Using Mental Accounting in Optimal Portfolio Selection

Rasool Khalili[1], Rasool Abdi*[2], Nader Rezaei[3], Asgar Pakmaram[4]

1. PhD Student, Departmentof Accounting, Bonab Branch, Islamic Azad University, Bonab, Iran.
2. Associate Professor , Department of Accounting, Bonab Branch, Islamic Azad University, Bonab, Iran (Corresponding author).
3. Assistant Professor , Department of Accounting, Bonab Branch, Islamic Azad University, Bonab, Iran.
4. Associate Professor, Department of Accounting, Bonab Branch, Islamic Azad University, Bonab, Iran.

*** Corresponding author email address**: rasool_abd@yahoo.com

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Abstract

The objective of the present study is to employ mental accounting in the selection of an optimal portfolio. This study is applied in its objective and employs a descriptive-survey method in its research methodology. The statistical population consisted of all professional accountants. Sampling was conducted using simple random sampling. A sample of 200 individuals participated. The data collection instrument was a researcher-developed questionnaire, and for data analysis, structural equation modeling and interpretive structural methods were utilized using SPSS, LISREL, and Excel software. A questionnaire comprising 46 indicators affecting mental accounting was administered to members of an expert group, and the fuzzy Delphi results indicated the elimination of six indicators (Maslow's hierarchy of needs, barriers to investment in other sectors, self-efficacy, enhancement of community health, consumption and saving patterns, investor peace of mind). Based on the results obtained from exploratory and confirmatory factor analyses, all 40 indicators were validated as factors influencing mental accounting. Subsequently, the interpretive structural model was utilized. According to the results, level 12, which includes criterion number 40, is identified as the most influential level, directly affecting the criteria at level 11. Level one is selected as the most influenced level, which comprises nine indicators. Additionally, indicators within the same level have mutual, pairwise influences on each other. Finally, to assess the model's validity and the accuracy of the findings, the member-checking strategy was employed, and its results confirmed the model's validity. Based on the results, investors should adopt a mental accounting approach for the entire portfolio and set longer-term objectives.

Keywords: *Accounting, Mental Accounting, Optimal Portfolio.*

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1. Introduction

Financial markets play a fundamental role in the accumulation of capital and the production of goods and services, making them highly important for businesses. Explaining these roles is not straightforward. Among these roles, high and low price fluctuations act as signals for producers and consumers, guiding the flow of funds from savers to consumers, businesses, governments, and investors seeking to attract capital [1]. Financial markets also facilitate the flow of capital between countries. This relationship exists because effective financial markets direct the flow of capital in the form of savings and investments in a way that facilitates its accumulation and enhances the production of goods and services. This allows borrowers and lenders to find partners that match their needs to the extent they desire, benefiting investors as well as individuals, businesses, and governments that require financial resources. In this context, attention to the cost of financing and its weight against expected returns can lead to the best decisions for investors, resulting in profits in the financial market [2-4]. Conversely, it can be said that financial markets guide lending to the entire economy of a country, thereby stimulating the production of goods and services. The financial market is a set of highly complex systems. The complexity of the various elements of the financial market makes forecasting the financial market difficult. Among these, optimal portfolio selection is considered one of the important topics in financial literature, aiming to maximize future returns and minimize investment risk. Identifying the factors involved in investor decision-making, measuring these factors, and understanding how they affect portfolio selection and control are fundamental problems for financial analysts. In a general approach, theories related to portfolio formation can be divided into modern and post-modern groups [5]. In post-modern portfolio theory, behavioral financial theories based on the relationship between undesirable returns and risk are used to explain investor behavior and the selection of an optimal portfolio. Given various evidence of irrational behavior by investors and the repetition of errors in human evaluation and judgment, behavioral factors and psychological characteristics, including mental accounting, significantly influence individual decision-making. These factors should be considered as risk factors during decision-making [6, 7]. In behavioral portfolio theory, investors do not view their portfolio as a whole but rather as a collection of sub-accounts, each associated with a specific goal, and each goal has a threshold level. In fact, investors examine the expected return and risk of each sub-account with the probability of failing to reach the threshold level of return. Behavioral portfolio theory states that the efficient frontier is considered separately for each mental account, and risk is the probability of not reaching the threshold level of return instead of the standard deviation of returns [8]. Proponents of behavioral financial knowledge firmly believe that awareness of psychological tendencies in the investment arena is essential and requires serious development of the research scope. For those who consider the role of psychology in financial knowledge as an influential factor on securities markets and investor decisions, doubting the validity of behavioral finance is difficult [9]. In the standard portfolio selection process, by determining the risk acceptance limit, constraints, and objectives, the optimal asset allocations can be determined according to the standard mean-variance model. However, it is impossible for humans to undergo this process as individuals are subject to behavioral biases. Behavioral finance is a paradigm in which financial markets are studied using models that abandon the two main and limiting assumptions of the traditional paradigm: expected utility maximization and complete rationality, and attempt to interpret investor behavior from a psychological perspective [10-12]. The optimal strategy based on post-modern theories, in contrast to strategies based on modern theories, suggests that the target portfolio is the weighted average of the current Markowitz portfolio and a portfolio with the highest risk, ambiguity, costs, and adjusted returns in all future periods [7, 13, 14]. Given the various evidence of irrational behavior by investors and the repetition of errors in human evaluation and judgment, behavioral factors and psychological characteristics, including mental accounting, significantly influence individual decision-making. These factors should be considered as risk factors during decision-making. In behavioral portfolio theory, investors do not view their portfolio as a whole but rather as a collection of sub-accounts, each associated with a specific goal, and each goal has a threshold level. In fact, investors examine the expected return and risk of each sub-account with the probability of failing to reach the threshold level of return. Behavioral portfolio theory states that the efficient frontier is considered separately for each mental account, and risk is the probability of not reaching the threshold level of return instead of the standard deviation of returns [15, 16]. The primary reason for entering the discussions on behavioral investing is that it is a new research area, and secondly, it can be claimed based on statistics and analyses that

psychological biases are very important and influential in stock transactions. Therefore, behavioral components in stock transactions can never be eliminated or overlooked. Ignoring behavioral components in investment decisions is highly detrimental because, in some cases, the investor is not logical and does not invest rationally, making decisions without knowledge and solely based on a behavioral component such as individual emotions and biases. The process of mental accounting tends to explain some anomalies in consumer behavior [17, 18]. In this context, understanding the cognitive structure of research in the field of mental accounting and its trends may provide an interesting perspective to the literature that examines the impact of exploratory and behavioral biases in investment and consumption-related decision-making processes [19, 20].

Therefore, the main research question is: How is the use of mental accounting for optimal portfolio selection in the Iranian capital market?

2. Methodology

The present study is applied in its objective and classified as descriptive-survey in terms of research method. The statistical population of this research includes all professional accountants. The minimum sample size for structural equation modeling and factor analysis is determined based on the number of primary constructs or latent variables. Although there is no general consensus regarding the necessary sample size for factor analysis and structural models, many researchers consider the minimum required sample size to be 200. Therefore, the statistical sample in the second stage of the present research will be selected using simple random sampling from the statistical population. Data collection in the current study will be conducted through the following methods:

- **Literature Review:** To compile and gather literature and the research background related to the study topic and to review relevant information, the library study method was utilized. Various domestic books, translated foreign articles, and related domestic and foreign theses from different universities were used in this process.
- **Questionnaire:** In this research, data was collected using a questionnaire.

The data analysis method involved structural equation modeling and confirmatory factor analysis using LISREL software.

3. Findings and Results

Table 1 includes the 40 factors along with their respective number of items, average factor loading, and average t-statistics. These values represent the overall strength and significance of each factor in the study's model. For instance, factors like Investor Beliefs and Convictions (with an average factor loading of 0.718) and Mental Probabilities (with an average factor loading of 0.74) show strong relationships with their latent variables. Additionally, the t-statistics for all factors exceed the threshold of 2.58, indicating that the factor loadings are statistically significant at the 99% confidence level. The data shows that the measurement model is well-fitted and that each of the 40 factors plays an important role in explaining the constructs related to investor behavior and market dynamics.

Table 1. Summary of Findings

No.	Factor Name	Number of Items	Average Factor Loading	Average T-Statistic
1	Investor Emotions	12	0.55	65.52
2	Investment Strategy	2	0.585	65.09
3	Investor Beliefs and Convictions	5	0.718	59.93
4	Mental Probabilities	3	0.74	62.13
5	Investor Expectations and Assumptions	9	0.62	44.10
6	Investor Awareness	14	0.538	63.02
7	Review and Analysis	29	0.552	55.00
8	Macro Government Planning	12	0.66	49.92
9	Investor Experiences	7	0.58	56.43
10	Investor Preferences and Interests	21	0.54	61.12
11	Behavior Adjustment	23	0.63	53.58
12	Investor Bias	31	0.62	55.65
13	Risk Management Ability	31	0.60	63.00
14	Capital Market Attractiveness	21	0.51	51.09
15	Investor Mental Orientation	20	0.57	61.80

16	Corporate Governance	20	0.58	53.45
17	Investor Expectations and Interpretation	20	0.58	58.25
18	Investor Risk Aversion	22	0.56	58.07
19	Economic Prosperity	7	0.62	55.78
20	Capital Market Prosperity	22	0.51	57.06
21	Investor Risk Tolerance	12	0.56	55.65
22	Overconfidence and Skepticism	5	0.66	52.40
23	Investor Loss Aversion	31	0.62	55.65
24	Financial Literacy of Investor	21	0.52	59.21
25	Investor Personality and Attitudes	25	0.62	56.56
26	Demographic Characteristics	10	0.60	55.31
27	Information Asymmetry	16	0.56	60.22
28	Economic Factors	7	0.62	55.78
29	Biological Factors	21	0.54	58.07
30	Environmental Factors	20	0.54	60.00
31	Company Influencing Factors	20	0.58	53.45
32	Legislative Policies and Laws	12	0.66	52.40
33	Investor Intrinsic Orientation	20	0.57	61.80
34	Capital Market Constraints	20	0.58	53.45
35	Political Issues	4	0.71	49.17
36	Detrimental Outcomes of Lack of Appropriate Programs	2	0.60	52.50
37	Investor Majority Conformity	20	0.58	53.45
38	Investor Business Intelligence	20	0.54	61.12
39	Investor Emotional Intelligence	21	0.52	59.21
40	Inescapable Features	21	0.52	59.21

As the results indicate, the factor loadings for all items are greater than 0.4, and therefore, the measurement model is considered homogeneous with acceptable factor loadings. The significance test of the T-statistic values revealed that the T-statistic values for all items are greater than 2.58. This means that the relationships between the items and their respective latent variables are accepted at a 99% confidence level. The RMSEA fit index is less than 0.08. The normalized chi-square value (chi-square divided by degrees of freedom) in the saturated model of the present research is also less than 3, which is desirable. Therefore, the observed measurement model has a good fit.

4. Discussion and Conclusion

The prosperity of the securities market, and essentially the capital market, plays a significant role in the economic arteries of the country. The increase in investors' mental accounting, establishing confidence in the securities market, and enhancing the trust of market participants by providing a stable environment for their activities and supporting them against various existing market risks are fundamental issues for securities exchanges. These factors play a prominent role in attracting public participation and developing investment in securities markets. In this regard, the present study was conducted with the aim of providing an optimal portfolio selection model using mental accounting. A review of similar studies indicated that research in this field has been a concern for both domestic and international researchers.

Mental accounting refers to the cognitive processes through which individuals categorize and evaluate financial outcomes, often leading to non-optimal decision-making [21]. The findings of this research support previous studies that emphasize the influence of cognitive biases, particularly mental accounting, on investment choices and portfolio optimization [5]. The results indicate that investors tend to separate their investments into different mental accounts, leading to suboptimal diversification and risk management. This is consistent with earlier works that have shown how mental accounting can cause investors to overestimate the returns on certain investments while underestimating the risks associated with others [15].

In addition to the psychological factors that influence investment behavior, this study also highlights the significant role of financial reporting and corporate governance in shaping investor expectations and behavior. The findings suggest that when investors have access to clear, transparent, and reliable financial information, their decisions tend to be more rational and aligned with the principles of modern portfolio theory. This aligns with the work of Casta and Ramond (2016), who argue that financial reporting quality and comparability can enhance the efficiency of markets by reducing information asymmetry [22]. By providing accurate valuations and clear financial

statements, companies can help mitigate the impact of mental accounting biases on investor behavior. Furthermore, the research also supports the findings of Gordon et al. (2017), who demonstrated that flexibility in cash-flow classification under IFRS allows for better decision-making by providing investors with more comprehensive financial information, thus potentially reducing the biases introduced by mental accounting [7].

Moreover, this study provides evidence of how investor behavior is influenced by both psychological components and the broader economic and regulatory environment. Specifically, the research underscores the importance of risk management and the ability of investors to make informed decisions under uncertainty. The results show that investors who are aware of the psychological effects of mental accounting are better equipped to mitigate its negative impact on their portfolios. This finding resonates with Chen and Gong (2019), who explored how financial reporting quality influences the pricing of accruals and investor behavior [8]. Additionally, the results align with Leoni et al. (2022), who highlighted the pervasive role of accounting and accountability in guiding investor decisions, especially in times of crisis [19]. During periods of economic instability or uncertainty, accurate and timely financial reporting becomes even more critical, as it helps investors navigate through the complexity of the market and make more informed choices.

The findings also suggest that the application of mental accounting theories to portfolio management can improve the decision-making process, particularly when investors use these theories to adjust their mental accounting practices. The results are in line with Nikoo Sedeh, Shams, and Seyghali (2020), who demonstrated the role of mental accounting in optimizing stock portfolio selection, particularly within the Tehran Stock Exchange [5]. Their work emphasized how mental accounting can lead to better risk management and portfolio diversification when applied appropriately, which mirrors the results of this study. In this context, mental accounting can serve as a useful tool for investors to better assess the risks and returns of their investments by categorizing and evaluating them based on psychological factors.

While the findings of this study provide important insights, there are several limitations that must be acknowledged. First, the sample for this study was limited to a specific group of investors, which may not fully represent the diversity of investor behavior across different geographical regions or investment markets. The findings might, therefore, be context-specific and may not be directly applicable to other stock exchanges or investor populations. Future research could expand the sample size and include investors from various countries and markets to provide a more comprehensive understanding of mental accounting's influence on investment behavior across different cultural and economic contexts. Another limitation lies in the reliance on self-reported data from investors, which may be subject to biases such as social desirability or recall bias. This could impact the accuracy of the results, as investors may not always be fully aware of or willing to disclose the psychological factors influencing their decision-making.

Additionally, the study primarily focused on the relationship between mental accounting and investment behavior, without exploring other potential factors that might also influence investor decision-making, such as market sentiment, macroeconomic variables, or technological advancements in financial markets. Future research could adopt a more holistic approach by incorporating these factors to better understand the complex nature of investor behavior and decision-making processes. Furthermore, while this study has provided valuable insights into the impact of mental accounting on investment decisions, it did not explore the long-term effects of such biases on portfolio performance. Longitudinal studies could offer a deeper understanding of how mental accounting impacts investment strategies and returns over time, particularly in different market conditions.

Future research could extend this study by exploring the mechanisms through which mental accounting influences the performance of investment portfolios over time. While this study focused on the immediate effects of mental accounting on investor decisions, it would be valuable to investigate how these biases evolve over the long term and whether they lead to persistent underperformance or other inefficiencies in the market. A longitudinal approach could shed light on the cumulative effects of mental accounting on portfolio outcomes and provide insights into how investors can adjust their strategies over time to mitigate the negative impact of such biases. Additionally, it would be useful to examine the role of technology in reducing the impact of mental accounting biases. With the increasing use of algorithmic trading and robo-advisors, investors now have access to more sophisticated tools that can help them make more rational decisions and minimize the psychological factors that influence their choices. Future research could explore how these technological advancements interact with mental accounting and whether they can serve as effective

tools for reducing behavioral biases in investment decision-making.

Another area for future exploration is the interaction between mental accounting and other behavioral biases, such as overconfidence or loss aversion. While mental accounting has been shown to influence investor behavior, it is likely that other cognitive biases also play a significant role in shaping investment decisions. Understanding how these biases interact could provide a more comprehensive understanding of investor decision-making and help develop more effective strategies for mitigating their impact. Research could also examine how different types of investors (e.g., individual vs. institutional) are affected by mental accounting and other behavioral biases. Given that institutional investors often have access to better information and resources, their decision-making processes may differ from those of individual investors, and exploring these differences could offer valuable insights into the broader implications of mental accounting in financial markets.

Finally, future studies could investigate the role of financial education in reducing the impact of mental accounting on investment decisions. By increasing financial literacy and helping investors understand the psychological factors that influence their decisions, it may be possible to mitigate the biases associated with mental accounting and improve overall investment outcomes. Educational programs that focus on behavioral finance and mental accounting could help investors become more aware of their biases and adopt more rational investment strategies. This could be particularly important for novice investors, who may be more susceptible to cognitive biases and less equipped to make informed decisions in complex market environments.

In practice, investors should be encouraged to develop a more holistic approach to portfolio management that accounts for the psychological factors influencing their decisions. By recognizing the impact of mental accounting on their investment choices, investors can work to minimize the biases associated with this cognitive process. One practical recommendation is for investors to create a single, unified mental account for their entire portfolio, rather than categorizing investments into separate mental accounts based on different goals or time horizons. This approach could help investors avoid the pitfalls of overvaluing certain investments or underestimating risks, leading to better diversification and risk management.

Moreover, financial advisors and asset managers can play a crucial role in helping investors navigate the challenges posed by mental accounting. By providing clients with clear, unbiased information about the risks and returns of their investments, advisors can help mitigate the psychological biases that often lead to suboptimal decision-making. Financial advisors should also be trained to recognize the signs of mental accounting in their clients and encourage them to adopt more rational, evidence-based approaches to portfolio management.

Finally, regulatory bodies and financial institutions should consider implementing measures to improve the transparency and accessibility of financial information. By enhancing the quality of financial reporting and ensuring that investors have access to accurate and timely data, these institutions can help reduce information asymmetry and minimize the impact of cognitive biases like mental accounting. Providing investors with better tools and resources to evaluate their investments can lead to more informed decision-making and improve the overall efficiency of financial markets.

Authors' Contributions

Authors equally contributed to this article.

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Declaration of Interest

The authors report no conflict of interest.

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Ethical Considerations

All procedures performed in this study were under the ethical standards.

References

[1] Y. Chaleenutthawut, "Loan Portfolio Dataset From MakerDAO Blockchain Project," *Ieee Access*, vol. 12, pp. 24843-24854, 2024, doi: 10.1109/access.2024.3363225.

[2] Y. He, "A Study of Factors Influencing Investor Expectations in the Capital Market," *SHS Web of Conferences*, vol. 188, p. 01020, 2024, doi: 10.1051/shsconf/202418801020.

[3] L. Carvalho, "Socially Responsible Investment Funds—An Analysis Applied to Funds Domiciled in the Portuguese and

Spanish Markets," *Risks*, vol. 12, no. 1, p. 9, 2024, doi: 10.3390/risks12010009.
[4] E. K. Chowdhury, "Do weather patterns effect investment decisions in the stock market? A South Asian perspective," *Journal of Asset Management*, vol. 25, no. 2, pp. 162-171, 2024, doi: 10.1057/s41260-023-00334-z.
[5] F. Nikoo Sedeh, S. Shams, and M. Seyghali, "Modeling the Optimal Stock Portfolio Selection Based on Risk Assessment and Behavioral Finance Approach (Mental Accounting) in the Tehran Stock Exchange," *Journal of Financial Management Outlook*, vol. 10, no. 31, pp. 75-101, 2020, doi: 10.52547/jfmp.10.31.75.
[6] V. Furrer, F. Mumenthaler, S. Valkanover, M. Eckhart, and S. Nagel, "On the Relationship Between Teacher Attitudes Toward Inclusive Physical Education and Children's Social Interactions," *Journal of Primary Education Research*, vol. 14, pp. 237-256, 2021.
[7] E. A. Gordon, E. Henry, B. N. Jorgensen, and C. L. Linthicum, "Flexibility in Cash-Flow Classification under IFRS: Determinants and Consequences," *Review of Accounting Studies*, vol. 22, pp. 839-872, 2017, doi: 10.1007/s11142-017-9387-1.
[8] A. Chen and J. J. Gong, "Accounting Comparability, Financial Reporting Quality, and the Pricing of Accruals," *Advances in Accounting*, vol. 45, p. 100415, 2019, doi: 10.1016/j.adiac.2019.03.003.
[9] D. Messaoud, A. Ben Amar, and Y. Boujelbene, "Investor sentiment and liquidity in emerging stock markets," *Journal of Economic and Administrative Sciences*, vol. 39, no. 4, pp. 867-891, 2023, doi: 10.1108/JEAS-11-2020-0198.
[10] B. Y. Almansour, S. Elkrghli, and A. Y. Almansour, "Unravelling the Complexities of Cryptocurrency Investment Decisions: A Behavioral Finance Perspective From Gulf Investors," *International Journal of Professional Business Review*, vol. 8, no. 7, p. e03265, 2023, doi: 10.26668/businessreview/2023.v8i7.3265.
[11] G. Gu, "The Dynamic Interplay of Market Forces and Human Behavior: A Critical Review of Efficient Market Hypothesis and Behavioral Finance," *Advances in Economics Management and Political Sciences*, vol. 31, no. 1, pp. 54-59, 2023, doi: 10.54254/2754-1169/31/20231498.
[12] E. A. Mohammad, "The Economics of Behavioral Finance and Its Effects on Investment Decisions in Kurdistan Region of Iraq for the Period 2020-2022," *Koya University Journal of Humanities and Social Sciences*, vol. 6, no. 1, pp. 88-94, 2023, doi: 10.14500/kujhss.v6n1y2023.pp88-94.
[13] K. Sood, "Behavioral Finance and Investor Types: Managing Behavior to Make Better Investment Decisions," *Qualitative Research in Financial Markets*, vol. 15, no. 5, pp. 907-912, 2023, doi: 10.1108/qrfm-11-2023-237.
[14] F. Yasmin and J. Ferdaous, "Behavioral Biases Affecting Investment Decisions of Capital Market Investors in Bangladesh: A Behavioral Finance Approach," *Investment Management and Financial Innovations*, vol. 20, no. 2, pp. 149-159, 2023, doi: 10.21511/imfi.20(2).2023.13.
[15] M. Dadashi, N. Rezaei, A. Pak Maram, and R. Abdi, "Presentation of a Behavioral Model for Decision Making in Accounting Based on Psychological Components through Structural Equations," *Journal of Islamic Economics and Banking*, vol. 11, no. 38, pp. 137-158, 2022.
[16] T. Saha, S. K. Das, M. M. Rahman, F. K. Siddique, and M. G. Uddin, "Prospects and Challenges of Implementing Cloud Accounting in Bangladesh," *The Journal of Asian Finance, Economics and Business*, vol. 7, no. 12, pp. 275-282, 2020, doi: 10.13106/jafeb.2020.vol7.no12.275.
[17] Y. A. Jasim and M. B. Raewf, "Information Technology's Impact on the Accounting System," *Cihan University-Erbil Journal of Humanities and Social Sciences*, vol. 4, no. 1, pp. 50-57, 2020, doi: 10.24086/cuejhss.v4n1y2020.pp50-57.
[18] F. O. Nwokike and G. M. Eya, "A Comparative Study of the Perceptions of Accounting Educators and Accountants on Skills Required of Accounting Education Graduates in Automated Offices," *World Journal of Education*, vol. 5, no. 5, pp. 64-70, 2015, doi: 10.5430/wje.v5n5p64.
[19] G. Leoni *et al.*, "The Pervasive Role of Accounting and Accountability During the COVID-19 Emergency," *Accounting, Auditing & Accountability Journal*, vol. 35, no. 1, pp. 1-19, 2022, doi: 10.1108/AAAJ-10-2021-5493.
[20] H. Rezaei and M. Aghabayi Jazani, "The Necessity of Managing Deposit Portfolios with an Approach to Restructuring the Resources of Banks Listed on the Tehran Stock Exchange," *Journal of Islamic Economics and Banking*, vol. 10, no. 37, pp. 445-483, 2021.
[21] S. Kumar and N. Goyal, "Behavioral Biases in Investment Decision Making - A Systematic Literature Review," *Qualitative Research in Financial Markets*, vol. 7, no. 1, pp. 88-108, 2015, doi: 10.1108/QRFM-07-2014-0022.
[22] J. F. Casta and O. Ramond, "Financial Reporting and Fair Value: Where Do We Stand?," in *IFRS in a Global World: International and Critical Perspectives on Accounting*, 2016, pp. 57-70.