important to note that the present dissertation focused on cognitive and psychological factors. In addition to these more internal factors, people are likely also influenced by external factors, such as culture, religion, access to financial advice, economic environment, and socioeconomic status (Ciumara, 2014). For example, earlier work found that people with access to financial advice can make better financial decisions than those without (Lachance & Tang, 2012). Therefore, to establish effective interventions, it is recommended to tailor the previously discussed factors and observations based on people's

unique circumstances. Recent studies support this notion, claiming that efforts should be applicable to the specific characteristics and needs of each target group (Dare, 2020; Lusardi, 2019). With the present dissertation, we hope to provide novel insights to increase sound financial decisions and, via these decisions, also increase financial satisfaction and financial well-being. Ultimately, the goal is to help people lead happier, healthier, and more successful lives.

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