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Overcoming Cognitive Biases in Strategic Management and Decision Making

Enis Siniksaran
Istanbul University, Turkey

A volume in the Advances in Human Resources Management and Organizational Development (AHRMOD) Book Series

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This chapter offers an exploration of base-rate neglect in decision-making, focusing on its implications across various domains, including marketing, consumer behavior, and strategic management. The chapter unfolds in four key dimensions: first, it revisits and discusses base-rate neglect within a novel framework. Second, it provides theoretical perspectives elucidating how base-rate neglect operates in decision-making, incorporating theoretical stances from the heuristics and biases program, evolutionary paradigms, and construal level theory. Third, the chapter examines recent developments in the literature to identify mitigating factors that influence this bias. Lastly, it proposes managerially relevant remedies for decision-makers to counteract base-rate neglect, offering insights into the application of bias-mitigating strategies. In light of an interdisciplinary theoretical lens, this chapter contributes to a deeper understanding of base-rate neglect, offering theoretical insights and practical strategies for decision-makers at both the organizational and consumer levels.

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In today's world driven by technological developments and digital transformation, the implementation of customized decision-making systems with properly designed strategical objectives has become inevitable. A good decision which yields high outcome benefits makes effective use of the information available to the decision-maker. The important questions at this point are how the information can be used correctly and effectively with the limitations of information processing time and ability and subsequently how new information is integrated with the current beliefs in our decision process. The answers can be, as a normative model, the Bayesian reasoning approach. However, this may not always help us reach the right decision due to cognitive biases. Business leaders can also be adversely affected by uncertain future environments and abundant information. This chapter describes how Bayesian reasoning can mitigate biases in strategic decision-making and also how Bayesian reasoning errors can be eliminated by debiasing methodology in both strategic and medical decision making.

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We make decisions and our decisions affect others as well as ourselves. However, we cannot always think in a completely rational way. Therefore, studies relating to understanding biases affecting decisions and eliminating negative effects of these biases can help us to improve our decisions. In this chapter, omission bias, identifiable victim effect, punishment without deterrence, ex-ante equality, and parochialism, which are considered deviations from utilitarianism, are examined. The reasons for the occurrence of them and some possible effects of these biases on the decisions taken and policies created are discussed. Ways to improve rational thinking and to reduce the negative effects of these biases are mentioned.

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The need for authority in society persists, with individuals expected to follow instructions unless in absolute isolation. Epistemic authorities, perceived as having valid knowledge in specific fields, guide peoples' understanding of the world. This includes leaders, experts, and even automated systems, all of whom can influence attitudes and actions. However, blind obedience to authority has detrimental consequences, referred to as "authority bias." This bias leads people to reflexively follow perceived legitimate authorities, impacting law enforcement, policymaking, business, marketing, and consumer behaviour. It can be triggered by symbols of authority, compelling storytelling, and charismatic figures. Today, it extends to non-human entities such as algorithms and robots, raising questions about their role in decision-making. Mitigation strategies include introducing conflicting authorities and empowering junior employees to challenge opinions with data.

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Cognitive biases play a crucial role in shaping human judgement and choices in the complex environment of decision making. This chapter provides a comprehensive examination of two prominent cognitive biases, groupthink bias, and polarisation bias. In this context, the importance of cognitive biases in decision-making processes is emphasised and placed in a rich research context. By meticulously detailing the methods and sources used in the research, the scope and main objectives of these biases are discussed, and a road map is endeavoured to be presented for a solution. This chapter has two aims: first, to elucidate the role and impact of cognitive biases in decision-making; and second, to provide a comprehensive analysis of two specific cognitive biases - groupthink bias and polarisation bias - and to provide a literature review on the subject, presenting a variety of different views and strategies for overcoming these biases. In addition, real-world examples provide vivid snapshots of how cognitive biases shape these areas.

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This chapter explores the persistent relevance of groupthink in collective decision-making dynamics. It delves into the seminal work of psychologists Solomon Asch and Irving Janis, highlighting its enduring impact on various domains, including politics, the military, corporate boardrooms, and everyday meetings. Understanding the symptoms and consequences of groupthink is crucial for improving decision-making in contemporary society. Groupthink describes the tendency of closely-knit groups to prioritise consensus over rational decision-making, leading to hasty agreements without proper evaluation. The study emphasises the importance of constructive conflict, challenges the notion of conflict-free meetings, and explores strategies to mitigate groupthink, including fostering collaboration, appointing devil's advocates, and promoting leadership that encourages open dialogue.

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This chapter focuses on ageism, which is one of today's noteworthy issues that should be addressed carefully. Ageism is a multidimensional concept whose roots we can find in different fields and whose consequences we can experience in many areas of life. It can affect the decisions we make, the policies we create, attitudes and behaviors, and health. Therefore, efforts to understand ageism and proposing solutions to reduce it are of great importance. In this chapter, the factors underlying ageism are discussed in the light of different theories and the problems that ageism may create in the workplace are touched upon. Ways to combat ageism are examined and suggestions are given.

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In financial markets, investment decision-making is said to be based merely on information reflected in the security's price, analysis of past performance of traded securities and forecasts of the future performance. The emergence of the behavioral side of finance in the early 1970s has put a huge emphasis that investors are not always rational and that each decision-making process is affected by both rationality and emotions. From a behavioral point of view, investors are affected by individual biases which prevent them from taking their investment decisions on a rational basis. One of the vital biases affecting rationality is the overconfidence bias, which has a huge influence on individual investors and financial markets. This article provides a review of the previous studies and research relating to overconfidence and its impact on individual investors in particular and financial markets in general, it also sheds light on Turkey as an empirical example and aims to discuss the previous works done in Turkey about this matter.

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The expectancy theory developed in behavioral finance has led to a significant paradigm shift by incorporating cognitive factors into the financial decision-making process. Deviating from the traditional finance approach, which assumes individuals act entirely rationally in their financial decisions, behavioral finance focuses on cognitive biases within the scope of its examination. A portion of studies in behavioral finance centers on various cognitive biases that guide investor behavior in decision-making processes. In the study, starting from assertion that cognitive biases play a determining role in individuals' financial behaviors, the impact of overconfidence and optimism biases on insurance purchasing behavior is examined from a behavioral finance perspective. Practices that could ameliorate the effects of overconfidence and optimism biases on insurance purchasing decisions are analyzed within Thaler and Sunstein's Nudge theory. Based on this analysis, recommendations for implementing measures to mitigate the impact of the biases on insurance purchase decisions are provided.

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This chapter elaborately explores the intricate landscape of decision-making, overconfidence, and gender disparities. Beginning with an insightful introduction to cognitive biases and their role in human judgment, the narrative later delves into gender differences in overconfidence. It unveils disparities in career trajectories, from educational choices to workplace dynamics. The author proposes debiasing strategies for equal opportunities by navigating the intricacies of altering human behavior and environmental factors. Through a multidisciplinary lens, combining insights from psychology and economics, the author calls to action for evidence-based interventions, emphasizing cautious alterations to systems for an unbiased, inclusive future.

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Fatih Boyar, Altinbas University, Turkey

Today, it is accepted that it is not possible to predict earthquakes in advance, but predictions can be obtained through statistical models. This situation has highlighted the importance of general preparedness against earthquakes. In this regard, earthquake preparedness and safety culture became essential. The aim of this chapter is to examine the psychological factors that are thought to have a possible impact on individuals' earthquake preparedness and to bring a new perspective from the behavioral paradigm. The subjects of the research were risk perception, fatalism, and strategic ignorance. The literature was reviewed on the effects of these variables on earthquake preparedness. In the light of what was learned from the literature, debias strategies against strategic ignorance were developed and added as suggestions. These strategies are separating earthquake preparedness items into steps starting from the easy ones, developing an insurance plan just like Save More Tomorrow, and conveying social norms have been suggested as debias strategies.

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The decision-making process does not always take place under clear and definite conditions; in fact, uncertainty prevails in many cases. Therefore, decision-makers often make their decisions without a strategy, and they resort to heuristics in order to calculate probabilities accurately and reduce uncertainty. However, Tversky and Kahneman reported that despite their utility, these heuristics have the potential to generate systematic errors. These systematic errors are called "cognitive biases" in the literature. Researchers have identified numerous debiasing methods to address cognitive biases, and by the time of progress, debiasing methods needed to be classified as cognitive biases. Kaufmann developed a taxonomy of debiasing measures in five categories for supplier selection decisions and the existence of these dimensions was investigated in decision-making positions of the procurement department.

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Ozgur Aksoy, Istanbul Universitesi, Turkey

Predictive algorithms are increasingly used to assist decision-making for efficiency gains. However, it is essential to acknowledge that algorithms can mirror systemic biases in their predictions in a way that favors certain groups over others, even if they are immune to cognitive biases. The notion of algorithms generating unfair predictions is referred to as "algorithmic bias." Addressing cognitive biases in humans might not always be an effective solution to mitigate algorithmic bias. Therefore, it is essential to understand when and how quantitative technical mitigation methods can address this issue. This chapter explores the fundamental concepts of algorithmic bias, its sources, and technical mitigation strategies. In a world where humans and AI are intertwined, it is our responsibility to ensure a fair digital future. Addressing algorithmic bias is critical to achieving this goal.

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Chapter 9
Overconfidence and Optimism Biases in Insurance Purchasing Decisions and Overcoming Them Through Nudge

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ABSTRACT

The expectancy theory developed in behavioral finance has led to a significant paradigm shift by incorporating cognitive factors into the financial decision-making process. Deviating from the traditional finance approach, which assumes individuals act entirely rationally in their financial decisions, behavioral finance focuses on cognitive biases within the scope of its examination. A portion of studies in behavioral finance centers on various cognitive biases that guide investor behavior in decision-making processes. In the study, starting from assertion that cognitive biases play a determining role in individuals' financial behaviors, the impact of overconfidence and optimism biases on insurance purchasing behavior is examined from a behavioral finance perspective. Practices that could ameliorate the effects of overconfidence and optimism biases on insurance purchasing decisions are analyzed within Thaler and Sunstein's Nudge theory. Based on this analysis, recommendations for implementing measures to mitigate the impact of the biases on insurance purchase decisions are provided.

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INTRODUCTION

The widespread academic acceptance of Behavioral Finance is attributed to the seminal work of Kahneman and Tversky (1979). Undertaking psychological studies with the aim of scrutinizing rationality, they subsequently formulated a new theory termed 'Prospect Theory' (Bachmann, De Giorgi, & Hens, 2018). Kahneman & Tversky have served as a catalyst for a new generation of research employing insights from cognitive psychology to enhance financial and economic models. Prospect Theory, as an alternative to conventional financial models, furnishes a more robust explanation for observed human behaviors (Pompian, 2012). The theory underscores a nuanced framework, delineating a complex interplay of various biases aimed at comprehending investor behavior. The research conducted by Kahneman & Tversky (1979) has discerned that investors' decision-making processes encompass an array of cognitive biases that influence their behavior (De Bondt & Thaler, 1985; Chang, 2011). Furthermore, their findings indicate a systematic deviation in decisions made under conditions of uncertainty from the predictions of traditional economic theory. In this context, the Prospect Theory put forth by Kahneman and Tversky (1979) has engendered a paradigm shift by integrating diverse cognitive factors into the decision-making process, imparting a distinct dimension to individuals' financial decision-making. Cognitive biases, generally arising from perceptual errors in the storage, correction, and processing of information or in the formulation of decision problems (Hilbert, 2012) have become a focal point, underscoring the increasing significance of endeavors to rectify the deleterious impacts of cognitive biases on the decision-making process.

Within the academic discourse concerning the insurance sector, numerous cognitive bias studies predominantly center on the adverse effects of overconfidence on insurance purchasing behavior (Bregu, 2022; Huang & Luo, 2015; Sandroni & Squintani, 2004). Furthermore, studies exist in the literature that contextualize the "overconfidence" bias within the realm of the "optimism" bias (Coats & Bajtelsmit, 2021; Sandroni & Squintani, 2007). Consequently, this paper scrutinizes the interplay between behavioral finance and insurance, deliberating on the impact of overconfidence and optimism biases on insurance purchasing behavior. Subsequently, practical interventions to ameliorate the influence of overconfidence and optimism biases in insurance purchasing decisions are examined within the framework of Thaler & Sunstein (2008) "Nudge" theory.

Thaler & Sunstein's (2008) book, "Nudge: Improving Decisions About Health, Wealth, and Happiness," is grounded in the assertion that individuals need to be nudged toward decisions that will enhance their lives, making them more prosperous, healthier, and more liberating. In this study, the application of choice architecture in the field of behavioral finance is explored. The "Nudge" theory, developed based on the theoretical framework of behavioral finance, aims to address human irrational behavior and cognitive biases. Nudging can be defined as a choice architecture that guides individuals' behavior to predict their choices without prohibiting options or significantly altering existing economic incentives. Choice architecture refers to the structure involving individuals or institutions that organize the subjects or issues individuals need to make decisions about (Thaler & Sunstein, 2008).

The central premise of this study is to examine when and how nudging is needed in insurance marketing and to explore strategic applications of nudges for insurance purchasing decisions. Based on this argument, the study aims to investigate the impact of overconfidence and optimism biases in individuals' insurance purchasing decision, analyze the role of cognitive biases in the decision-making process, and propose nudge strategies for mitigating these biases. Additionally, within the scope of the study, existing practices in the insurance sector have been analyzed in the context of nudge strategies. Based

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on these analyses, recommendations for new practices have been developed to address optimism and overconfidence biases that could negatively affect purchasing decisions in the sector.

The effectiveness of public and private sector insurance market management decisions and strategies is directly related to understanding the irrationality in individuals' insurance attitudes. Therefore, this study focuses on individuals' insurance purchasing behavior. The analysis aims to provide content that can guide managerial decisions in the insurance sector and create a meaningful and informative perspective for professionals who want to develop effective managerial strategies. So, in the following part of the study, a framework for the responsible use of the nudge approach to behavior change in insurance purchasing is analyzed.

BEHAVIORAL FINANCE

Behavioral finance, commonly defined as the application of psychology to finance, has emerged as a significant discipline, particularly after 2000, parallel to advancements in information technologies and financial markets. Before the 1990s, when behavioral finance was debated in scientific literature and journals, many individuals needed a more precise understanding. However, in today's context, behavioral finance has become a fundamental area of interest for researchers and finance professionals (Pompian, 2012). Behavioral finance is described as an interdisciplinary research field combining insights from psychology and finance to understand better investors' behaviors and their approaches to investment instruments (Bachmann, De Giorgi, & Hens, 2018). Additionally, it has gained importance as a field that investigates how investors make decisions with irrational biases. Thus, behavioral finance helps us comprehensively understand and explain the dynamics in financial markets (Sattar, Toseef, & Sattar, 2020).

The widespread acceptance of Behavioral Finance in academic circles can be attributed to the studies that Kahneman & Tversky (1979) conducted. In their research, Kahneman & Tversky aimed to question the rationality assumption of "Expected Utility Theory," developed by Von Neumann and Morgenstern. Through psychological studies, they developed a new theory, which they named "Prospect Theory," challenging the foundational assumption of rationality (Bachmann, De Giorgi, & Hens, 2018). Kahneman and Tversky's Prospect Theory has inspired a new generation of research using "cognitive psychology" insights to enrich financial and economic models. Kahneman & Tversky (1979) demonstrated with prospect theory that human decisions systematically deviate from the rationality predicted by traditional economic theory under uncertain conditions.

Behavioral finance researchers have found that individuals often deviate from the assumption of rationality, especially when making decisions about money, financial situations, and investments. They have found that individuals frequently adhere to ideas associated with bounded rationality, departing from the assumption of rationality, particularly in situations involving risk and uncertainty (Ricciardi, 2004). Behavioral finance, one of the early users of the term being Boulding (1958), is defined as the examination of aspects of human economic decisions and cognitive-emotional structures. Unlike traditional economic analysis that explains individuals' decision-making processes through rational thinking, behavioral finance examines these processes by considering cognitive, psychological, cultural, and social factors. This field contests a mechanistic view of human conduct, asserting that financial determinations occur within a more complex and multidimensional interaction network (Wray, 1994).

Expectation theory, as an alternative to traditional financial models, explains observed human behaviors better. Traditional and behavioral finance explain individuals' decision-making processes from

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different perspectives, leading to significant paradigmatic differences in understanding the foundation of individual behaviors between these two approaches. One fundamental difference is that traditional finance focuses on rational markets and the concept of rational economic man. Behavioral finance, on the other hand, attempts to explain decisions and the factors influencing them not based on the assumed homo economicus of traditional finance theory but rather on the real-world homo sapiens. From the perspective of the neoclassical economic approach, Homo economicus is a simple model of economic behavior that assumes individuals make economic decisions guided by principles of perfect self-interest, perfect rationality, and perfect information. This rationality-oriented approach parallels the classical finance era and shares the fundamental assertion that individuals are "rational maximizers" who focus entirely on their interests and, therefore, base all economic decisions on rationality (Pompian, 2012). In this context, a rational economic individual is defined as a maximizer unwilling to settle for less than the most profitable option among choices (McFadden, 2007). Based on the expected utility theory, traditional finance assumes that individuals are "rational" and centers on how to behave to maximize their assets.

Homo economicus has become a preferred modeling approach for conventional economists due to its relatively simplified economic analysis, enabling researchers to formulate their analyses more easily by quantifying their results. In traditional financial research, a model is typically proposed first, followed by empirical studies to examine the precision of this model. In behavioral finance, however, the approach involves observing behavioral patterns in the market first and then attempting to create a model that explains these patterns based on the observed outcomes (Bloomfield, 2010; Fromlet, 2001). So, behavioral finance attempts to develop economic theory and policies from a psychological or behavioral perspective, contrary to the idealistic rational individual. It seeks to understand how real individuals think and behave (Nagatsu, 2015).

Rational individuals and the proposed rational economic model faced one of the first criticisms of the concept of "bounded rationality" proposed by Simon (1957). Simon (1957) defined the concept of bounded rationality as individuals having limited information and computational ability due to their cognitive capacities. Due to constraints in memory and cognitive processing capacity, Simon (1957) argued that individuals exhibit a form of bounded rationality in their cognitive resources. The assumption of rational humans, based on perfect rationality, perfect self-interest, and perfect information, as in the Homo economicus model, has been criticized (Pompian, 2012). Pompian (2012) claims that individuals are neither entirely rational nor entirely irrational. Instead, Pompian suggests that people possess characteristics with various rational and irrational traits.

Literature reviews indicates another area of differentiation between traditional finance and behavioral finance researchers, focusing on individuals' risk and decision-making processes. Classical finance assumes an objective, one-dimensional, and macro view of risk, while behavioral finance embraces a subjective, multidimensional, and micro stance (Mazzoli & Marinelli, 2011). While traditional finance concerns itself with "expected risk," behavioral finance places importance on the concept of "perceived risk". The behavioral finance perspective on risk is more comprehensive than the traditional one. In the behavioral finance approach, individuals do not always act consistently with reason and logic in their attitudes toward risk. Behavioral finance explains individuals' expectations from goods and services in their decision-making process using "value" instead of the traditional finance literature's "utility." Traditional finance argues that individuals, in the decision-making process under risk and uncertainty, make decisions by accurately calculating the option that will provide their highest utility, aiming to maximize their utility. Aligned with traditional finance, the utility-focused expected utility theory assumes that individuals decide by considering the future utility they will obtain rather than the immediate utility when

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they want to purchase any goods or services. In other words, according to the expected utility approach, individuals are decision-makers who consider the expected benefits of goods or services (Ricciardi, 2008).

One of the most significant studies in behavioral finance is "Prospect Theory," developed by Kahneman & Tversky in 1979. The concept of "utility" from "Expected Utility Theory" is not used in this approach. Instead, Kahneman & Tversky (1979) explain "Prospect Theory" with the value function they introduced. In this theory, value refers to the gains and losses deviating from the reference point that the individual has created for themselves. The value function takes shape based on deviations (gain-loss) from the reference value point taken as zero, and the value of expectations forms as a function of the subjective values individuals assign to outcomes (losses and gains) (Baker & Nofsinger, 2010). According to Tversky & Kahneman, individuals feel nearly twice as much distress from losing as the satisfaction they derive from an equivalent gain. This phenomenon is identified as loss aversion behavior (Tversky & Kahneman, 1992). Due to their inclination to avoid losses, individuals exhibit greater sensitivity to losses than gains. Consequently, the slope of the loss region is more pronounced than the gain in this area. Moreover, the value function typically displays twice the steepness for losses compared to equivalent gains (Kahneman & Tversky, 1984).

In essence, the behavioral finance theory posits a paradigm shift from rationality to irrationality, focusing on perceived risk instead of expected risk and emphasizing value over utility within individuals' decision-making processes. This theoretical framework underscores a nuanced and intricate structure arising from the interplay of diverse cognitive biases to comprehend investor behavior. The seminal studies conducted by Kahneman & Tversky (1979) have yielded insights into investors' decision-making processes, revealing the pervasive influence of various cognitive biases on investor behavior. These studies have further demonstrated a systematic departure of decisions made under conditions of uncertainty from the predictions of traditional economic theory (De Bondt & Thaler, 1985; Chang, 2011). The subsequent section of the investigation delves into the examination of cognitive biases.

COGNITIVE BIASES IN FINANCIAL DECISION-MAKING PROCESS

Cognitive biases refer to tendencies in individuals' thought processes, information processing, and evaluation stages that lead to non-objective or systematic errors. In other words, cognitive biases are cognitive tools frequently employed when processing complex information, influencing how individuals understand, interpret, or recall reality and, in turn, contributing to non-objective or systematic errors. Individuals face constraints in terms of time and limited cognitive capacity during the information processing stage. Consequently, they resort to shortcuts or heuristics to solve problems and make decisions.

This phenomenon, as highlighted in the works of Tversky & Kahneman (1974) and emphasized by Gilovich, Griffin, & Kahneman (2002), is a fundamental factor underlying cognitive fallacies. Tversky & Kahneman were pioneering researchers in the early 1970s who first introduced "Cognitive Bias." With the term "cognitive bias," they aimed to describe individuals' systematic yet erroneous decision-making and judgmental patterns. In their studies, Tversky and Kahneman (1974) proposed that under conditions of uncertainty, individuals resort to shortcuts for quick decision-making and exploit cognitive biases resulting from these shortcuts. They asserted that these shortcuts could lead to systematic and predictable errors in decision-making (Weyman & Barnett, 2016).

Decision-making under uncertainty and risk is a highly intricate process, subject to variations based on the individual characteristics of the decision-maker. Some factors influencing the decision-making process

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include the individual's awareness of their emotions, hopes, and fears (Richter, Schiller, & Schlesinger, 2014). Other factors vary based on genetic traits, environmental influences, and past experiences, shaping individual perceptions (Nofsinger, 2021). In this context, Kahneman & Tversky's (1979) "Prospect Theory" has brought about a paradigm shift by incorporating various cognitive factors into the decision-making process, introducing a different dimension to individuals' financial decision-making processes.

Cognitive biases generally arise from perceptual errors resulting from the storage, correction, and processing of information or during the formulation of a decision problem. While cognitive biases can expedite the information processing cycle, they concurrently introduce deviations, errors, and variations in investors' perception of the risk concept. The decision-making process relies on inputs such as the current state of reality and probability estimates to discern risks and uncertainties. However, the individual's financial situation and anticipated emotions also contribute to this process. The cognitive processes of the brain, akin to a computer, handling these inputs in the logic and reasoning section can simultaneously lead to foreseeable errors (Keil, Depledge & Rai, 2007; Nofsinger, 2021).

Various cognitive biases that influence individuals' decision-making have been identified in the literature. However, behavioral finance literature reveals a close connection between optimism and overconfidence biases, prompting numerous studies to explore these cognitive biases together (Barone-Adesi, Mancini & Shefrin, 2012; Fabre & François-Heude, 2009; Joo & Durri, 2017; Kinari, 2016; Riaz & Iqbal, 2015). There are also studies focusing on "overconfidence" and "optimism" bias that affect insurance decisions in the literature (Bregu, 2022; Coats & Bajtelsmit, 2021; Fang & Wu, 2020; Huang & Luo, 2015; Landry & Jahan-Parvar, 2011; Michaud, 2021; Royal & Walls, 2019; Sandroni & Squintani, 2007; Sandroni & Squintani, 2004; Spinnewijn, 2013; Spinnewijn, 2014). Also, optimism and overconfidence biases theoretically affect decision-making under conditions of risk and uncertainty (De Bondt & Thaler, 1985). Since the insurance industry manages economic risks and uncertainties (Haiss & Sumegi, 2008), the study examines insurance purchasing decisions in the context of overconfidence and optimism biases.

Overconfidence Bias

Confidence can be defined as "the complete belief in oneself and one's abilities," while overconfidence can be defined as "the tendency to take the behavior of self-assurance to extremes" (Ricciardi & Simon, 2000). In the psychological literature, overconfidence is defined as the tendency of an individual to exaggerate their skills, expectations of success, the likelihood of positive outcomes, or the accuracy of their knowledge (Odean, 1998). Pompian (2012) summarizes overconfidence as an unwarranted belief in one's intuitive reasoning, judgments, and cognitive abilities. Overconfidence in oneself denotes the inclination of an individual to exaggerate their abilities, expectations of success, positive outcomes of events, or the accuracy of their knowledge. This tendency arises from individuals being unaware of the limits of their cognitive capacities (Conger & Wolstein, 2004).

Numerous academic studies, particularly in the field of psychology, have been conducted about overconfidence. Notably, the experimental psychology research conducted by Fishchhoff, Slovic, & Lichtenstein (1977) stands out among these studies. In this research, a group of individuals was subjected to a general knowledge test, and afterward, they were asked how confident they were in their answers. Even though most participants provided correct answers only in the 70% to 80% range, a significant portion of them claimed to be 100% certain. The results of this study indicate that overconfidence is a widespread and consistent tendency (Pompian, 2012). Similar research conducted with comparable

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methodologies has revealed that individuals, when correctly answering a question or making an accurate prediction, are, on average, less accurate in their estimations.

The assumption of overconfidence in the context of the functioning of financial markets and investor behavior describes the excessive confidence of investors in their abilities, knowledge, and experiences (Michailova, 2010). Overconfident investors tend to believe more strongly in their assessments and show less interest in the assessments of others (Odean, 1998). Investors exhibiting this cognitive bias also tend to hold an exaggerated view of themselves and believe they are experts in the field of investment (Fast et al., 2012).

Overconfident investors underestimate the variance of the risky asset or overestimate its precision (Glaser & Weber, 2010). The fallacy of overconfidence differentiates the individual investor's perception of financial risk. Investors who are overconfident in themselves, their level of knowledge, and their investment performance tend to take high levels of risk. Individuals need to be aware of overconfidence. Recognizing and reducing overconfidence is an essential step in establishing the foundations of a real financial plan.

While overconfidence bias leads to aggressive investments (Baker & Nofsinger, 2010: 250), it also results in investors taking riskier positions, engaging in larger trading volumes, and conducting more significant transactions than rational investors. This misguided market behavior leads to extraordinary trading volumes (De Bondt & Thaler, 1985; Glaser & Weber, 2007) and excessive price volatility (Scheinkman & Xiong, 2003). While optimism bias has been suggested as a component of the overconfidence bias in various studies (Malmendier & Tate, 2005, 2007; Montier, 2002), a general overview of the research in this field reveals that the concept of optimism is considered a distinct type of cognitive bias.

Optimism Bias

Many daily decisions, such as working on a project, investing, or purchasing insurance, require estimating the probabilities of future events: the likelihood of a project being successful, the risk of the investment, or the likelihood of being involved in an accident. When considering these possibilities, decision-makers tend to be optimistically biased; optimism bias is the tendency to overestimate the likelihood of positive future outcomes and underestimate the likelihood of adverse future outcomes (Weinstein, 1980). Theoretically, optimism bias affects decision-making under risk and uncertainty (De Bondt & Thaler, 1985). General optimism regarding events beyond one's control can cause individuals to underestimate their risks, leading them to make suboptimal financial decisions.

In other words, optimism bias is the difference between an individual's expectation and the subsequent outcome. If expectations are better than reality, the bias is optimistic; if expectations are worse than reality, the bias is pessimistic (Sharot, 2011). Kahneman & Lovallo (2003) define optimism bias in technical terms, emphasizing that investors tend to adopt an internal rather than an external perspective when making financial decisions. The internal perspective focuses on the current situation and reflects personal judgments. On the other hand, an external perspective evaluates the current situation impartially based on the outcomes of similar past situations. The thought process from internal to external distinguishes investors exhibiting optimism bias from those making rational economic decisions.

Optimism bias is often confused with overconfidence. Unlike overconfidence, optimism bias leads individuals to underestimate the probability of adverse events beyond their control, such as an airline crash or an uncontrollable fire, and overestimate the likelihood of uncontrollable positive outcomes. This bias occurs when individuals evaluate the probability of unfavorable situations lower than they are and

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overestimate the probability of uncontrollable positive outcomes (Coats & Bajtelsmit, 2021). Individuals, by nature, commonly harbor an optimistic perspective. Hence, they demonstrate a propensity for an excessively optimistic outlook concerning the positive performance potential of markets, the economy, and their investments. Most excessively optimistic investors believe that adverse investments will not befall them, attributing such outcomes solely to "others".

Optimism bias can lead investors to overestimate the positive aspects of their investments. This bias may cause them to place too much trust in optimistic forecasts, such as earnings estimates provided by analysts, or their research based on company reports that paint a rosy picture of the future. Moreover, investors tend to seek out and favor positive news about the markets or their investments, which can further reinforce their optimistic outlook and make them more inclined towards optimism than pessimism (Pompian, 2012). Optimism bias may cause individuals to favor certain investment instruments overly and ignore others in their financial decisions. Within the realm of financial studies on excessive optimism, it is discerned that investors characterized by heightened optimism consistently harbor the belief that their transactions will invariably yield more lucrative outcomes.

The optimism bias, characterized by individuals perceiving the future positively while neglecting adverse consequences, may contribute to an augmented inclination to make decisions associated with increased risk (Cervellati, Pattitoni, & Savioli, 2022; Weber, Weber, & Nosić, 2013). Individuals invest with optimistic hope, especially in the stock market, believing these investments will enhance their future returns. Thus, the Optimism Bias is also influenced by an individual's excessive confidence in predicting future returns (Joo & Durri, 2017). So, the next section of the study examines the relationship between cognitive biases, insurance, and behavioral finance.

THE PSYCHOLOGY OF RISK: BEHAVIORAL FINANCE PERSPECTIVE IN INSURANCE

Insurance is defined as the transfer of risks individuals face regarding potential economic adversities caused by loss and income reduction, aiming to protect themselves by transferring these risks to insurance companies in exchange for a specified premium. Insurance plays an influential role in ensuring the continuity of individuals' financial situations by safeguarding them against possible risks. Regarding the risks covered by the coverage, insurance is responsible for assuring the insured against unexpected adverse events encountered until the policy expires. With an insurance policy, individuals at risk protect themselves against potential significant financial losses posed by low-probability events by incurring a small cost in the form of a premium, thus securing against potential significant losses throughout the policy term (Kunreuther & Pauly, 2015). Insurance assumes a crucial role in the equitable distribution of societal risks by protecting individuals from potential losses from uncertain risks that may manifest in the future. In executing this function, insurance offers psychological solace to individuals and empowers them to contemplate the future with heightened confidence. Due to these inherent attributes, it is posited that insurance maintains a robust association with security needs, positioned as the second foundational tier in Maslow's (1943) "Hierarchy of Needs" (Pathak & Tripathi, 2010).

The concept of risk, intricately intertwined with the notion of insurance and complementing it, denotes the probability of the occurrence of damage, injury, illness, death, and other adversities associated with a specific peril. In other words, risk involves an element of uncertainty concerning the manifestation of harm, loss, danger, or damage. Individuals constantly face various risks throughout life, and the uncer-

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tainty surrounding whether or when these risks will materialize makes taking precautions inevitable. Consequently, insurance comes into play as a risk management tool. Therefore, the risk management function of insurance holds considerable significance (Lupton, 2013; Salman, 2015).

Factors Affecting Insurance Purchase Decision-Making

The decision to purchase an insurance policy is among the challenging decisions individuals make, given the complexity of the process. The complexity of the decision to purchase insurance arises from evaluating the probability and magnitude of risks, financial needs, insurance price, quality, and benefits, comparing different insurance products offered in the market, and selecting an insurance package. Additionally, individuals need help understanding risks, and challenges in accurately assessing and interpreting the size, frequency, and probabilities of risks make it difficult for them to make an optimal decision in purchasing insurance (Sum & Nordin, 2018).

The paramount rationale for delving into the behavioral finance scrutiny of insurance lies in the distinctive decision-making behavior observed in insurance preferences compared to other risky choices. Psychological evidence underscores the variability in individuals' perceptions of risks across different contexts and, concurrently, their adaptation of distinct risk management solutions (Slovic, 1987). Insurance markets display nuanced distinctions when compared to markets for other commodities. The acquisition of insurance contracts involves procuring a commitment from the insurer to disburse payments contingent upon specified events. The aversion to monetary risks and the confidence in the insurer's pledged fulfillment of payments are influential factors directing the demand for insurance. Individual orientations towards insurance vary based on personal habits, historical experiences, or cognitive frameworks. Given that a precise comprehension of decision-making processes related to risks and insurance demands is imperative, a thorough understanding of the profound impacts of behavioral factors becomes essential for the meticulous assessment and explication of the behaviors exhibited by insurance customers (Kunreuther & Pauly, 2015; Richter, Rub, & Schelling, 2019).

In decision-making processes associated with insurance purchasing, deviations from rationality may arise when confronted with risks, uncertainties, or inadequate information in assessing alternatives. The scrutiny and comprehension of behaviors surrounding the purchasing of an insurance policy hold paramount importance in the insurance domain, and the field of behavioral finance introduces innovative perspectives to address these complexities (Outreville, 2014). Investigations into the influence of cognitive biases on decisions regarding insurance purchases have enriched the literature by providing a nuanced understanding of the subject. Consequently, the subsequent section of this study delves into the exploration of insurance and behavioral finance, with a particular focus on the biases of optimism and overconfidence, recognizing their substantial impact on insurance dynamics.

The Effect of Overconfidence and Optimism Biases on Insurance Purchasing Decisions

Individuals' actions shaped by the loss aversion effect in their risk attitudes can result in effective insurance utilization as a risk transfer mechanism. However, it can also lead to a lack of motivation to place themselves under insurance coverage. Overconfidence and optimism biases play a prominent role in influencing this different orientation, affecting individuals' attitudes toward the insurance system (Michaud, 2021; Spinnewijn, 2014). An individual may either assess a high or immeasurable probability

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as low and, consequently, refrain from adopting insurance purchasing behavior or, conversely, perceive outcome probabilities more negatively than they are and decide to transfer assumed risks to insurance. The inadequate understanding of individual risks due to biases of optimism and overconfidence among individuals leads to a decrease in insurance demand and, consequently, an increase in the overall cost of risk (Coats & Bajtelsmit, 2021). According to Sandroni & Squintani (2007), differences in risk perceptions can arise due to biases of optimism and overconfidence. Consequently, certain high-risk situations may be perceived as low-risk, leading individuals to reduce their preventive measures and insurance demand.

Studies in this field indicate that optimism and overconfidence biases significantly affect insurance. These biases may lead individuals to underestimate their risks, resulting in inadequate insurance coverage and, ultimately, higher total risk costs. Therefore, individuals who excessively trust and are optimistic about their risks tend to take fewer precautions against risks (Coats & Bajtelsmit, 2021; Sandroni & Squintani, 2004). In their study, Sandroni & Squintani (2004) highlighted the significance of overconfidence in the context of car and health insurance, finding ample empirical evidence that many individuals tend to underestimate the risks associated with their health and those arising from driving. They inferred that this often leads to insufficient investment in preventive measures such as insurance. Similarly, in their survey conducted on elderly individuals in the United States and China, Huang & Luo (2015) found that overconfidence bias has a negative impact on the decision to purchase health insurance. Additionally, Bregu (2022) concluded in an experimental study conducted in the United States that individuals with overconfidence tend to purchase less insurance. Coats & Bajtelsmita (2021) researched optimism bias and overconfidence bias's effect on insurance decisions. The research outcomes indicate that individuals with an optimistic outlook bear a more significant overall risk cost and are more prone to inadequate insurance coverage than their less optimistic counterparts, even in situations where procuring insurance would optimize anticipated returns. Also, the analysis reveals that overconfidence does not significantly impact the decision to secure insurance. Nevertheless, participants exhibiting heightened overconfidence generally exhibit more substantial variations in insurance behavior, especially when the risk of loss is linked to their own errors. Numerous studies conducted in the literature have found that overconfidence and optimism biases have a negative impact on insurance purchasing behavior. Therefore, in the next stage of the study, suggestions related to nudge theory have been proposed to improve the effect of these cognitive biases on insurance purchasing behavior.

IMPROVING THE IMPACT OF COGNITIVE BIASES ON INSURANCE PURCHASING DECISIONS THROUGH NUDGE

Thaler & Sunstein (2008)'s book, "Nudge: Improving Decisions About Health, Wealth, and Happiness" initiated a discussion on how the discipline of behavioral finance, aiming to nudge individuals towards decisions that would make them wealthier, healthier, and more accessible, could be applied to choose architecture. Nudging is a choice architecture that predicts individual behaviors by guiding options without banning them or significantly changing existing economic incentives. Choice architecture refers to individuals or institutions organizing issues or topics people must decide about (Thaler & Sunstein, 2008). Choice architecture is explained through libertarian paternalism, not rigid paternalism. Policies related to nudging are generally seen as soft policies because, in libertarian paternalism, individuals are free to opt out of the nudged option (Thaler & Sunstein, 2003).

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Thaler & Sunstein (2008) illustrate the concept of nudging through an example of how food presentation in an elementary school cafeteria affects students' choices. Students tend to gravitate towards the items placed first on the counter. The responsible individual, noticing this behavior, arranged to influence children's dietary habits. Healthy foods were placed in the front, and less nutritious ones were positioned towards the back. In line with the expectations of libertarian paternalism, there was no outright prohibition; all foods were presented to the children, and the choice was left to them. In this context, the cafeteria manager acts as a choice architect. The choice architect has enhanced individual utility by adjusting the selection pattern. With these features, liberal paternalistic practices strive to correct the negative impacts of cognitive biases in the decision-making process.

Nudge Strategies in Insurance Decision-Making

Thaler & Sunstein (2008) emphasized the necessity of employing "nudge" strategies when individuals face challenging decisions, cannot immediately see the outcomes, and struggle to comprehend the pros and cons of the matter. Therefore, "nudge" strategies can be applied to the insurance sector, one area where individuals have difficulty making decisions due to risk perception, cognitive biases, financial situations, experiences, and social and cultural characteristics. The conditions under which individuals encounter these fraught choices, as categorized by Thaler & Sunstein (2008) under topics like "Benefits Now-Costs Later", "Degree of Difficulty", "Frequency", "Feedback" and "Knowing What You Like". These topics are analyzed below in the context of their relationship with insurance buying practices:

- **Benefits Now-Costs Later:** When individuals are forced to make decisions that challenge their self-control boundaries, problems arise. Self-control issues occur when there is a temporal gap between our choices and the outcomes we will experience (Thaler & Sunstein, 2008). In the context of purchasing insurance policies, immediate costs are incurred for the insurance premium covering the risks included in the coverage. However, there is an uncertain temporal gap regarding whether the risk will occur. Simultaneously, there is a probability of incurring the cost without experiencing the risk, leading to a potential loss. Both damage-based insurances, such as vehicle, life, health insurance, and retirement insurance, exhibit these uncertainties and temporal gaps. Overconfidence and optimism biases in decision-making under uncertainty affect individuals' decisions to purchase insurance. Therefore, insurance products are suitable for implementing nudge strategies at the managerial level.
- **Degree of Difficulty:** When individuals face challenges in the decision-making process and encounter various difficulties of varying degrees, even technological support may prove insufficient in completely solving many challenging issues (Thaler & Sunstein, 2008). The complexity of insurance products and the difficulty of the decision-making process for purchasing insurance make it challenging to arrive at an optimal decision. Complex insurance products, such as various pension investment funds in private pension policies and differentiation of premium amounts depending on which disease risks and hospitals are covered in health insurance policies, can complicate the process of individuals making an optimal insurance purchasing decision. This difficulty in the decision-making process, combined with overconfidence and optimism biases, can negatively impact individuals' propensity to purchase insurance. Therefore, resorting to nudging strategies to facilitate the process would be appropriate at the managerial level.

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- **Frequency:** Depending on the frequency of challenges they encounter in decision-making, individuals can develop more effective solutions through experience and practice. However, such application and experience opportunities may be limited when making critical decisions. Retirement insurance policies, in particular, provide a clear example in line with this context. Individuals may only have one chance throughout their lives to save for retirement, with adjustments made during the year being the only opportunities for practice (Thaler & Sunstein, 2008). However, as the potential risks increase, the opportunity for practical experience decreases. Limitation of experience depending on the frequency of occurrence, regarding the possibility of the person not encountering any risks, can increase self-confidence and optimism. Therefore, applying appropriate nudge strategies in strategic managerial decisions for insurance can make current risks and insurance products more visible to potential buyers or existing customers.
- **Feedback:** Individuals can learn and gain experience by receiving feedback from their decisions. However, in many cases, receiving feedback about the outcomes of decisions may not always be possible (Thaler & Sunstein, 2008). Especially in private pension policies, investors' inability to receive feedback on the return of their existing pension investment funds causes them not to feel the need for insurance and may increase overconfidence and optimism biases. Similarly, individuals may exhibit a more optimistic perspective on health insurance policies if they cannot receive feedback about their health expenses, experiences, and possible health risks for the previous year. Issuing and selling insurance contracts and providing accurate feedback to the policyholder during the post-sale process will increase the likelihood of the relevant policy being preferred and purchased. At this point, it will benefit individuals in the insurance purchasing process if actors in the insurance market benefit from nudge strategies that focus on appropriate feedback.
- **Knowing What You Like:** Individuals may need help to make effective decisions when they find it challenging to predict the experiences and potential gains resulting from the choices in front of them. A similar challenge arises when decisions cannot be easily connected to the outcomes they will yield. This situation is particularly evident in insurance, where individuals need help selecting the appropriate health insurance policy or choosing their retirement portfolio. Investors may want to comprehend the potential returns of fund scenarios in their retirement portfolios, but due to the abundance of variables, even experts with portfolio knowledge may face difficulties in the analysis process. Similarly, individuals may find it challenging to understand the potential effects of choosing a health insurance policy (Thaler & Sunstein, 2008). Therefore, when individuals are confronted with numerous options in making significant decisions in their lives, dealing with decision-making processes can become challenging. In such cases, the use of choice architecture may be recommended in terms of nudging strategies.

If individuals have difficulty predicting the experiences and potential gains that the choices in front of them will bring, they may need help making effective decisions. A similar difficulty is the inability to reconcile the decisions taken with the results to be achieved. This situation occurs primarily when individuals determine their retirement portfolio, choose funds, or choose the appropriate health insurance policy (Thaler & Sunstein, 2008). Investors want to know the possible returns of fund scenarios in their retirement portfolio. However, due to the high number of variables, even experts with portfolio knowledge need help in the analysis process. For this reason, individuals similarly have difficulty understanding the possible effects of choosing a health insurance policy. Since returns and risks cannot be predicted in advance, individuals' overconfidence and optimism bias may be practical. Therefore,

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individuals who need help deciding what they want and do not know precisely what they want may have a negative attitude toward insurance. Insurance market managers' use of nudge strategies that provide future projections regarding the benefits and returns of insurance policies may contribute to individuals' more effective prediction of the benefits they will obtain from insurance. This can help individuals more easily determine the most suitable policy for them.

Nudging Strategies, Choice Architecture, and Enhancing Insurance Decisions

Thaler & Sunstein (2008) have framed the choice architecture under six topics, forming the acronym "Nudges." These topics are listed as "iNcentives," "Understand Mappings," "Defaults," "Give Feedback," "Expect Error," and "Structure Complex Choices". When the literature is examined, it is observed that "Incentives," "Default Rules," and "Structure Complex Choices" stand out as choice architecture strategies in studies related to insurance fields (Baker & Logue, 2015; Fredriksson & Holmlund, 2006; Kimball-Stanley, 2008; Sinn, 1996; Sum & Nordin, 2018; Thaler & Sunstein, 2008). In this context, the three strategies in question are included in the chapter. Within the framework of the nudge methods discussed, nudge strategies in strategic management and decision-making processes used by public authorities and insurance market regulators are examined, and their impact on individuals' insurance purchasing decisions (enhancing) is focused.

iNcentives

The reference points of economic policies, prices, and incentives are traditional nudge tools that choice architects use when designing a system. This tool focuses on the balance of supply and demand as elements shaping the decisions of consumers and producers (Thaler & Sunstein, 2008). Changes in the price of the offered goods can influence the behavior of consumers and producers, determining market balances. As a fundamental element of economic decisions, price should be considered in conjunction with supply and demand factors. This relationship between supply and demand also affects the dynamics of the insurance sector. The premium price individuals pay for insurance becomes more attractive with specific incentives. Economic incentives are powerful elements that can influence customers' decisions to purchase insurance. The insurance sector frequently uses these incentives to gain a competitive advantage and expand the customer base.

Overconfidence and optimism biases can hinder individuals from accurately assessing risks, thus causing a person to lose a healthy perspective when purchasing insurance. Due to the belief that they will not face potential risks or can handle them independently, individuals may perceive insurance premiums as high, leading to a postponement of the decision to purchase insurance. At this point, economic incentives provided by both government and private insurance companies can be effective correctives. Incentives that could influence the decision to purchase insurance are outlined below:

- *Premium Discounts and Campaigns:* Insurance companies may offer customers premium discounts or special campaigns during specific periods or under certain conditions. For instance, applying a discount on premiums for customers purchasing a policy within a specified time frame can positively influence the decision to purchase insurance.
- *Loyalty Programs:* Insurance companies can implement loyalty programs to enhance customer loyalty. The perception that regular purchase of insurance policies will lead to price discounts can

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positively influence the demand for insurance. In Turkey, private insurance companies implement loyalty incentive programs for health, vehicle, and life insurance. The increase in these incentives can positively impact the decision to purchase insurance, instilling a sense of gain in the consumer and reducing the impact of cognitive biases.

- *Tax Incentives:* Tax deductions or exemptions can influence insurance purchasing decisions positively. Tax incentives provide practical benefits such as alleviating financial burdens, offering financial incentives, increasing accessibility, and promoting financial risk management. In Turkey, individuals can benefit from a tax deduction for private health insurance premiums. Payments for private health insurance premiums can be deducted from the income tax base. Therefore, triggering a sense of gain in customers and limiting the impact of excessive confidence and optimism biases.
- *Government-Supported Insurance Programs*: These incentives encompass insurance products offered by the government to promote specific types of insurance or to ensure protection against certain risks for the public. For example, earthquake insurance is critical for public health and safety due to the high risk associated with earthquakes. Optimism and excessive confidence biases can lead to the perception of low earthquake risk. Moreover, these biases can hinder individuals from taking precautions and reduce demand for insurance. However, preparedness for risks that can cause severe damage, such as earthquakes, is crucial for individuals and institutions. In Turkey, in 1999, earthquake insurance became mandatory after the destructive Marmara Region earthquake. State support for disaster insurance, like earthquake insurance, can be increased, especially for individuals residing in high-risk areas, making these insurances more attractive. This way, the impact of optimism and excessive confidence biases, which contribute to the belief that disasters will not happen to individuals, can be mitigated in influencing insurance purchasing behavior.
- *Pension Insurance Incentives:* Some countries encourage individuals to purchase private pension insurance to ensure their financial security during retirement. Pension insurance can be supported by incentives such as tax advantages or government contributions. These incentives are crucial to make individuals feel more secure during their retirement and manage society's overall well-being during aging. The government's contribution to the individual pension system can assist participants in accumulating more money in their retirement funds. Moreover, these incentives can contribute to individuals having a better standard of living during their retirement. The individual pension system in Turkey is incentivized with a 30% government contribution. For every contribution made to the individual pension system, an additional amount equivalent to 30% is accumulated in the government contribution account. An increase in the government contribution rate makes participation in the individual pension system more attractive. Simultaneously, it enhances the welfare-providing impact of the government as a complement to the social security system for both individuals and societies. The increase in government contribution not only supports the individual pension system but also contributes to the social security system, elevating the perception of gain in individuals and serving as a significant incentive mechanism against excessive confidence and optimism biases.
- *Health Insurance Incentives:* Incentives for private health insurance can be utilized to guide individuals toward purchasing such insurance and to provide broader access to healthcare services. Similar to the individual pension system, applying a government contribution to private health insurance is a motivational strategy to encourage individuals to purchase these types of insurance. Making private health insurance premiums more accessible through government contributions

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can reduce the effects of individuals' excessive confidence and optimism biases regarding preserving their health. Such an incentive can alleviate individuals' financial challenges when purchasing health insurance and make premium payments more appealing.

Default Rules

Default rules are a highly effective strategy in the choice architecture, widely encountered in many fields. Due to the tendency of most people to prefer the option that requires the least effort and the path of least resistance, default rules are often favored. In many situations, default rules are indispensable because forcing people to make choices can be cumbersome and time-consuming. Choice architects expect individuals to gravitate toward default rules without evaluating what is best for them (Thaler, Sunstein & Balz, 2013; Thaler & Sunstein, 2008). Examples of default rules commonly used in programs, particularly education, health, and savings, include automatic enrollment applications. Both public and private sectors have discovered the power of default rules, and regulators in the insurance market are increasingly recognizing the significance of the default rules approach. It is observed that insurance market regulators increasingly consider the default rules approach in strategic management and decision-making processes. The default rules approach is a healing method in cases where individuals do not foresee possible risks and do not feel the need for insurance due to overconfidence and optimism biases. If individuals turn to the default rule without choosing complex insurance processes, this will cause them to reconsider the need for insurance and reduce the optimism bias.

Thaler & Sunstein (2008) state that allowing individuals to opt out of the individual retirement system by structuring the initial registration as mandatory rather than incentivizing entry produces better results. Therefore, if individuals are automatically enrolled in retirement plans, their savings can significantly increase. Individuals who cannot foresee the benefits the individual retirement system will provide in later years are likely to refrain from entering the system when left to their own devices. However, in a mandatory enrollment-optional exit model, it is anticipated that even though some individuals may opt out of the system due to behavioral reasons such as procrastination, those who remain in the system will save more for retirement. In Turkey, the regulation requiring automatic enrollment in individual retirement plans was enacted on January 1, 2017. This regulation is based on the principle of automatically including employees in a retirement plan through their employers and allowing them to exit the plan whenever they wish.

The default rules strategy, similar to individual retirement, can be adapted to health insurance programs by introducing automatic enrollment. In the case of the complementary health insurance system currently in effect in Turkey, transitioning to automatic enrollment can be proposed as an effective method to enhance individual and social benefits in the field of health. Unlike the general health insurance system, automatic enrollment in the complementary health insurance system, which enables treatment in private healthcare institutions under insurance coverage, could serve as a starting point for breaking the biases of individuals who excessively trust that they will not encounter any health issues. So, the automatic enrollment system will provide insured individuals with greater flexibility in choosing among various healthcare institutions by increasing access to healthcare services. This adaptation will lead to individuals having a better healthcare experience and, at the same time, contribute to the overall strengthening of the healthcare system.

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Structure Complex Choices

Structuring complex choices aims to address how information or the presentation of a decision is delivered to an individual. Complexity and an excessive load of information can lead to confusion. Resistance to change may arise not from disagreement or skepticism but from the difficulty individuals experience in perception. Therefore, simplification, as a nudge applied to facilitate the selection of the recommended activity, is a method that can be employed to encourage specific behaviors (Karlsen & Andersen, 2019). The complexity of the insurance purchasing process stems from various challenges individuals face in evaluating risks. Steps such as accurately assessing the likelihood and magnitude of risks, determining financial needs, comparing different insurance products, and selecting the most suitable insurance package can sometimes become complex for individuals (Sum & Nordin, 2018). The use of 'Structure Complex Choices' allows policyholders to assess better, explain, and, when necessary, influence their decisions. This information can be utilized in product design and implementing simplification in product presentation (Richter, Ruß & Schelling, 2019).

Presenting a simplified range of options allows individuals to choose from various alternatives and has the advantage of reducing the information load. This approach helps users reduce overconfidence and optimism biases by providing them with more straightforward options, increasing their likelihood of finding a solution that better suits their needs, and allowing them to see possible risks and returns more clearly. Thus, individuals can make a more balanced and conscious choice between options. This practice allows people to make better decisions and evaluate potential risks and negative consequences more effectively. As a result, simplifying complex choices reduces the information load and improves against overconfidence and optimism biases. It can contribute to making healthier decisions in the field of insurance.

The decision-making processes, particularly in health and retirement insurance, are intricate and complex. For example, private health insurance policies and premium payments vary based on the health services covered under the agreement, contracted healthcare institutions, and coverage scopes. The presentation of these insurance products in bundled packages can help individuals better understand the offered coverage. Moreover, using simplified language devoid of complex terms in these packages aids individuals in grasping their insurance coverage more effectively. These packages also facilitate the comparison of different coverage levels and determine which package is most suitable for their needs. Additionally, presenting options in bundled packages enables individuals to make quick decisions, offering a wide range of choices while reducing the burden of information. For example, in private health insurance, presenting different policies as packages for inpatient and outpatient treatments or categorizing outpatient treatment policies into packages based on coverage scopes, along with simplifying the information and presentation in these packages, could be recommended as nudging strategies.

The nudge strategies examined in this study improve individuals' insurance purchasing choices and can facilitate the selection of a suitable alternative through default rules (Brown & Krishna, 2004; Donkers et al., 2020; Sunstein, 2018; Thaler & Sunstein, 2008). Today, rapid advances in digital technologies, artificial intelligence, and machine learning-based algorithms allow insurance managers to recommend options that will lead individuals to more satisfactory outcomes about insurance than they can determine for themselves. Thus, developments in information and communication technologies enable nudge strategies to be used more effectively.

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CONCLUSION

Behavioral finance theory is an approach that highlights irrationality instead of rationality in individuals' decision-making processes and emphasizes perceived risk over expected risk, as well as the concept of value over utility. The theory underscores a complex structure resulting from the interaction of various biases to understand investor behavior. The widespread acceptance of Behavioral Finance in academic circles was realized through the work of Kahneman & Tversky (1979). Kahneman & Tversky (1979) proposed the "Prospect Theory," asserting that cognitive factors play a decisive role in investors' decision-making processes. By incorporating various cognitive biases into the decision-making process, this theory has paved the way for a shift in the traditional finance paradigm. With this new approach, research in various areas to mitigate the adverse effects of cognitive biases on the decision-making process has gained importance.

In today's context, the behavioral finance approach is gaining more attention from insurance market participants, regulators, and researchers. The significant reason for the necessity of a specific examination of insurance in behavioral finance is the divergence in decision behavior between insurance preferences and other risky choices. Psychological evidence indicates that individuals perceive risks associated with insurance differently from others and adapt distinct risk management solutions. The decision to purchase insurance is also a highly complex process, with cognitive biases coming into play as individuals grapple with decision-making challenges.

Studies in the literature (Bregu, 2022; Coats & Bajtelsmit, 2021; Huang & Luo, 2015; Sandroni & Squintani, 2004, Sandroni & Squintani, 2007) highlight the significant effects of optimism and overconfidence biases on insurance. The findings from this research suggest that these two cognitive biases lead individuals to underestimate their risks, consequently resulting in underinsurance and, therefore, the formation of higher total risk costs. Differences in risk perceptions due to optimism and overconfidence biases can lead to the perception of some high-risk situations as low risk, reducing individuals' willingness to take precautions or demand insurance. To mitigate these effects, the use of nudge strategies has become important.

In their book "Nudge: Improving Decisions About Health, Wealth, and Happiness", Thaler & Sunstein (2008) provide recommendations on how the architecture of choice can be applied to nudge individuals towards making decisions that will enhance their lives by enabling them to be wealthier, healthier, and more liberated. The concepts of nudging and choice architecture, as defined by Thaler & Sunstein (2008), are described as specific directions and strategies that predictably influence human behavior without prohibiting alternative actions or significantly altering economic incentives. At the core of this approach, the fundamental premise of the study is to examine how and when nudging is needed in the insurance sector and to explore the application of nudges for insurance purchasing decisions. Additionally, elucidating the relationship between overconfidence and optimism biases and the decision to purchase insurance is essential for developing recommendations that can influence policy design for insurance companies and government policies.

To elucidate the need for nudging, Thaler & Sunstein (2008) have stated that "nudging" strategies are essential when individuals face difficult decisions, cannot immediately see the outcomes, and struggle to quickly comprehend the pros and cons of the matter. They have examined the conditions under which these challenging choices may arise, delving into topics such as "Benefits Now-Costs Later," "Degree of Difficulty," "Frequency," "Feedback," and "Knowing What You Like." Within the scope of their work, the subheadings in which Thaler & Sunstein (2008) explain the circumstances under which dif-

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ficult choices arise have been examined about the decision to purchase insurance. Thaler and Sunstein (2008) have addressed choice architecture as improvement methods related to the Nudge theory under six headings: "iNcentives," "Understand mappings," "Defaults," "Give feedback," "Expect error," and "Structure complex choices." When the literature is examined, it is observed that "Incentives," "Default Rules," and "Structure Complex Choices" stand out as choice architecture strategies in studies related to insurance fields (Baker & Logue, 2015; Fredriksson & Holmlund, 2006; Kimball-Stanley, 2008; Sinn, 1996; Sum & Nordin, 2018; Thaler & Sunstein, 2008). In this context, the three strategies have been analyzed in connection with the insurance sector.

Overconfidence and optimism biases hinder individuals from accurately assessing risks, so a healthy perspective on their insurance purchasing decisions may be lost. When examining iNcentives strategies as one of the recommendations of choice architecture, particularly in the context of price and demand, it is observed that price incentives in the insurance sector have the potential to increase demand. When the perception of insurance as a high cost combines optimism and overconfidence bias, leading individuals to abstract themselves from risky situations, it can adversely affect purchasing behavior. Financial incentives can be employed to create a sense of gain to mitigate this negative impact, potentially exerting a positive influence on the decision to purchase insurance. In the study, for this purpose, "Premium Discounts and Campaigns," "Loyalty Programs," "Tax Incentives," "Government-Supported Insurance Programs," "Retirement Insurance Incentives," and "Health Insurance Incentives" are listed as "iNcentives" that can be utilized in the sector. The positive contributions these incentives can provide to the industry are discussed through examples. The current applications of incentives in the insurance sector are exemplified, and suggestions are made to expand the use of incentives from insurance types such as earthquake insurance, disaster insurance, and individual retirement to different areas.

Another choice architecture proposal analyzed in the study is the "Default Rules," and its impact on the insurance sector has been examined. Instead of encouraging entry into the individual retirement system in the insurance sector, allowing the first registration to be mandatory and freeing individuals to opt out of the system has been considered a compelling improvement example. Recommendations have been developed for adapting this practice to other types of insurance beyond individual retirement.

Finally, in the analysis, the "Structure complex choices" recommendation has been explored in connection with insurance. Considering the negative impact of the complexity and diversity of insurance packages and types on decision-making processes, suggestions have been made for presenting insurance products in package formats, eliminating language barriers for consumer ease of access, and providing more explicit expressions of package differences.

The importance of the examined nudge strategies to the effectiveness of decision processes in insurance industry management is increasing with the availability of today's big data and the rapid development of artificial intelligence and machine learning-based algorithms. These developments allow insurance market managers to predict consumers' needs more accurately. In particular, integrating these methods with nudge strategies can support coping with optimism and overconfidence biases by increasing the need for insurance and helping individuals choose the insurance product that best suits their needs (Dellaert et al., 2024). These strategies can potentially provide customers with more personalized solutions and increase competitive advantage in the insurance industry.

As a result, the effective implementation of nudge strategies can offer significant advantages to players in the industry by bringing a more accurate and informed approach to management decisions in the insurance industry. As a result of this study, the suggestions made to make insurance sector management decisions more sustainable and individual-oriented will contribute to shaping future studies. This study

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can guide future research in Turkey and other countries to overcome overconfidence and optimism biases in individuals' insurance purchasing behavior. In addition, these suggestions for developing more effective management decisions and strategies in the insurance sector can be applied in Turkey's insurance markets and other countries. Also, it is possible to reveal different perspectives by examining the effects of nudge strategies, which are not included in this analysis, on insurance purchasing decisions in future studies. These recommendations can contribute to adopting more effective strategic approaches by providing valuable information for decision-makers in the insurance industry.

REFERENCES

Bachmann, K. K., De Giorgi, E. G., & Hens, T. (2018). *Behavioral finance for private banking: from the art of advice to the science of advice*. John Wiley & Sons. doi:10.1002/9781119453697

Baker, H. K., & Nofsinger, J. R. (Eds.). (2010). *Behavioral finance: investors, corporations, and markets* (Vol. 6). John Wiley & Sons. doi:10.1002/9781118258415

Baker, T., & Logue, K. D. (2015). Mandatory rules and default rules in insurance contracts. D., Schwarcz, & P. Siegelman, (Ed). Research handbook on the economics of insurance law. Edward Elgar Publishing.

Barber, B. M., & Odean, T. (2001). Boys will be boys: Gender, overconfidence, and common stock investment. *The Quarterly Journal of Economics*, *116*(1), 261–292. doi:10.1162/003355301556400

Barone-Adesi, G., Mancini, L., & Shefrin, H. (2012). Behavioral finance and the pricing kernel puzzle: estimating risk aversion, optimism, and overconfidence. *Unpublished Manuscript Swiss Finance Institute*, 3(7), 1-50.

Bloomfield, R. (2010). Traditional versus behavioral finance. H. K., Baker, & J. R. Nofsinger, (Ed). Behavioral finance: Investors, corporations, and markets (pp.23-38). John Wiley & Sons.

Boulding, K. E. (1958). Contemporary Economic Research. D. P. Ray (Ed.), Trends in social science (pp. 9-26). Philosophical Library.

Bregu, K. (2022). The effect of overconfidence on insurance demand. *The Geneva Risk and Insurance Review*, *47*(2), 298–326. doi:10.1057/s10713-021-00064-5

Brown, C. L., & Krishna, A. (2004). The skeptical shopper: A metacognitive account for the effects of default. *The Journal of Consumer Research*, *31*(3), 529–539. doi:10.1086/425087

Cervellati, E. M., Pattitoni, P., & Savioli, M. (2022). Do overconfident and over-optimistic entrepreneurs invest too much in their companies? theory and evidence from Italian smes. *Strategic Entrepreneurship Journal*, *16*(4), 769–800. doi:10.1002/sej.1421

Chang, B. Y. (2011). Investor behavior and economic cycles: the impact of human biases and cognitive limitations on economic booms and busts. *The journal of behavioral finance & Economics, 1*, 1-26.

Coats, J., & Bajtelsmit, V. (2021). Optimism, overconfidence, and insurance decisions. *Financial Services Review*, *29*(1), 1–28. doi:10.61190/fsr.v29i1.3441

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IGI Global Platform
Downloaded: 2/16/2024 6:24:34 AM
IP Address: 46.196.65.125

Conger, R. F., & Wolstein, C. R. (2004). Managing overconfidence in pricing. *Emphasis*, (2), 10.

De Bondt, W. F., & Thaler, R. (1985). Does the stock market overreact? *The Journal of Finance*, *40*(3), 793–805. doi:10.1111/j.1540-6261.1985.tb05004.x

De Bondt, W. F., & Thaler, R. H. (1995). Financial decision-making in markets and firms: A behavioral perspective. *Handbooks in Operations Research and Management Science*, *9*, 385–410. doi:10.1016/S0927-0507(05)80057-X

Dellaert, B. G., Johnson, E. J., Duncan, S., & Baker, T. (2024). Choice architecture for healthier insurance decisions: Ordering and partitioning together can improve consumer choice. *Journal of Marketing*, *88*(1), 15–30. doi:10.1177/00222429221119086

Donkers, B., Dellaert, B. G., Waisman, R. M., & Häubl, G. (2020). Preference dynamics in sequential consumer choice with defaults. *JMR, Journal of Marketing Research*, *57*(6), 1096–1112. doi:10.1177/0022243720956642

Fabre, B., & François-Heude, A. (2009). Optimism and overconfidence investors' biases: A methodological note. *Finance*, *30*(1), 79–119. doi:10.3917/fina.301.0079

Fang, H., & Wu, Z. (2020). Life insurance and life settlement markets with overconfident policyholders. *Journal of Economic Theory*, *189*, 189. doi:10.1016/j.jet.2020.105093

Fast, N. J., Sivanathan, N., Mayer, N. D., & Galinsky, A. D. (2012). Power and overconfident decision-making. *Organizational Behavior and Human Decision Processes*, *117*(2), 249–260. doi:10.1016/j.obhdp.2011.11.009

Fischhoff, B., Slovic, P., & Lichtenstein, S. (1977). Knowing with certainty: The appropriateness of extreme confidence. *Journal of Experimental Psychology. Human Perception and Performance*, *3*(4), 552–564. doi:10.1037/0096-1523.3.4.552

Fredriksson, P., & Holmlund, B. (2006). Improving incentives in unemployment insurance: A review of recent research. *Journal of Economic Surveys*, *20*(3), 357–386. doi:10.1111/j.0950-0804.2006.00283.x

Fromlet, H. (2001). Behavioral finance-theory and practical application: Systematic analysis of departures from the homo economicus paradigm are essential for realistic financial research and analysis. *Business Economics (Cleveland, Ohio)*, *36*(3), 63–69.

Gilovich, T., Griffin, D., & Kahneman, D. (Eds.). (2002). *Heuristics and biases: The psychology of intuitive judgment*. Cambridge University Press. doi:10.1017/CBO9780511808098

Glaser, M., & Weber, M. (2007). Overconfidence and trading volume. *The Geneva Risk and Insurance Review*, *32*(1), 1–36. doi:10.1007/s10713-007-0003-3

Glaser, M., & Weber, M. (2010). Overconfidence. K., Baker, & J. R. Nofsinger, (Ed). Behavioral finance: Investors, corporations, and markets (pp. 241-258.). John Wiley & Sons.

Haiss, P., & Sumegi, K. (2008). The relationship between insurance and economic growth in Europe: A theoretical and empirical analysis. *Empirica*, *35*(4), 405–431. doi:10.1007/s10663-008-9075-2

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Hilbert, M. (2012). Toward a synthesis of cognitive biases: How noisy information processing can bias human decision making. *Psychological Bulletin*, *138*(2), 211–237. doi:10.1037/a0025940 PMID:22122235

Huang, W., & Luo, M. (2015). Overconfidence and health insurance participation among the elderly. *Institute for the study of labor*, *9481*, 1-19.

Joo, B. A., & Durri, K. (2017). Influence of overconfidence, optimism, and pessimism on the rationality of the individual investors: an empirical analysis. *Pacific business review international*, *9*(12), 7-13.

Kahneman, D., & Lovallo, D. (2003). Delusions of success: How optimism undermines executives' decisions. *Harvard Business Review*, *81*(7), 56–63. PMID:12858711

Kahneman, D., & Tversky, A. (1979). Prospect theory: An analysis of decision under risk. *Econometrica*, *47*(2), 263–292. doi:10.2307/1914185

Kahneman, D., & Tversky, A. (1984). Choices, values, and frames. *The American Psychologist*, *39*(4), 341–350. doi:10.1037/0003-066X.39.4.341

Karlsen, R., & Andersen, A. (2019). Recommendations with a nudge. *Technologies*, *7*(2), 45. doi:10.3390/technologies7020045

Keil, M., Depledge, G., & Rai, A. (2007). Escalation: The role of problem recognition and cognitive bias. *Decision Sciences*, *38*(3), 391–421. doi:10.1111/j.1540-5915.2007.00164.x

Kimball-Stanley, A. (2008). Insurance and credit default swaps: Should like things be treated alike. *Conn. Ins. LJ*, *15*, 241.

Kinari, Y. (2016). Properties of expectation biases: Optimism and overconfidence. *Journal of Behavioral and Experimental Finance*, *10*, 32–49. doi:10.1016/j.jbef.2016.02.003

Kunreuther, H., & Pauly, M. V. (2015). Behavioral economics and insurance: Principles and solutions. D. Schwarcz, & P. Siegelman (Ed). Research handbook on the economics of insurance law (pp.15-35). Edward Elgar Publishing.

Landry, C., & Jahan-Parvar, M. (2011). Flood insurance coverage in the coastal zone. *The Journal of Risk and Insurance*, *78*(2), 361–388. doi:10.1111/j.1539-6975.2010.01380.x

Lupton, D. (2013). *Risk*. Routledge. doi:10.4324/9780203070161

Malmendier, U., & Tate, G. (2005). Does overconfidence affect corporate investment? CEO overconfidence measures revisited. *European Financial Management*, *11*(5), 649–659. doi:10.1111/j.1354-7798.2005.00302.x

Malmendier, U., & Tate, G. (2008). Who makes acquisitions? CEO overconfidence and the market's reaction. *Journal of Financial Economics*, *89*(1), 20–43. doi:10.1016/j.jfineco.2007.07.002

Maslow, A. H. (1943). A theory of human motivation. *Psychological Review*, *50*(4), 370–396. doi:10.1037/h0054346

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Mazzoli, C., & Marinelli, N. (2011). The role of risk in the investment decision process: traditional vs behavioural finance. L. Caterina, & G. Brighett (Ed.), Risk tolerance in financial decision making (pp. 8-66). Palgrave Macmillan.

McFadden, Ć. (2007). The behavioral science of transportation. *Transport Policy*, *14*(4), 269–274. doi:10.1016/j.tranpol.2007.07.001

Michailova, J. (2010). Overconfidence and bubbles in experimental asset markets. Retrieved November 7, 2022, from https://mpra.ub.uni-muenchen.de/30579/1/MPRA_paper_30579.pdf

Michaud, C. P. (2021). The effects of overconfident yield forecasting on cross-coverage level crop insurance demand. *Agricultural Finance Review*, *82*(4), 657–674. doi:10.1108/AFR-05-2021-0065

Nagatsu, M. (2015). Behavioral economics, history of. J D. Wright (Ed.), International encyclopedia of the social & behavioral sciences, 2, 2. (pp. 443–449). Elsevier.

Nofsinger, J. R. (2008). *The Psychology of investing*. 3. Ed. Pearson Education.

Odean, T. (1998). Volume, volatility, price, and profit when all traders are above average. *The Journal of Finance*, *53*(6), 1887–1934. doi:10.1111/0022-1082.00078

Outreville, J. F. (2014). Risk aversion, risk behavior, and demand for insurance: A survey. *Journal of Insurance Issues*, *37*(2), 158–186.

Pathak, S., & Tripathi, V. (2010). Sales force turnover: an exploratory study of the Indian insurance sector. *Management (18544223), 5*(1).

Pompian, M. M. (2012). *Behavioral finance and wealth management: how to build investment strategies that account for investor biases* (Vol. 667). John Wiley & Sons. doi:10.1002/9781119202400

Riaz, T., & Iqbal, H. (2015). Impact of overconfidence, illusion of control, self-control and optimism bias on investors decision making; evidence from developing markets. *Research journal of finance and accounting*, *6*(11), 110-116.

RicciardiV. (2004). A risk perception primer: a narrative research review of the risk perception literature in behavioral accounting and behavioral finance. Social science research network SSRN. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=566802 doi:10.2139/ssrn.566802

Ricciardi, V. (2008). The psychology of risk: the behavioral finance perspective. F. J. Fabozzi, (Ed.), Handbook of finance: volume 2: Investment management and financial management (pp. 85-111). John Wiley & Sons.

Ricciardi, V., & Simon, H. K. (2000). What is behavioral finance?. *Business, education & technology journal*, *2*(2), 1-9.

Richter, A., Ruß, J., & Schelling, S. (2019). Insurance customer behavior: Lessons from behavioral economics. *Risk Management & Insurance Review*, *22*(2), 183–205. doi:10.1111/rmir.12121

Richter, A., Schiller, J., & Schlesinger, H. (2014). Behavioral insurance: Theory and experiments. *Journal of Risk and Uncertainty*, *48*(2), 85–96. doi:10.1007/s11166-014-9188-x

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Royal, A., & Walls, M. (2019). Flood risk perceptions and insurance choice: Do decisions in the floodplain reflect overoptimism? *Risk Analysis*, *39*(5), 1088–1104. doi:10.1111/risa.13240 PMID:30458060

Salman, S. A. (2015). Insurance as the backbone of risk Management. *International Business Management*, *9*(1), 54–59.

Sandroni, A., & Squintani, F. (2004). The Overconfidence Problem in Insurance Market. ELSE Working Paper No. 2005- 2. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=653002

Sandroni, A., & Squintani, F. (2007). Overconfidence, insurance, and paternalism. *The American Economic Review*, *97*(5), 1994–2004. doi:10.1257/aer.97.5.1994

Sattar, M. A., Toseef, M. & Sattar, M. F. (2020). Behavioral finance biases in investment decision making. *International journal of accounting, finance and risk management*, *5*(2), 67-75.

Scheinkman, J. A., & Xiong, W. (2003). Overconfidence and speculative bubbles. *Journal of Political Economy*, *111*(6), 1183–1220. doi:10.1086/378531

Sharot, T. (2011). The optimism bias. *Current Biology*, *21*(23), R941–R945. doi:10.1016/j.cub.2011.10.030 PMID:22153158

Simon, H. A. (1957). *Models of man; social and rational*. John, Wiley & Sons.

Sinn, H. W. (1996). Social insurance, incentives and risk taking. *International Tax and Public Finance*, *3*(3), 259–280. doi:10.1007/BF00418944

Slovic, P. (1987). Perception of risk. *Science*, *236*(4799), 280–285. doi:10.1126/science.3563507 PMID:3563507

Spinnewijn, J. (2013). Insurance and perceptions: How to screen optimists and pessimists. *Economic Journal (London)*, *123*(569), 606–633. doi:10.1111/ecoj.12008

Spinnewijn, J. (2014). Unemployed but optimistic: Optimal insurance design with biased beliefs. *Journal of the European Economic Association*, *13*(1), 130–167. doi:10.1111/jeea.12099

Sum, R. M., & Nordin, N. (2018). Decision making biases in insurance purchasing. *Journal of advanced research in social and behavioural sciences*, *10*(2), 165-179.

Sunstein, C. R. (2018). Better off, as judged by themselves: A comment on evaluating nudges. *International Review of Economics*, *65*(1), 1–8. doi:10.1007/s12232-017-0280-9

Thaler, R. H., & Sunstein, C. (2008). *Nudge- improving decisions about health, wealth, and happiness*. Penguin Books.

Thaler, R. H., & Sunstein, C. R. (2003). Libertarian paternalism. *The American Economic Review*, *93*(2), 175–179. doi:10.1257/000282803321947001

Thaler, R. H., Sunstein, C. R., & Balz, J. P. (2013). Choice architecture. *The Behavioral foundations of public policy, 25*, 428-439.

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Tversky, A., & Kahneman, D. (1974). Judgment under uncertainty: heuristics and biases: biases in judgments reveal some heuristics of thinking under uncertainty. *Science*, *185*(4157), 1124–1131. doi:10.1126/science.185.4157.1124 PMID:17835457

Tversky, A., & Kahneman, D. (1992). Advances in prospect theory: Cumulative representation of uncertainty. *Journal of Risk and Uncertainty*, *5*(4), 297–323. doi:10.1007/BF00122574

Weber, M., Weber, E. U., & Nosić, A. (2013). Who takes risks when and why: Determinants of changes in investor risk taking. *Review of Finance*, *17*(3), 847–883. doi:10.1093/rof/rfs024

Weinstein, N. D. (1980). Unrealistic optimism about future life events. *Journal of Personality and Social Psychology*, *39*(5), 806–820. doi:10.1037/0022-3514.39.5.806

Weyman, A., & Barnett, J. (2016). Heuristics and biases in decision making about risk. A. Burgess, A. Alemanno & J. Zinn, (Ed). Routledge handbook of risk studies (pp. 131-139). Routledge.

Wray, L. R. (1994). Kenneth Boulding's grants economics. *Journal of Economic Issues*, *28*(4), 1205–1225. doi:10.1080/00213624.1994.11505619

KEY TERMS AND DEFINITIONS

Behavioral Finance: Behavioral finance is described as an interdisciplinary research field combining insights from psychology and finance to understand better investors' behaviors and their approaches to investment instruments (Bachmann, De Giorgi, & Hens, 2018).

Choice Architecture: Choice architecture refers to individuals or institutions organizing issues or topics people must decide about (Thaler & Sunstein, 2008).

Default Rules: Default rules, as a nudge strategy, refer to setting a particular option as the default choice in a decision-making process. This strategy leverages the tendency for people to stick with the default option, often resulting in higher compliance rates (Thaler & Sunstein, 2008).

Incentives: Incentives, as a nudge strategy, involve offering rewards or punishments to influence behavior. This can include providing positive incentives like rewards, discounts, or bonuses to encourage desired actions, or negative incentives like fines or penalties to discourage undesired behaviors (Thaler & Sunstein, 2008).

Insurance: Insurance is defined as the transfer of risks individuals face regarding potential economic adversities caused by loss and income reduction, aiming to protect themselves by transferring these risks to insurance companies in exchange for a specified premium (Kunreuther & Pauly, 2015).

Nudge Theory: Nudging is a choice architecture that predicts individual behaviors by guiding options without banning them or significantly changing existing economic incentives (Thaler & Sunstein, 2008).

Optimism Bias: Optimism bias is the tendency to overestimate the likelihood of positive future outcomes and underestimate the likelihood of adverse future outcomes (Weinstein, 1980).

Overconfidence Bias: Overconfidence in oneself denotes the inclination of an individual to exaggerate their abilities, expectations of success, positive outcomes of events, or the accuracy of their knowledge. This tendency arises from individuals being unaware of the limits of their cognitive capacities (Conger & Wolstein, 2004)

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Structure Complex Choices: Structuring complex choices as a nudge strategy involves simplifying decision-making processes by breaking them down into smaller, more manageable steps or by providing clear guidance and information (Thaler & Sunstein, 2008).