Understanding Consumer Financial Behavior

Money Management in an Age of Financial Illiteracy

W. Fred van Raaij

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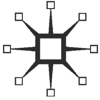

UNDERSTANDING CONSUMER FINANCIAL BEHAVIOR
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Foreword

After the financial crisis, understanding consumer financial behavior is becoming increasingly important for management and research. We have learned from the crisis that financial products are complex for most people, and consumers make many mistakes when buying these products. Financial products should not be treated separately, but attention should be given to the overlap and interaction between these products. Moreover consumers should not be impulsive but regulate their spending and should not start too late with saving for their retirement.

Research on consumer financial behavior can support governmental policy and marketing management with relevant data on financial behavior of consumers and investors. There are several reasons why relevant data are needed. Financial products have become more complex to understand and to choose. At the same time, consumers have become more responsible for their own financial future, the products they buy, the risks they take, and their retirement income. It is relevant for policymakers and financial institutions to know how financially literate or illiterate consumers and investors are, how they handle their financial affairs, which mistakes they make, and how these mistakes can be corrected and how consumers and investors can be assisted for a better financial future and life. Important financial decisions such as retirement saving are often postponed till too late. Many citizens are financially illiterate and need, as much as they can, to be "in control" of their own financial affairs. This book will, hopefully, help in a better understanding of financial behavior of citizens and thus contribute to better policies directed toward improvements of financial behavior and decisions of consumers and investors, and ultimately, toward no or less financial problems, more satisfaction, happiness, and well-being.

This book has its origin in economic psychology (Katona, 1975, 1980; Kahneman and Tversky, 1979; Wärneryd, 1999, 2001), in consumer research in marketing (Soman and coauthors), in behavioral or

psychological economics (Simon, 1963; Maital, 1982), and in behavioral finance (Thaler, 1992). Katona (1975, 1980) was one of the first to use the concepts of psychological and behavioral economics. Behavioral economics and behavioral finance have become accepted fields within economics (Figure F.1). In the past 20 years, we witnessed a growing number of publications in these fields and a lot of behavioral, experimental, and survey research in economics. Quite a number of scientific journals in economics, marketing, and psychology now publish papers on economic psychology and behavioral finance.

An important source of information on recent issues and publications in behavioral economics is the annual guide that appeared in 2014 and 2015, edited by Alain Samson, *The Behavioral Economics Guide*. The World Bank (Washington, DC, 2015) published the world development report *Mind, Society, and Behavior*, and with this report the World Bank gave a strong impetus to behavioral research on finance in developing countries. In a similar way, the OECD (Paris, 2005, 2012) contributed to the field with reports on financial literacy and behavioral finance.

Earlier versions of chapters 2–8 and 10 of this book were published in *Foundations and Trends in Marketing* (Delft, The Netherlands, and Hanover, MA: NOW Publishers; see Van Raaij, 2014). I thank Zachary Rolnik of NOW Publishers for his permission to use further elaborated versions of this material in the current book.

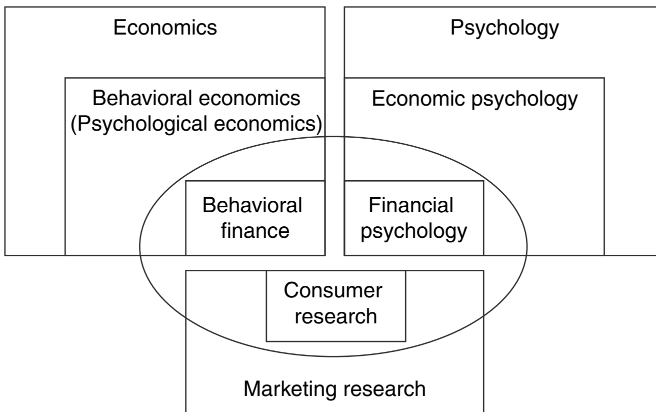

Figure F.1 Relationships between sciences, and the three basic sciences of this book (in the ellipse).

FOUR PERSPECTIVES

Four perspectives and uses of this book may be distinguished:

1. It is a structured literature survey on consumer financial behavior: published research results are combined into an overview that explains what is known on several types of financial behavior such as money management, saving, borrowing, insuring, participating in pension plans, investing, paying taxes, and avoiding becoming a victim of fraud.
2. The determinants and conditions of financial behavior such as individual differences and personality, perception of gains and losses, confidence, trust, risk preference, time preference, decision-making, and self-regulation are discussed and related to different types of financial behavior.
3. Marketing aspects are included: how can financial institutions become more customer oriented, regain trust, and offer the right combinations of products and services to customers?
4. Consumer financial education and literacy: which behavioral effects can we expect from financial education? How can education be done more effectively? Which are the correlates of financial literacy determining financial behavior? How could consumers better manage their personal financial affairs?

TARGET GROUPS OF THE BOOK

Related to the four perspectives are the target groups and people for whom this book has been written:

1. Teachers and students of marketing, behavioral finance, economic psychology, and management (at university level)
2. Financial advisors and planners
3. Consumer educators
4. Communicators and consumer advisors of financial institutions
5. Governmental consumer policymakers on consumer finance and protection
6. Consumers themselves (for a better understanding of their financial behavior)

Acknowledgments

In the past 17 years I have developed an interest in understanding consumer financial behavior. The start was the introduction of the euro in nine countries of the European Union in 2001. Research questions included how people react to the currency change and the loss of a national symbol, money illusion, and the costs and benefits of the new currency, as people perceive it in countries that adopted the euro and in countries that did not (Müller-Peters et al., 1998; Van Everdingen and Van Raaij, 1998). I thank the working group on Euro research of the International Association of Research in Economic Psychology for their stimulating meetings and discussions. This triggered in me the urge to learn more about consumer financial behavior, especially money management, pension plans, and insurance.

In 2006, the Platform Wijzer in Geldzaken [Moneywise] was established, a joint effort of the Department of Finance, other governmental departments, financial institutions, and the Consumer Union in The Netherlands. The platform stimulates research on consumer financial behavior and organizes two core activities on money management and education for children at the primary school level and on pension awareness and behavior. I thank the members of the platform for sharing their ideas and for their efforts in promoting consumer financial education and literacy.

Since 2012, Pauline van Esterik and I have done research on trust in financial institutions, joined by Peter Mulder of the market research agency GfK. Owing to the financial crisis in 2008, consumers lost their trust in banks, insurance companies, pension funds, and other financial institutions. The annual surveys on trust and its determinants and consequences provide a lot of insights into how people think about financial institutions in general and about their own bank, insurance company, and pension fund in particular. I thank Pauline and Peter for the stimulating discussions on trust, satisfaction, loyalty, and related topics in the interaction of financial institutions and consumers.

And, last but not least, I thank my wife, Gerrie, for her support in finishing this book and for all the good hours we have together when I am not sitting in front of a screen reading or writing chapters or papers. Now that this book is done, we will have more enjoyable hours together.

1

Introduction

Homo Economicus or Psychologicus?

In economic theory, the "homo economicus," with his/her rational decision-making, stable preferences, egocentrism, and maximizing utility, used to be the economic model of man. In Simon's (1957, p. xxiii) words: "Economic Man has a complete and consistent system of preferences that allows him/her always to choose among the alternatives open to him/her. He/she is always completely aware of what these alternatives are. There are no limits on the complexity of the computations he/she can perform in order to determine which alternatives are best." Becker (1976) outlined rational choice theory and applied this to domains outside traditional economics, from crime to marriage (Becker, 1981), and obviously also financial behavior. Becker believed that psychologists and sociologists could learn from the "rational man" assumption advocated by neoclassical economists. He did not assume that consumers actually use economic models and trade-offs to select a marriage partner or make a financial decision (descriptive validity), but he assumed that economic models are able to predict outcomes of human decision processes (predictive validity).

However, the opposite direction of thinking emerged at the end of past century. In behavioral economics and behavioral finance, new and more descriptive models have been developed on economic and financial behavior. From a psychological perspective, economic psychology contributed to this development by studying economic behavior of consumers, investors, and entrepreneurs. Neoclassical economists can learn from psychologists and sociologists. Behavioral economics constitutes a paradigm change in economics. In this paradigm change, three stages may be distinguished (Kuhn, 1962; Lakatos, 1968; Van Raaij, 1985):

1. Anomalies, paradoxes, and theoretical deviations are discovered that cannot be explained by neoclassical economic theory (Thaler, 1992).

2. These anomalies can be explained by biases and heuristics, a kind of partial theories that can explain a number of economic phenomena. Prospect theory is an example of a successful partial theory (Kahneman and Tversky, 1979).
3. These biases and heuristics can be categorized and hopefully will become part of a new overarching (behavioral) economic theory. However, this need not be true. Just as in psychology, behavioral economics/finance may remain a science without an overarching theory, but with a number of partial theories.

Behavioral economics and finance are now in the second stage. Descriptive studies and experiments have been done on how people behave and make decisions, how people use heuristics, are biased, and how people may be systematically irrational but still predictable in their behavior. Note that in behavioral economics and behavioral finance the emphasis is more on behavior (change), and less on mental constructs such as perception, motivation, attitude (change), and intention. A similar development took place in psychology: the behavioristic approach (Skinner, 1974) of focusing primarily on behavior and less on unobservable mental constructs such as attitude and intention.

Dual-Systems Models

For financial behavior, self-control is important for personal daily money management and long-term interests such as saving for retirement. In many cultures, self-control is a virtue by itself, required for friendly and effective human interactions. Thaler and Shefrin (1981) describe "self-control" as a conflict or competition between two opposing forces, the "planner" and the "doer." It looks as if we have two "homunculi" (little men) in our brain with two opposing objectives. The *planner*, located in prefrontal cortex of the brain (System 2), has a future-time preference and a high degree of delay of gratification and reward. The planner is in favor of deliberate decision-making and saving for the future. In contrast, the *doer*, located in the (reptilian) base of the brain (System 1), has present-time preferences and strives for immediate gratification and reward. The doer is impulsive and requires immediate rewards, whereas the planner accepts delayed (monetary) rewards. In this *dual-self model*, the planner tries to control the doer. The outcome depends on which force, the planner or the doer, "wins" the competition. Note that this approach is rather similar to the Freudian competition between the "superego" (conscience, values, norms), "ego" (planner), and "id" (doer).

The dual-self model is a kind of structural approach of identifying two functions as structures or locations in the brain. These locations can be found in the brain and correspond with separate neural systems. Parts of the limbic system associated with the midbrain dopamine system, including the paralimbic cortex, are associated with immediate rewards, and thus the doer. Regions of the lateral prefrontal cortex and posterior parietal cortex are engaged by intertemporal choice, irrespective of delay (McClure et al., 2004), and thus the planner.

Shiv and Fedorikhin (1999) tested the control function of the planner. If the planner is overloaded with other tasks, less cognitive capacity and energy is available for controlling the doer. This is called *resource depletion* (Muraven and Baumeister, 2000; Chapter 17). In such situations, the planner does not function very well and the doer may "win" the competition. This will result in less deliberate and more impulsive spending and buying decisions. Baumeister, Vohs and Tice (2007) compared willpower with a muscle. Tasks that require self-control, and lengthy or difficult decision-making, weaken this muscle, leading to *ego depletion* and thus a diminished ability for self-control. After a long and strenuous task, people are tired and ego-depleted and more easily engage in less desirable behavior. After such a strenuous task, they may also feel that they have done their very best and are "licensed" (permitted) rewarding and gratifying themselves.

Kahneman (2003, 2011) also distinguishes two systems. System 1 is the unconscious, intuitive, and automatic system and System 2 is the conscious, deliberate system of thinking. System 1 is nonconscious, impulsive, with present-time preference, whereas System 2 is conscious, deliberate, with future-time preference. Decision-making in System 1 is intuitive, fast and effortless, whereas decision-making in System 2 is difficult, slow, and effortful. In many instances, System 2 needs to control the impulsive decisions of System 1. See table 1.1 for a contrast between both systems. However, it is rather

Table 1.1 Contrast between Systems 1 and 2

System 1 (nonconscious)	System 2 (conscious)
Location: old brain	Location: neocortex
Multiple systems	Single system
Automatic: fast, effortless	Controlled: slow, effortful
Unintentional, uncontrollable	Intentional, controllable
Intuitive thinking	Deliberate thinking
Parallel processes	Serial processes
Many processes at the same time	One process at a time
No capacity constraints	Capacity constraints

unlikely that both systems are functioning completely independently. Both systems have functional specializations and there must be interactions between them. For instance, System 1 provides an emotional preselection and first impression (liking) of stimuli that are then more fully evaluated with System 2 (Van Raaij, 1989). Another interaction is that emotions of System 1 become consonant with cognitions of System 2 or vice versa.

Biases and Heuristics

Human thinking is not purely rational, error-free maximization of utility, as in neoclassical economic models. It is full of deviations from rationality: biases and heuristics. A *cognitive bias* is a systematic (nonrandom) error in thinking, deviating from formal logic or accepted norms. A *heuristic* is a cognitive shortcut, rule of thumb, or quick and easy decision process simplifying decisions or substituting a difficult question with an easier one (Kahneman, 2003). Using price or brand name as an indicator of quality of a product is an example of a heuristic. Availability and representativeness are two classes of general heuristics (Tversky and Kahneman, 1974).

The *availability heuristic* implies that the prevalence and probabilities of events that are recent, salient, vivid, accessible, memorable, and easily come to mind, are overestimated. We overestimate the probability of being killed by terrorists, because these cases are published in newspapers, and we underestimate the probability of dying by falling from the stairs. This may affect the type and coverage of insurance we buy.

The *representativeness heuristic* implies that the probability that an object or event A belongs to category B is judged by looking at the degree to which A resembles B (similarity). By doing this we neglect the base rate, that is, the general probability that B occurs (Kahneman and Tversky, 1972). If a financial product is expensive and has a famous brand name, we may assume that it has a high quality, whereas it is more likely that this product has an average quality. Products with an average quality are more frequent in the market and have a higher base rate than products with a high quality.

The *affect heuristic* is the third general heuristic. It is relying on good or bad feelings experienced in relation to a stimulus. Affect-based evaluation is quick, automatic, rooted in experiential thought, activated before reflective judgment. The affect heuristic is more pronounced if people do not have the cognitive resources or time to reflect. It is part of System 1 of intuitive thought (Slovic et al., 2002) and is similar to

the first impression or primary affective reaction (PAR) to a stimulus, for instance, an advertisement (Van Raaij, 1989). Affect coming from the brain stem is quicker and easier than cognition (thought) coming from the neocortex. This first impression often "colors" the subsequent more deliberate judgment. See Pieters and Van Raaij (1988) on the relevance of affect for economic behavior.

In the dual-system framework, System 1 consists of processes that are intuitive, automatic, experience-based, and often nonconscious. System 1 is the home of biases and heuristics. The reactions of System 1 are quicker than reactions from System 2, the system of controlled, deliberate, analytical, and reflective thinking. See the section titled "Dual-Systems Models" for more information on dual-system theory (Kahneman, 2003).

Biases and heuristics are often used habitually and automatically, without consciously thinking about it, even by experts. They may be dysfunctional and may lead to errors. Hogarth (1981) argues that this is the case when biases and heuristics are studied as discrete (separate) events. In practice, people use biases and heuristics as an ongoing process and get continuous feedback about their usefulness, both successes and failures. Dysfunctional aspects may then be corrected and disappearing over time. Educational programs and warnings to "debias" people have mixed results. In "debiasing" programs, biases are considered to be judgment errors to be corrected for unbiased decision-making (Fischhoff, 1982). Arkes (1991) overviews the evolutionary costs and benefits of judgment errors. Some of these errors persist despite their obvious drawbacks. People may be trained to overcome these biases, but often relapse to their biases after some time.

People often make use of "fast and frugal" heuristics (System 1) rather than making decisions by a slow, difficult, and cumbersome approach of comparing alterative options and selecting the "best" option (System 2). Gigerenzer (2007) argues that these heuristics are not necessarily inferior ways of information processing and decision-making, but may be functional in an evolutionary sense in a complex world to make fast, often even unconscious (intuitive), evaluations and decisions.

The foregoing models are based on individual thinking, automatically (System 1) or deliberately (System 2). A third aspect of thinking is "social thinking (and behavior)," such as cooperation, trust (see section "Trust" in chapter 12), emulation, imitation, social modeling (Bandura, 1986; Section 17.8), and herding, following the crowd (see section "Herd Behavior" in chapter 7). People have social preferences for fairness and reciprocity and cooperate with others.

MAIN THEORETICAL APPROACHES

The main theoretical explanations of financial behavior used in this book are derived from theory and research in economic psychology and behavioral economics/finance. A short overview of the eleven main theoretical concepts and explanations may provide a first understanding of the background.

1. Judgments and evaluations are not absolute, but relative and given in relation to a *reference point*. Losses and gains are perceived as deviations from a reference point (prospect theory; Kahneman and Tversky, 1979). The reference point is usually the past state, but could also be an expected future state. The silver medal winner expecting a bronze medal, perceives a gain. The silver medal winner expecting a gold medal, perceives a loss. People adapt to gains or losses by changing their reference points. People with a promotion focus strive for gains, whereas people with a prevention focus try to avoid losses (Higgins, 1998, 2005) (chapter 13).
2. A loss has a larger negative value than an equivalent gain has a positive value. Losses loom larger than gains (prospect theory; Kahneman and Tversky, 1979). *Loss aversion* is motivationally stronger than gain seeking. People take more risk to avoid losses than to reach gains. In a negative frame emphasizing losses, people are risk seeking to avoid losses. In a positive frame emphasizing gains, people are risk averse (chapter 13).
3. To exert control of expenses people use *mental accounting* and separate budgets for separate categories of expenses. This is a precommitment to exert self-control on spending, because people reduce and stop spending if the budget for a category has been depleted in a particular period. Many consumers do not want to transfer money between accounts (Thaler, 1985, 1999) (chapter 2).
4. *Self-control* and *self-regulation* (self-efficacy; Bandura, 1986, 1997) are important determinants of responsible financial behavior. Self-control is facilitated by precommitments, in case willpower is weak. It is correlated with future time preference, delay of gratification, and conscientiousness (chapter 17).
5. *Time preference* is the preference for spending or receiving money now or in the future. Future spending and receiving is discounted. Thus, people want a compensation for receiving money later rather than now. And they are willing to pay for receiving money earlier than expected. Present bias has a negative effect on (retirement) saving (chapter 15).

6. People *overestimate small probabilities* and thus participate in lotteries and take insurance. They are more affected by the size of the prize or potential damage/loss than by its probability (Tversky and Kahneman, 1974; Vlek and Stallen, 1981).
7. *Risk preference* is the preference for risky or certain options. Risk preference depends on the optimum stimulation level (OSL), and thus extraversion and impulsivity. It also depends on situational factors such as framing, potential losses, and the behavior of others (chapter 14).
8. People tend to compare, imitate, and follow the behavior of relevant others. This is a conscious or nonconscious process. "The crowd cannot be wrong." People tend to overestimate the number of people with the same opinion as they have (social consensus). Due to lack of reliable and valid information, investors tend to follow each other creating buying and selling frenzies and bubbles (chapter 7).
9. *Mental resources* are not unlimited, although System 1 suggests that mental functioning is effortless and unlimited. System 2 certainly has capacity constraints. The theory on (mental) resource depletion states that used resources are not immediately replenished. Resource depletion and fatigue have negative effects on decision-making and self-control (Muraven and Baumeister, 2000) (chapters 16, 17).
10. Confidence and trust are basic background factors. *Confidence* is optimism/pessimism about the personal and national financial future. It affects the level of spending, saving, and borrowing. *Trust* in people and institutions is needed if the quality of products and services cannot be assessed at purchase. Trust determines the type and number of transactions and loyalty (chapter 12).
11. *Perceptual biases* are manifold, such as money illusion, middle option, and attraction affect. These biases largely depend on the quantity, order, and presentation of information. Priming is a conscious or nonconscious influence on behavior through the salience of cues (chapter 16). Vohs and Baumeister (2011) found that a prime activating the concept of money results in more self-sufficient behavior. The money prime was a task to count money, whereas the nonmoney prime was a task to count sweets. Money helps in solving problems, in being self-sufficient, and in asking less help from others. In this way, money helps to increase happiness. Vohs, Mead, and Goode (2006) conclude that the prime of money activates self-reliance and self-sufficiency and deactivates social concern for others, which is a negative consequence, and asking others for help.

Relevance of Consumer Financial Behavior

Consumer financial behavior is or should be the basis and starting point for marketing management of financial products and services, as well as for consumer financial education and protection policy. This book is on consumer behavior with regard to spending, saving, borrowing, insuring, investing, tax compliance, and retirement planning, at a domain-specific and generic level (not at brand level). Determinants and consequences of these types of financial behaviors are also discussed. Sound and responsible financial behavior is a requirement for realizing one's life goals, being included in the financial system, participating successfully in the present society with its amazing array of products and services, social media, information (overload), and pursuit of satisfaction, happiness, and well-being. Consumer financial behavior is a research and application domain between microeconomics, behavioral finance, marketing, and consumer behavior. It is based on insights and behavioral theories from cognitive, economic, and social psychology (cognitive biases, heuristics, social influences), in the context of and sometimes in conflict with (rational) microeconomic theories of consumers, investors, entrepreneurs, and markets.

Financial behavior of consumers is relevant for government policy of demand and buying power of households, for marketing management of companies on consumer markets, and, last but not least, for consumers themselves and for consumer protection policy. Financial behavior consists of different types of behavior such as (1) day-to-day money management: spending, saving, and paying bills; (2) financial planning for the future such as retirement saving and pension plans; and (3) buying (complex) financial products such as insurance, mortgage, and pension plan (OECD, 2005).

Campbell (2006) provides a good overview of economic research on household finance. He concludes that some households make significant financial mistakes. For some financial products, this provides a cross-subsidy from naïve to sophisticated households and inhibits welfare improving financial innovation. Naïve households often have a lower level of income and education. In other words, complex financial products and the increased responsibility of individuals to manage their own financial affairs may lead to larger rather than smaller welfare differences between households. This is clearly an undesirable effect of giving more financial responsibility to households.

Many consumers lack sufficient knowledge and skills (financial literacy) about budgeting, financial products, and financial planning. Due to this lack of knowledge and skills, people may make suboptimal

decisions, take too much credit, pay too high interest rates, not save enough for their retirement, be over- or underinsured, and may make costly mistakes in their investments. Financial education could possibly help people to make better financial decisions (Mandell, 2001; Lusardi and Mitchell, 2014), but others such as Willis (2011) conclude that financial education increases people's confidence into overconfidence, but does not improve their financial behavior. If financial education is not successful for certain people, they should be assisted and advised by experts and/or by digital expert systems.

Consumer spending, saving, borrowing, investing, and tax compliance have implications for *macroeconomic policy* of a country. Katona (1975) was one of the first to recognize that consumers have freedom and thus power in their discretionary spending and saving. The economy of a country may stagnate if consumers have a low confidence in the economy and delay or curtail their spending. The economy of a country will grow and prosper if consumers have a high level of confidence and spend their income.[1] This may also be on a global scale. It is stated in The World Development Report 2015, titled *Mind, Society, and Behavior* (World Bank, 2015), that insights into how people make decisions can lead to new interventions that help households to save more, firms to increase productivity, communities to reduce prevalence of diseases, parents to improve cognitive development in children, and consumers to save energy.

Consumer organizations and market authorities need to know the reasons why consumers spend, save, borrow, insure, invest, and save for their retirement or the reasons why they do not. From a *consumer protection* perspective, this may provide ways to protect consumers against unscrupulous sellers and against themselves as illiterate and imperfect decision-makers. Questions for consumer protection are: How should consumers manage their financial affairs in an optimal manner? How should they avoid the risk of mistakes and losses they cannot bear? What is responsible and sustainable financial behavior (chapter 10)? How can households regulate their financial behavior to their attain life goals (chapter 17)?

Financial products are bought on the *market*. Financial institutions develop and sell new products and services, communicate about these products and services, and advice consumers what to buy. How could banks and insurance and credit-card companies become more customer-centric and less sales-driven? Products should be offered that people need and want in the short term and in the long term, and products that are safe under various economic conditions such as economic recession. The duty of care of sellers includes protecting

consumers against severe mistakes and risk of losses they cannot bear. Financial products and services with an investment component may look profitable and attractive in the short term, but these products could be "dangerous" (not profitable and even creating losses) in the long term under different economic conditions. For instance, a high mortgage may be attractive to finance a home, but could lead to over-indebtedness if house prices or incomes decline.

Financial affairs contain a paradox. People know that good money management and financial planning are very important for their future and happiness, but, at the same time, most people spend little time on increasing their knowledge of financial products and on managing their finances purposefully.

STRUCTURE OF THIS BOOK

This book is about consumer financial behavior, and financial products and services at the generic and domain-specific level: choice and expenditure within a product category or between product variants. The book is not about the specific level of brand choice (Van Raaij and Verhallen, 1994). This means that no particular brands of financial institutions and service/product brands will be mentioned.

In the first part of the book, different types of financial behavior will be discussed: money management (chapter 2), saving behavior (chapter 3), credit behavior and debt problems (chapter 4), insurance behavior (chapter 5), pension plans and retirement provisions (chapter 6), investment behavior (chapter 7), tax behavior (chapter 8), and being victim of financial fraud (chapter 9). Each of these chapters can be read independently and not necessarily in the order of the book. At the beginning of each chapter it is indicated which topics of part II are especially relevant for that chapter. The final chapter of part I (chapter 10) is on responsible financial behavior. [Earlier versions of chapters 2, 3, 4, 5, 6, 7, 8, and 10 have been published as Van Raaij (2014)].

The second part of this book contains seven chapters on psychological concepts and topics that are relevant for consumer financial behavior: individual differences and segmentation (chapter 11), confidence and trust (chapter 12), loss aversion and reference points (chapter 13), risk preference (chapter 14), time preference (chapter 15), decision-making, decision architecture, and defaults (chapter 16), and self-regulation (chapter 17). These psychological and sociological concepts are relevant for several types of financial behavior. Each of these chapters can be read independently and not necessarily in the order of the book.

Part I

2

Money Management

The basis of financial behavior is how people manage their money in daily transactions and payments, and how people try to "make ends meet" by mental accounting and budgeting their expenses. Financial planning and decision-making about (complex) financial products are also part of money management. Will money "buy" happiness and well-being or are other factors more important? This chapter can be read in combination with chapters 10 (responsible financial behavior), 11 (individual differences and segmentation), 12 (confidence and trust), and 17 (self-regulation).

Money Management

Money has a lot of meanings and associations. It is perceived as the basis of an enjoyable lifestyle and as the root of evil. Some people believe that money will bring happiness and well-being, whereas others believe that money is creating rather than satisfying wants. In psychology, it is a neglected topic, although Furnham and Argyle (1998) wrote a book on the psychology of money. Their book is particularly on the "meanings of money" and the attitudes people have about money. This book is behavior-oriented: managing money, saving and borrowing, and money as an instrument for realizing goals in life.

Money management is an important task of an individual or household. Money is a scarce resource to be spent or saved in a responsible way in order to maintain the consumption level of a household and to reach desired goals such as creating a financial buffer, buying a house, financing the education of children, and securing income after retirement. Financial management is instrumental in spending and enjoying life now: "You live only once." It is also instrumental in reaching life goals, avoiding problems and frustrations, and ultimately in creating happiness and well-being.

The three major domains of financial behavior are (figure 2.1) (OECD, 2005):

1. Day-to-day money management such as paying for products and services, paying bills, saving, and credit
2. Financial planning and reserving money for future expenses
3. Decisions about appropriate (complex) financial products

Day-to-day money management includes: receiving the salary on the bank account, putting money in the savings account, getting cash money from the ATM (automatic teller machine), paying in stores and restaurants, and paying bills. It also includes knowledge of prices and discounts, comparison of products and brands, trading off price and quality of products and services, and resistance to temptations. Price-quality trade-offs are done frequently: which quality level is acceptable and which prices are affordable? Often, the *middle option* will be selected, because the cost/price (downside) and quality (upside) of a middle option seem to have an acceptable balance. A free product has no cost, thus no downside. Consumers easily accept free products, because there is no trade-off to be made (zero price effect). If consumers have to choose between receiving a voucher with the value of €20 for the price of €7, or a free voucher with the value of €10, they tend to select the second voucher. A free product with a gain of €10 is preferred to a gain of €13 (Shampanier, Mazar, and Ariely, 2007).

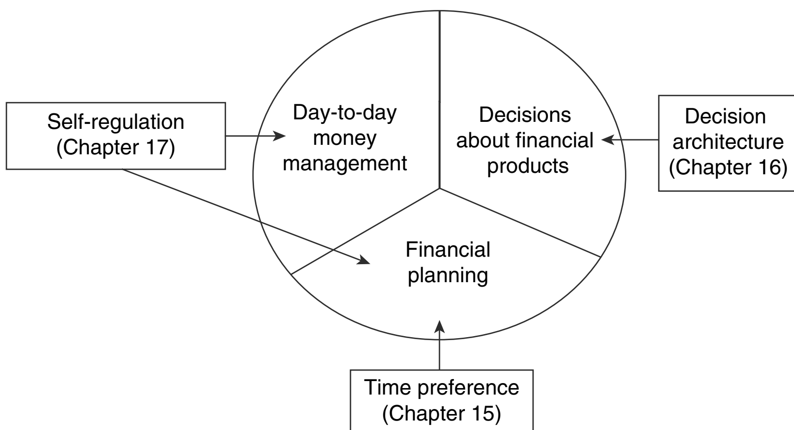

Figure 2.1 Domains of financial behavior.

Money management is the basic domain of financial behavior. It is usually not a goal by itself, but instrumental in reaching goals of persons or households. A basic financial goal is making ends meet and avoiding problematic debt (prevention goal). More advanced goals are, for instance, the acquisition of a durable good or purchasing a nice vacation (promotion goal). Due to poor money management one may not reach these desired goals and this may cause stress and conflicts between household members. Thus, an important psychological factor with money management is *self-regulation* (section "Self-Regulation" in chapter 17), managing finances for reaching personal goals. Day-to-day money management may take a lot of attention, time, and effort for poor people. Poor people spend a lot of time on solving urgent financial problems, making ends meet, and balancing their cash flow of income and expenditures (Mullainathan and Shafir, 2013). As a consumer remarks: "At the end of my salary, always a part of the month is left over."

Many people are not really interested in financial matters. It is a paradox that consumers know how important financial management is, but at the same time do not like spending much time and effort on it. They do not like reading and thinking about the "ins" and "outs" of financial products such as mortgages, insurances, and pension plans. Most people have a low need for cognition for financial products, services, and transactions. *Need for cognition* (Cacioppo and Petty, 1982) is the motivation of an individual to know and to think about a specific topic, because the topic is interesting by itself. Many people like to think about cars, sports, cooking, holidays, or home decoration. These topics stimulate creative thinking and day dreaming. Many people like thinking about being wealthy and spending money, but not so much on how to become wealthy. Maybe, only accountants, entrepreneurs, and economists have a high need for cognition about financial issues.

Financial products are "low *involvement*" products for many people and in many situations. People do not think about these products very often, except when there are financial problems. After an accident, the insurance becomes a high-involvement product for claiming damage. But when the insurance company has paid the claim, insurance may become a low-involvement product again. Involvement can be defined by four dimensions: (1) perceived product importance and importance of the negative consequences of mispurchase, (2) perceived probability of mispurchase, (3) symbolic value, and (4) hedonic value of the product (Laurent and Kapferer, 1985). Note that in this definition of *involvement*, mispurchase plays an important role. Consumers may worry about mispurchases and thus about potential

losses. Loss aversion is an important driver of financial behavior (section "Losses and Gains" in chapter 13).

To continue with this definition by Laurent and Kapferer (1985), financial products have a low symbolic and hedonic value, because these products are inconspicuous and largely "invisible" to others. The certainty, comfort, and peace of mind these products (insurance policy, pension plan) provide may have hedonic value for the person him/herself. Most financial products are important for consumers, and often consumers perceive the risk of negative consequences from a poor choice and/or the probability of making a mistake. Consumers may experience the negative consequences only years after the purchase, if the insurance company does not honor the claim, the investment fund does not give the expected or promised return, or the pension plan does not provide a sufficient retirement income. Note that we are concerned here with the product and not the brand level. Brands are also important for trust, hedonic, and symbolic values.

Paying Methods and Spending

Paying methods include paying with cash money, check, debit card, credit card, and even the smartphone. Due to digital-technical developments, payment with credit card and smartphone becomes almost automatic and the amounts paid become less visible. Consumers are less averse to paying with a credit card than paying with cash money (banknotes and coins) (Soman, 2001). Many consumers use precommitments to control themselves when paying cash. A *precommitment* is a self-imposed restriction on spending in order to avoid overspending. Examples of such precommitments are: shopping without bank or credit card, but only with a banknote of €50 or $100 restraining yourself not to buy more than these amounts. Another precommitment is waiting as long as possible to "break" a banknote of €50 or $100. As available cash budgets consist of a number of banknotes, these banknotes are a sort of *partitioning* device. Consumers hesitate, think, feel guilty, and wait before breaking another banknote (Cheema and Soman, 2008). This way they control their spending. The rate of consumption decreases when potato chips come in a number of small packs and when money is divided into several envelopes (Dhar, Huber, and Khan, 2007). Partitioning is an effective device when consumers are trying to regulate their consumption and spending. A credit card does not have such a partitioning "brake" on spending.

The physical appearance of banknotes also plays a role. Many people pay with worn-out bills first before paying with new, crisp, and clean

ones. Many bills of small denominations have been used frequently and are worn-out after two years. The reluctance to pay with these worn-out bills is lower than for new bills (Di Muro and Noseworthy, 2013). Thus, new bills provide a kind of temporary precommitment device not to spend them.

Soman (2001) found that people spend more when paying with a credit card than when paying with cash. Prelec and Simester (2001) found that people are willing to pay up to twice as much for baseball tickets when paying with their credit card compared to paying cash. Handing bills and coins to the cashier is for many consumers a more visible, painful, and aversive "loss" than paying with plastic. Paying with a credit card is a less visible and is a delayed "loss" because of the payment delay till the end of the month. Credit cards decouple the purchase from the payment by separating and delaying the payment. A credit card removes constraints on consumption because future income can be used for present payments. Another aspect of a credit card is that an individual payment, for instance, a €45 expense, loses its salience when perceived as a small part of a larger amount, for instance, €975, due on the card this month.

Decision-Making about Financial Products

In principle, consumers are provided by their bank with an accurate day-to-day online *overview* of their finances. But this overview is "hidden" in their bank account "behind" their user name and password or with an encrypted key. Consumers who do not pay bills online and do not regularly check their financial situation may not have an accurate overview of their financial situation. It is a financial skill to synchronize incoming and outgoing money in such a way that the balance of the bank account remains positive and that some money is left over at the end of the month. There are large differences in financial skill between consumers, how often they are online, pay their bills on time, and check their financial matters (Antonides, De Groot, and Van Raaij, 2008). Some people manage to "make end meet" even with a low income, whereas others seem to have a "hole" in their hands and experience financial problems.

Consumers may try to preserve a financial buffer for unforeseen events such as the breakdown of the washer or an expensive car repair. A savings buffer may consist of the amount of a two- to six-months worth of salary. A credit buffer is an arrangement, such as revolving credit, with the bank to be "in the red" for a certain period, if money is needed for an unexpected expenditure. Consumers wanting to buy