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BEHAVIORAL FINANCE AND CLASSICAL FINANCE, OPPOSITE OR COMPLEMENTARY THEORIES?

FINANZAS CONDUCTUALES Y FINANZAS CLÁSICAS, ¿TEORÍAS OPUESTAS O COMPLEMENTARIAS?

FINANÇAS COMPORTAMENTAIS E FINANÇAS CLÁSSICAS, ¿TEORIAS OPOSTAS OU COMPLEMENTARES?

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Abstract

In the field of finance, there have been several contributions that study how individuals make investment, financing, resource allocation, and asset valuation decisions for the growth of organizations; however, two approaches have been generated that conceive the decision-making process from various perspectives; on the one hand, classical finance points out that individuals are informed and behave in a rational and maximizing way, while behavioral finance explains the behavior of the decision-maker based on cognitive and emotional factors, pointing out anomalies and inefficiencies in the information. This article reflects on the main characteristics of the approaches in the decision-making process, which guide an overview of the field of knowledge of finance from its traditional vision to a more current one. This research uses a qualitative approach, a descriptive documentary type with a deductive method; as a result, a complementary position between the approaches is proposed, considering that decision–making is a complex process that includes the individual's behavior and moves away from rationality, being influenced consciously and unconsciously by feelings, emotions, preferences and cognitive limitations in the understanding of information.

Keywords: decision making; economic behavior; financial management; psychology; rationalism.

JEL: D91; F65; G11; G40; G41

Resumen

En el campo de las finanzas se han realizado diversas aportaciones que estudian cómo los individuos toman decisiones de inversión, financiación, asignación de recursos y valoración de activos para el crecimiento de las organizaciones; sin embargo, se han generado dos enfoques que conciben el proceso de toma de decisiones desde varias perspectivas; por un lado, las finanzas clásicas señalan que los individuos están informados y se comportan de manera racional y maximizadora, mientras que, las finanzas conductuales explican el comportamiento del tomador de decisiones a partir de factores cognoscitivos y emocionales, señalando anomalías e ineficiencias en la información. El presente artículo reflexiona sobre las principales características de los

enfoques en el proceso de toma de decisiones, que guíen un panorama del campo de conocimiento de las finanzas desde su visión tradicional hacia una más actual. La investigación es de enfoque cualitativo, de tipo descriptivo documental con método deductivo; como resultado se propone una postura complementaria entre los enfoques, considerando que la toma de decisiones es un proceso complejo que incluye el comportamiento del individuo y se aleja de la racionalidad, al ser influenciado consciente e inconscientemente por sentimientos, emociones, preferencias y limitaciones cognitivas en la comprensión de la información.

Palabras clave: comportamiento económico; gestión financiera; psicología; racionalismo; toma de decisiones.

JEL: D91; F65; G11; G40; G41

Resumo

No campo das finanças, há várias contribuições que estudam como os indivíduos tomam decisões de investimento, financiamento, alocação de recursos e avaliação de ativos para o crescimento das organizações; no entanto, foram geradas duas abordagens que concebem o processo de tomada de decisão sob várias perspectivas; por um lado, as finanças clássicas apontam que os indivíduos são informados e se comportam de forma racional e maximizadora, enquanto as finanças comportamentais explicam o comportamento do tomador de decisão com base em fatores cognitivos e emocionais, apontando anomalias e ineficiências nas informações. Este artigo reflete sobre as principais características das abordagens do processo decisório, orientando uma visão geral do campo de conhecimento das finanças, desde sua visão tradicional até uma mais contemporânea. A pesquisa é de abordagem qualitativa, do tipo documental descritiva com método dedutivo; como resultado, propõe-se uma posição complementar entre as abordagens, considerando que a tomada de decisão é um processo complexo que inclui o comportamento do indivíduo e se afasta da racionalidade, sendo influenciada consciente e inconscientemente por sentimentos, emoções, preferências e limitações cognitivas na compreensão das informações.

Palavras-chave: comportamento econômico; gestão financeira; psicologia; racionalidade; tomada de decisões.

JEL: D91; F65; G11; G40; G41.

Introduction

In the complex world of finance, two theories have captured the attention and analysis of academics, researchers, and consultants alike: classical or traditional finance and behavioral finance. On the one hand, classical finance suggests that individuals are well-informed, behave rationally, and aim to maximize utility with a risk-averse expectation, thus dealing with efficient markets (Fernández et al., 2017). On the other hand, behavioral finance offers a different perspective by explaining the behavior of decision-makers or investors through cognitive and emotional factors, indicating that markets present anomalies and may be inefficient (Ramírez, 2009).

This scenario has sparked a fascinating debate between both schools of thought, which explores how perceptions and approaches related to money management and decision-making in the financial sphere are shaped. Human behavior has gained increasing relevance in economic studies, thanks to the perspective and contributions of psychology and sociology, giving rise to a challenging and thought-provoking discipline. In this field, the influence of cognitive and emotional biases has been demonstrated, showing how these patterns have led to market anomalies that challenge the assumptions of absolute efficiency.

Thus, this article aims to examine, through a literature review, the fundamental pillars of each theory to reflect on their position, importance, differences, and connections in the individual's financial decision-making process. These two theories are contrasted, and a balance is sought in understanding financial behavior. This leads to the following questions: Is reason the main force behind economic decisions, or are there emotional and psychological factors that affect them? How can financial management be complemented by both theories?

Once the questioning was established as the first step in the literature review protocol, the Scopus database was selected for document analysis, as it is one of the most important search engines with the largest number of peer-reviewed business and finance journals. The search terms defined were *classical finance* and *behavioral finance,* and the inclusion criteria were final articles in English and Spanish.

Upon reflection, a complementary stance between the approaches is adopted, as together they allow for a better understanding of the role of emotions and individual behaviors through econometric models that consider new information and market anomalies, leading to a more accurate reality for decision-makers. Thus, behavioral theory expands the contributions of classical finance through new analytical methods used to analyze emotions in financial decision-making. Ultimately, the article seeks to enrich the understanding of the financial world with a complementary alternative between the theories, providing new opportunities to make more informed and conscious decisions in today's complex economic landscape.

Reflection

In their economic development, individuals are constantly seeking ways to optimize their resources, and in this endeavor, finance plays a crucial role. Finance is considered a tool that allows for the optimization of resources through investment, saving, and expenditure planning (Parra et al., 2022). However, it is the individual who must make the financial decision for it to be successful, which is why it is important to consider both the internal and external context in which the decision is made. Within the decision-making process of individuals, agents, or investors, several theories seek to explain human behavior in markets. This article focuses on the theory of classical and behavioral finance, providing a brief description of their main characteristics, particularities, and contributions to the debate through an analysis of the differences between them.

An Approach to Classical Finance

Classical or traditional finance is primarily based on econometric and mathematical models that explain the economic and financial decisions made by individuals, assuming that these economic models are accurate and adequately represent the reality in which the individual operates. Additionally, it categorizes individuals under the concept of *homo economicus*, who behave rationally both individually and collectively, with calculation and self-interest prevailing in their decision-making process (Pascale & Pascale, 2011). The rationality of individuals is precisely one of the main characteristics on which this theory is based, where "investors, operators, and agents are fully rational and make the correct decisions given the available information, and

as a result, financial markets are neutral for economic activity because they are quasi-perfect" (Azofra, 2012, p. 161).

Until the late 1970s, the economy and the business field became interested in studying individuals' decision-making processes, giving rise to the Rational Choice Theory (RCT). This theory suggests that to make a choice, individuals evaluate the utility offered by each of the possible alternatives and the probability of occurrence, so they opt for the best combination of utility and probability, trying to maximize the former (Zampetti, 2023).

Now, the Bayesian statistical methodology, from the perspective of Cáceres et al. (2020), seeks to determine the probability of an event occurring in a population, modifying it through the use of different scenarios and interaction between variables, based on the analysis of new, often massive information or Big Data. This is associated with finance, as individuals have complete access to market information, analyze it, and make decisions with full knowledge, behaving according to these statistical principles that maximize their benefits.

From the standpoint of the expected utility theory proposed by Von Neumann & Morgenstern (1944) for risky decision-making, utility is a number that allows uncertain scenarios to be evaluated to choose rewards, which results in a utility function where the individual facing a certain situation makes a decision, taking into account the compensation that the exercise may generate with a probability value. This theory has been studied and applied in many contexts, including exercises such as lotteries and rewards, to verify individual choices. Therefore, it is considered an effort to develop a theory of behavior based on rationality (Pascale & Pascale, 2011).

Regarding risk measurement in investments through Markowitz's (1959) portfolio theory, the goal is to mitigate risk through portfolio diversification by combining assets, suggesting that in an investment, not only the expected return matters but also the risk involved in achieving it. Therefore, diversification favors maximizing profitability while minimizing risk (Azofra & Fernández, 1992). In addition to Markowitz's contribution, the Capital Asset Pricing Model (CAPM) by Sharpe (1964) sets the price of financial assets and establishes the rate of return for

certain assets in a diversified investment portfolio, taking into account the sensitivity to market risk or systematic risk (Alcalá, 2012).

Consequently, the model allows for multiple combinations of assets in a single portfolio, aiming to maximize profitability and minimize risk. At the same time, it provides investors with a view of various investment alternatives, known as the efficient frontier.

The efficient-market hypothesis, proposed by Fama (1965), is an important contribution to classical finance. This theory argues that investors are well-informed and that prices fully reflect the available and relevant market information. As a result, the market behaves according to the random walk model, meaning that prices adjust quickly to new market information. Additionally, Fama (1970) classifies market efficiency into three forms: weak, semi-strong, and strong, considering the availability of information such as historical prices and returns, public information, and private information (Flórez, 2008).

Thus, the market is considered efficient when based on rational expectations, assuming that the future can be predicted and calculated from past and present data. Therefore, in the decision-making process between Fama (1970) and Sharpe (1964), according to López et al. (2020), Fama is considered more conservative, favoring security by minimizing risk and investment profitability.

In summary, classical finance theory is based on economic and mathematical models that assume individuals make rational decisions in efficient markets, leading them to choose the best option because they are fully informed about the market, meaning the information is sufficient, complete, and accurate. As a result, asset valuation reflects the correct price, and investors focus primarily on maximizing their economic benefits, while also considering other variables such as risk and the probability of occurrence. In this context, individuals make decisions following predictable behavioral patterns, thanks to these models.

An Approach to Behavioral Finance

Over the years, new discoveries and studies have emerged, indicating that rationality is not always present in humans' financial and economic decisions due to the influence of endogenous and exogenous factors affecting their choices. These advances primarily come from researchers in other disciplines, such as psychology, that try to explain individual behavior under conditions different from those established by classical and neoclassical financial theory. Some of these factors include emotions, which can exert influence over financial decisions, and cognition, which refers to the knowledge and processing of information to psychologically understand financial behavior (Hernández, 2016).

Therefore, empirical evidence from current research considers the assumption of rationality insufficient, as it is sometimes observed that individuals deviate from the paradigms offered by classical financial theory. This has occurred due to questions about the volatility in financial markets and the identification of market anomalies incompatible with the efficient market hypothesis and could not be explained by classical approaches. This situation highlights the need to overcome these paradigms, which fail to address new realities (Rivera & Henao, 2021).

Likewise, theories from (Kahneman & Tversky, 1979) and the application of cognitive psychology techniques have been incorporated into economic analysis to try to explain individual behavior when making decisions in light of the anomalies found. Based on this, the authors pointed out that humans tend to behave irrationally, consistently, and in a correlated manner. In fact, behavioral finance seeks to explain market volatility based on the existence of emotional factors that affect individual behavior. It is the individual who, in their reasoning process, is driven by personal motivations such as ambition and the desire for wealth, leading to a departure from rational behavior and causing them to make hasty and anticipatory decisions, trying to stay ahead of others' reactions, which can lead to bubbles, i.e., the loss of value of assets relative to real market prices. Consequently, the destruction of economic and even social value could become an imminent effect of the individual’s erratic behavior (Ortiz & Celis, 2019).

This is justified because the individual, in their role as an agent or investor, is a human and therefore often makes errors in reasoning. These errors arise from considering internal factors such as expectations and personal judgment, based on information they deem most aligned with their positions or approximations, experience, context, and knowledge. This indicates that individuals make decisions based on a subjective interpretation of their environment, which can lead to distortion of information and the treatment it receives, overlooking the probabilities of occurrence.

It is important to note that the traditional approach is based on the premise that humans are hyperrational, which constitutes a view that does not necessarily take into account the complexity of human nature, instead focusing on an economic social nature. In this sense, behavioral theories seek to encompass this complexity by involving elements such as fear, the need for affiliation, and dreams, among others (Martínez, 2023)

Among the most representative contributions discussed in behavioral finance is Simon's (1947; 1991) bounded rationality, which, contrary to the classical finance stance, indicates that when individuals make decisions, they do not know all the alternatives, as they have limited information for the selection process. This leads them to search for alternatives, and when they find one that meets their appreciation and preference, they abandon the search and select it (Pascale & Pascale, 2011). Therefore, this position "acknowledges that every human is limited in resources, time, and capacity to process, elaborate all possible alternatives, and choose the one that offers maximum benefit" (Alcalá, 2014, p. 13). Thus, the selected option is more focused on satisfaction than maximization.

On the other hand, Savage (1954) and Zampetti (2023), in the Subjective Expected Utility Theory (SEUT), explain how individuals' decision-making begins when they assign a subjective probability to an alternative and estimate the expected utility, so the decision becomes rational by maximizing the subjective expected utility. Similarly, Bell et al. (1977) present the Multiattribute Utility Theory (MAUT), which proceeds from the existence of multiple-choice alternatives, each with numerous factors that must be considered for evaluation. The choice process begins with assigning weight and importance to each factor and finally choosing the best decision, the one with the highest score.

Additionally, Kahneman and Tversky's (2014) prospect theory has made significant contributions by demonstrating the evaluations individuals make when faced with loss and gain scenarios. In these scenarios, decision-making is more influenced by the perception of gain than by the perception of loss; in other words, individuals tend to exhibit risk aversion in a context of gains, while adopting a risk-seeking posture in a context of losses (Fernández et al., 2017). This implies that individuals display different attitudes when making decisions depending on the context in which they find themselves.

Furthermore, behavioral finance is grounded in heuristic theory, which studies the decision-making process through the formation of judgments, strategies, methods, and criteria to solve problems. In this approach, reference is made to the use of shortcuts by individuals to make decisions, as they tend to assimilate past situations, seeking a faster and easier path, although it may not always be the most appropriate. This theory identifies three main heuristics that influence judgment formation when individuals reason.

First is the representativeness heuristic, which refers to the tendency to choose based on historical results rather than considering current data that reflects the actual situation. Second is the availability heuristic, where individuals tend to prefer the comfort and confidence offered by the familiar or known. Third is the anchoring and adjustment heuristic, in which individuals use a starting point, such as a memory or situation, as a reference and then adjust upward or downward; for example, with price, figures, statistics, etc. (Fernández et al., 2017; Ortiz & Celis, 2019; Pascale & Pascale, 2011).

Individuals must analyze the biases present when making financial decisions, as these can be considered behavioral errors stemming from an incorrect perception or interpretation of information in the decision-making process. Among the most common biases are the following: a) Overconfidence: this leads to overvaluing knowledge, experiences, and perspectives, often resulting in an underestimation of reality. b) Risk aversion: this bias generates insecurities and reduces individuals' expectations due to fear present in their decisions; consequently, individuals tend to prefer safe options, even if they are less profitable or beneficial. c) Imitation of behavior patterns: here, individuals choose to copy the decisions and behaviors of other investors or people

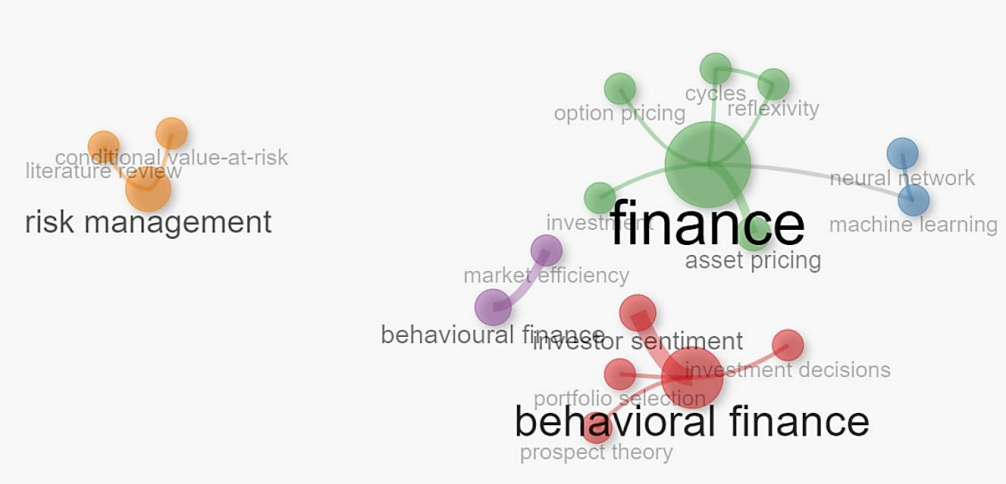
they consider successful, without conducting independent analysis. Finally, d) Disposition effect: this bias refers to individuals' tendency to sell winning assets prematurely and retain losing assets for excessively long periods (Alcalá, 2012; Ramírez, 2009).

Classical and Behavioral Finance: Opposing or Complementary Theories?

Once the main features of classical and behavioral finance are understood, it is appropriate to explore how research in these fields has evolved, with the aim of establishing whether they are opposing or complementary. Below is an analysis of the concurrence of terms and the evolution of research topics within these approaches (Figure 1):

Figure 1

Term Co-occurrence Analysis



Source: prepared by the authors based on data obtained from the Scopus database, processed in Bibliometrix.

It is important to mention that, within the analyzed data, few authors have addressed the topics of classical finance and behavioral finance in the same paper, which is why the degree of linkage between clusters, relationships, and associations between terms is not high. However, in the previous graph, the overlap between keywords mentioned in the articles is identified, forming three clusters: finance, behavioral finance, and risk management. The finance cluster shows

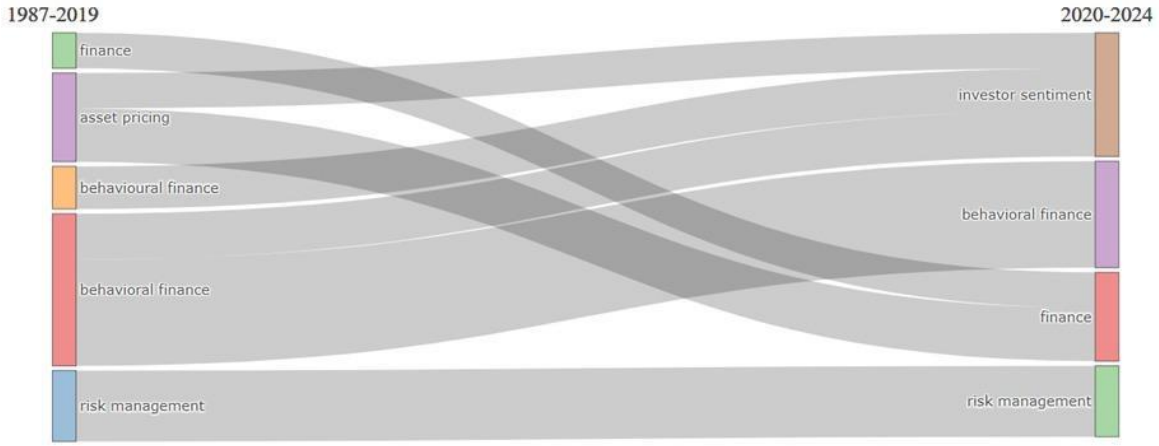
relationships with terms such as asset pricing, reflexivity, cycles, option prices, and investment, each of which concerns topics addressed by different classical finance theories.

Similarly, this cluster is associated with terms like neural network and machine learning, suggesting that there has already been some approach to the behavioral topic. The behavioral finance cluster is related to terms like prospect theory, investment decisions, investor sentiment, and portfolio selection, all of which are typical of authors addressing behavioral finance. It is worth noting the emergence of the term market efficiency, despite not being a tangible connection yet. Finally, the risk management cluster appears, which has been studied through literature review and conditional value at risk.

The bibliographic review covers documents from the years 1987 to 2024. From this, Figure 2, illustrating the evolution of the research topic, is generated, showing the main trends in two periods. The first period spans 1987-2019, where the topics were finance, asset pricing, behavioral finance, and risk management. The second period covers the years 2020-2024, where the topic of investor sentiment emerges, and all previously mentioned topics remain except for asset pricing, which is studied within the new topic. Therefore, it is inferred that a classical theory topic has been integrated into behavioral theory. Additionally, there is an increase in research on investor sentiment, and risk management has continued to be a topic analyzed by various authors, reflecting an increase in topics specific to behavioral finance. This reaffirms the fact that both classical and behavioral finance theories remain relevant in research.

Figure 2

Evolution of the research topic



Source: prepared by the authors based on data obtained from the Scopus database, processed in Bibliometrix.

It is now pertinent to proceed with the description of the characteristics presented by each approach of financial theory, in order to identify some clearly defined differences and continue the reflection on opposition or complementarity, through Table 1:

Table 1

Comparison of classical finance and behavioral finance

Classical Finance Theory	Behavioral Finance
Individuals' decision-making is rational.	Individuals' decision-making is generally irrational.
Efficient market.	Inefficient market: market anomalies.
Economic models explain the financial and economic decisions made by individuals.	Economic and mathematical models do not fully represent the reality on which decisions are made.

Based on classical and neoclassical financial theory.	Considered an extension of traditional financial theory with a complementary perspective from psychology (heuristics and biases).
Individuals' behavior is guided by expected utility theory – maximization.	Individuals' behavior deviates from the predictions of theories due to psychological factors (emotions, feelings, biases).
Based on rigorous mathematical theories and carefully documented empirical studies.	It is multidisciplinary, involving sociology, psychology, finance, accounting, economics, and decision sciences; however, it relies on mathematical models.
El Risk is considered and mentioned as one of the central elements in various classical decision-making theories or postulates, but it is mostly discussed in terms of probability.	Risk aversion and risk-seeking are considered. Risk, uncertainty, and emotions are also factored into decision-making, even underestimating probability.

Source: Prepared by the authors.

The main differences found between the postulates of classical finance theory and behavioral finance relate to the concept and the behavior of individuals when making decisions. Classical theory is based on the belief that individuals are entirely rational, and their behavior is mediated and predictable according to expected utility theory models. It is assumed that they can make unbiased forecasts about the future and have complete information and knowledge of the market, under the premise of an efficient market which implies that they will make the right decision, maximizing their benefits and reducing their exposure to risk.

However, Barra (2020) points out that classical finance develops in a perfect market, where individuals make decisions based on a fully parameterized context and information. Nevertheless, decision-making must not only consider the framework of risk and uncertainty but also the understanding of the concept of rationality, which, according to the classics, is incorrect.

On the other hand, behavioral finance assumes that individuals do not behave entirely rationally, as they face cognitive barriers, biases, information asymmetry, and their own

environment in the decision-making process, which complicates financial decision-making. Additionally, they are pressured by expectations from their surroundings, their own attitudes, and aptitudes. This leads them to make decisions not only based on collected, understood, and analyzed information but also considering emotions as relevant factors at the moment of decision-making, such as doubt, fear, ambition, confidence, intuition, emotion, sadness, among others. Therefore, it is important to consider emotions in the financial decision-making process (Cifuentes et al., 2021).

Indeed, research conducted by followers of behavioral finance has demonstrated that factors such as gender, marital status, age, and education level influence individuals' behavior when making decisions (Cascão et al., 2022; Khawaja & Alharbi, 2021; Ricciardi, 2008). These are elements that econometric models under a classical approach, although advanced and representing reality to some extent, often overlook. However, these models can be expanded with contributions from behavioral variables.

Now, the characteristics of each approach pave the way for a vision of complementarity and refinement rather than opposition; for example, from the behavioral theory perspective, inconsistencies in market and individual behavior predictions are attributed to the lack of realism in classical finance, as it does not adequately reflect how the real world functions. Although it considers the concept of reality under the scientific method, this conception is simplified and lacks the complexity that behavioral theory considers inherent to human beings and the constant and rapid changes occurring.

For this reason, models originating from mathematics and physics, which support assumptions of efficient markets and rational expectations, should not be interpreted as the sole representation of human behavior and choice. While classical models accurately reflect and apply the conditions of matter, they cannot reflect or be applied in the same way to human conditions and decision-making (Azofra, 2012). Therefore, it is suggested that the model be expanded with subjective information that complements the process and provides a broader and more realistic view of the factors involved in a financial decision.

In this regard, Pérez & Rodríguez (2022) state that it is necessary to adopt an interdisciplinary approach that contributes to the understanding of financial complexity,

combining cognitive potential and outcome optimization with sufficient information and self-control, i.e., merging behavioral and classical finance in financial decision-making.

Continuing with the analysis, the multidisciplinarity of behavioral finance is identified, arising from the need to incorporate knowledge and fields of study beyond economics, which have been considered complementary since earlier times. Marshall (as cited in Pascale & Pascale, 2007) reaffirms this conception through his economic principles, where he maintains that economics is a psychological science affected by human biology and evolutionary processes.

Thus, psychology provides classical finance with tools to understand the inherent human behavior and the complexity of the environment. It also helps to comprehend how political, economic, social, and environmental variables modify thinking and, consequently, individuals' actions. These factors can change or strengthen individuals' beliefs, preferences, and emotions, influencing the valuation and selection of financial alternatives.

Indeed, classical and behavioral finance represent two seemingly disparate approaches to studying financial markets due to the marked differences exposed in the literature. However, it is proposed that these paradigms are not mutually exclusive but complementary, together offering a more comprehensive and robust understanding of financial phenomena.

Classical finance is based on principles such as market efficiency, investor rationality, and rational expectations hypothesis. These theories, including Markowitz's Portfolio Theory and the Capital Asset Pricing Model, provide solid mathematical and economic frameworks for investment decision-making, asset valuation, and risk management. However, classical finance assumes that investors are rational and seek to maximize their benefits, and that markets reflect all available information immediately and accurately. This approach, while powerful, has proven insufficient to explain certain observed market behaviors, such as speculative bubbles, financial crises, and market anomalies.

Behavioral finance, on the other hand, incorporates principles from psychology to explain how and why investors may make irrational decisions. Authors such as Kahneman and Tversky demonstrate that cognitive and emotional biases, including overconfidence, loss aversion, and representativeness heuristics, significantly influence investor behavior. These behavioral theories

have provided convincing explanations for many phenomena that classical finance cannot adequately address; however, in some scenarios, they lack the mathematical and predictive structure characteristic of classical theories, which limits their applicability in certain areas of financial management.

Given the above, proposing a vision of complementarity implies recognizing that both classical and behavioral finance have strengths and weaknesses that can be leveraged and mitigated through their integration. Classical models offer essential tools for asset valuation and risk management, while behavioral elements allow for adjustments to these models to more accurately reflect the reality of human behavior inherent in markets. For example, a hybrid approach could improve portfolio management by combining Markowitz's portfolio theory with an understanding of behavioral biases affecting investment decisions. In this sense, financial advisors could use classical models to structure optimal portfolios and, at the same time, employ principles of behavioral finance to educate investors about biases that could impair their long-term returns.

Furthermore, the current financial market highlights the importance and utility of traditional postulates such as CAPM, Internal Rate of Return (IRR), efficient frontier, and portfolio diversification as ways to reduce risk. However, due to the complexity and dynamics of the market, it is also acknowledged that incorporating models considering the behavior and actions of financial managers is necessary as a complement, since they cannot be completely explained through a single approach, in order to improve precision in risk measurement and economic decisions. Consequently, behavioral finance, through cognitive psychology, does not aim to undermine the advancements of classical theory; rather, it broadens the perspective of decision-making by providing a psychological context that enriches and refines traditional models.

Behavioral and classical finance, far from being opposed, complement and enrich each other, offering a profound and holistic understanding of economic behavior. On the one hand, classical finance provides a solid and quantitative framework based on the assumption of agent rationality and market efficiency. On the other hand, behavioral finance expands this framework by incorporating human behavior psychology, revealing how cognitive biases, emotions, and heuristics influence financial decisions. This integration not only corrects the limitations of classical models but also enhances their explanatory power, allowing, for example, adjustments to

asset valuation models to account for irrational price deviations and improving risk management strategies by incorporating loss aversion and other psychological biases.

In summary, reflecting on the principles of both theories can develop a richer and more realistic perspective, which not only improves market movement prediction but also fosters more informed and effective financial practices (Leković, 2020), contributing to an understanding of the complexity of human behavior in financial markets. The complementarity between behavioral and classical finance is not only an expansion of existing knowledge that contributes to a deep and nuanced understanding of global financial dynamics but also a foundation for innovating and improving investment and financial regulation strategies in an increasingly dynamic and complex world. Finally, considering behavioral finance as an extension of classical finance, it is feasible to generate a more robust framework that benefits both academics and practitioners in financial practice.

Conclusions

The characteristics described in the theories of classical and behavioral finance reflect the significant advances and rigorous studies carried out in both streams by highly regarded and recognized authors. First, the differences between the approaches and postulates, often contradictory and primarily related to the scientific bases underpinning each paradigm—economics and finance versus psychology and finance.

Second, the problem studied is focused on understanding the individual's decision-making process, where classical theory adheres to its econometric models, with classical and neoclassical finance views conceiving the individual as the homo economicus. In contrast, behavioral finance assumes that there are factors beyond those proposed and offers a broader perspective by integrating psychological aspects of the human being, who often does not behave as expected according to rationality due to the influence of emotions outside of modeling.

Third, the concept of rationality, which in the classical approach is limited, as the person must use economic mechanisms for financial choices, while in the behavioral approach, they rely on feelings, emotions, and context.

This article adopts a complementary stance by considering that decision-making should encompass an inclusive perspective since individual behavior deviates from rationality as it is influenced both consciously and unconsciously by feelings, emotions, preferences, and cognitive limitations in understanding information. Moreover, it acknowledges that one does not operate in a perfect economy but in a context where human nature leads to less controlled behaviors. Accordingly, a call is made for further research by the humanities to contribute to understanding individual decision-making in the financial world, which directly impacts people's quality of life and improvement of their surroundings, as appropriate financial decisions can change an individual's economic trajectory.

Ethical Considerations

This study did not require approval from an ethics or bioethics committee as it did not use any living resource, agent, biological sample, or personal data that poses any risk to life, the environment, or human rights.

Conflict of Interest

The authors declare that there are no conflicts of interest related to the article.

Author Contribution Statement

Alexa Juliana Montoya Morales: Conceptualization, Methodology, Formal Analysis, Investigation, Original Draft Writing, Writing: Review and Editing, Visualization, Supervision.

Yaneth Ladino Villegas: Conceptualization, Methodology, Formal Analysis, Investigation, Original Draft Writing, Writing: Review and Editing, Visualization.

Valeria Rivera Quiguanás: Conceptualization, Methodology, Formal Analysis, Investigation, Original Draft Writing, Writing: Review and Editing, Visualization.

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References

(1) Alcalá, J. (2012). Toma de decisiones de inversión. Un enfoque conductual. *Económicas CUC*, *33*(1), 253–264.

(2) Alcalá, J. (2014). Análisis de los factores cognitivos que inciden en la toma de decisiones de inversión de los administradores financieros de la ciudad de barranquilla. *The Journal of Business*, *45*(3), 444.

(3) Azofra, V. (2012). Pasado y presente de las finanzas corporativas Universidad de Valladolid. *Revista de Contabilidad y Dirección*, *15*, 135–166.

(4) Azofra, V. y Fernández, A. (1992). Evolución reciente de la moderna teoría financiera. *Anales de Estudios Económicos y Empresariales*, *7*, 111–126.

(5) Barra, R. A. (2020). *La teoría de la utilidad esperada: descubriendo su realismo y veracidad en el entorno empresarial peruano* [Tesis de Doctorado, Universidad de Piura]. Repositorio Institucional Piura. https://pirhua.udep.edu.pe/handle/11042/4740

(6) Bell, D. E., Keeney, R. L. & Raiffa, H. (1977). *Conflicting objectives in decisions*. John Wiley & Sons

(7) Cáceres, P., Pavan, C., Otamendi, E. y Bramuglia, G. (2020). Principios de estadística Bayesiana y su relación con la farmacocinética aplicada. *Revista Chilena de Pediatría*, *91*(5), 828–837. https://dx.doi.org/10.32641/rchped.v91i5.1594

(8) Cascão, A., Quelhas, A. P. & Cunha, A. M. (2022). Heuristics and cognitive biases in the housing investment market. *International Journal of Housing Markets and Analysis*, *16*(5), 991–1006. https://doi.org/10.1108/IJHMA-05-2022-0073

(9) Cifuentes, C., Delgado, S. T. & González, J. I. (2021). Economic Behaviour from a Biological and Psychological Approach. *Apuntes Del Cenes*, *40*(72), 17–43. https://doi.org/10.19053/01203053.V40.N72.2021.12474

(10) Fama, E. (1965). The Behavior of Stock-Market Prices. *The Journal of Business, 38*(1), 34–105.

(11) Fama, E. F. (1970). Efficient Capital Markets: A review of theory and empirical work. *The Journal of Finance*, *25*(2), 383. https://doi.org/10.2307/2325486

(12) Fernández, Á. M., De Guevara, R. L. y Madrid, R. M. (2017). Las finanzas conductuales en la toma de decisiones. *Fides et Ratio - Revista de Difusión Cultural y Científica de La Universidad La Salle en Bolivia*, *13*(13), 127–144. http://www.scielo.org.bo/scielo.php?pid=S2071-081X2017000100009&script=sci_arttext

(13) Flórez, L. S. (2008). Evolución de la Teoría Financiera en el Siglo XX. *Cinzia Ollari*, *12*(27), 145–168.

(14) Hernández, C. A. (2016). *Las Neurofinanzas en la toma de decisiones financieras: cuando las decisiones financieras no cumplen cuestiones racionales.* ISEC Instituto Superior de Educacao e Ciencias.

(15) Kahneman, D. y Tversky, A. (1979). On the interpretation of intuitive probability: A reply to Jonathan Cohen. *Cognition*, *7*(4), 409–411. https://doi.org/10.1016/0010-0277(79)90024-6

(16) Kahneman, D. y Tversky, A. (2014). Teoría prospectiva: un análisis de la decisión bajo riesgo. *Estudios de Psicología, 8*(29-30), 95-124. https://doi.org/10.1080/02109395.1987.10821483

(17) Khawaja, M. J. & Alharbi, Z. N. (2021). Factors influencing investor behavior: an empirical study of Saudi Stock Market. *International Journal of Social Economics*, *48*(4), 587–601. https://doi.org/10.1108/IJSE-07-2020-0496

(18) Leković, M. (2020). Behavioral finance as an answer to the limitations of standard finance. *Bankarstvo*, *49*(3), 36–76. https://doi.org/10.5937/BANKARSTVO2003036L

(19) López, M., Fernández, J. C., Trinidad, J. E. y Sánchez, M. Á. (2020). Una nueva perspectiva de la frontera eficiente en el modelo de sharpe. En J. J. García. (Ed.) *Anales de Economía Aplicada 2018: economía del transporte y logística portuaria* (pp. 1027–1036). Universidad de Huelva.

(20) Markovitz, H. (1959). *Portfolio selection: Efficient diversification of investments*. John Wiley. https://www.jstor.org/stable/j.ctt1bh4c8h

(21) Martínez, M. (2023). Finanzas comportamentales: un enfoque alternativo que complementa nuestro proceso de toma de decisiones. *Papeles de Administración Hoy, 7*(10), 36-47.

(22) Ortiz, J. J. y Celis, H. (2019). Vista de Las finanzas conductuales y la teoría del riesgo: ¿nuevos fundamentos para la gerencia financiera. *Criterio Libre*, *17*(31), 43–82. https://doi.org/10.18041/1900-0642/criteriolibre.2019v18n31.6130

(23) Parra, R., Ladino, Y. y Díaz, M. C. (2022). *Elementos de la Valoración de Empresas*. Kinesis. https://kinesis-editorial.com/producto/elementos-de-la-valoracion-de-empresas/

(24) Pascale, R. y Pascale, G. (2011). XXXI Jornadas Nacionales de Administración Financiera Teoría de las Finanzas Sus supuestos, neoclasicismo y psicología cognitiva. *Sadaf.*

(25) Pascale, R. y Pascale, G. (2007). Toma de decisiones económicas: el aporte cognitivo en la ruta de Simon, Allais y Tversky y Kahneman. *Ciencias Psicológicas*, *1*(2),149-170.

(26) Pérez, A. & Rodríguez, A. (2022). Behavioral Economics: An Analysis from Interdisciplinarity and Complexity. *Apuntes Del Cenes*, *41*(74), 17–40. https://doi.org/10.19053/01203053.V41.N74.2022.13983

(27) Ramírez, M. H. (2009). Finanzas Conductuales: Un enfoque para Latinoamérica. *Tec Empresarial*, *3*(3), 8-17.

(28) Ricciardi, V. (2008). The financial psychology of worry and women. *SSRN Electronic Journal*. https://doi.org/10.2139/SSRN.1093351

(29) Rivera, V. y Henao, J. J. (2021). Paradigmas en contabilidad que impiden la incorporación de aspectos diferentes del económico. *Cuadernos de Contabilidad*, *22*, 1–18. https://doi.org/10.11144/Javeriana.cc22.pcii

(30) Savage, L. (1954). *The Foundations of Statistics*. John Wiley.

(31) Sharpe, W. F. (1964). Capital Asset Prices: a Theory of market equilibrium under conditions of risk. *The Journal of Finance*, *19*(3), 425–442. https://doi.org/10.1111/J.1540-6261.1964.TB02865.X

(32) Simon, H. A. (1947). *Administrative behavior; a study of decision-making processes in administrative organization.* Macmillan.

(33) Simon, H. A. (1991). Organizations and Markets. *Journal of Economic Perspectives*, *5*(2), 25-44**.** https://doi.org/10.1257/jep.5.2.25

(34) Von Neumann, J. & Morgenstern, O. (1944). *Theory of Games and Economic Behavior*. Princeton University Press. https://doi.org/10.1515/9781400829460

(35) Zampetti, L. (2023). Toma de Decisiones, Funciones Ejecutivas y Emoción: Una revisión de los modelos teóricos. *Analogías Del Comportamiento, 23*, 53–63.

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