The Impact of Financial Intelligence on Investment Decisions: The Modifying Role of Behavioral Finance in Industrial Companies Listed on the Amman Stock Exchange

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Abstract. The study aimed to examine the impact of financial intelligence across its dimensions (professional skills, technical skills, cognitive skills) on investment decisions (time dimension, decision conditions dimension, and financing structure dimension), with behavioral finance serving as a moderating role in industrial companies listed on the Amman Stock Exchange. This research employed a descriptive analytical approach suitable for its objectives. The population consisted of all employees in the financial departments of industrial companies listed on the Amman Stock Exchange. Data were collected from secondary sources, such as the theoretical framework and recent relevant studies, as well as primary data through a simple random sample. The researcher distributed and collected 229 valid questionnaires for analysis. The SPSS program was used, and based on a significance level of 0.05, various statistical procedures and tests were conducted, including tests for normal distribution, multiple and simple regression, analysis of variance, correlation, coefficient of determination, multicollinearity, and hierarchical regression analysis. The study found that financial intelligence significantly impacts investment decisions, with behavioral finance acting as a moderating factor. The study recommended educating investment decision-makers to pay attention to financial intelligence due to its significant role in investment decisions.

Keywords: Behavioral finance, Financial intelligence, Industrial companies listed on the amman stock exchange, Investment decisions.

1. INTRODUCTION

Decision-making is a complex process that involves analyzing multiple factors and following various steps. Investment decisions, in particular, are of great significance to investors, as their success relies on the accuracy of the decision-making process. The effectiveness of such decisions is also influenced by the positive correlation between returns and the risks associated with these investments (Lehner, 2021). Technological advancements and corporate expansion necessitate the employment of skilled and competent managers capable of effectively managing companies. This, in turn, reflects the sound performance of managers, which contributes to the survival and growth of a company. This is one of the key attributes of financial intelligence. Financial intelligence is not an inherent skill but rather a set of acquired competencies that require practice and the application of financial concepts in real-world contexts (Fatehi & Hajiha, 2021). Furthermore, investment decisions are significantly influenced by behavioral finance. These decisions are affected by numerous internal and external factors, many of which are difficult to quantify. Accordingly, this study aims to explore the impact of financial intelligence on investment decisions while considering the modifying role of behavioral finance in industrial companies listed on the Amman Stock Exchange.

1.1. Statement of the Problem and Research Questions

The decision-making process requires continuous preparedness to navigate the intense fluctuations and rapid transformations occurring in the business environment, whether technological, managerial or financial. Investment decision-makers do not always make rational choices based on unbiased behavior; rather, they also rely on forecasting future trends. In light of this, the present study seeks to examine the impact of financial intelligence on investment decisions while considering the modifying role of behavioral finance in industrial companies. Based on the above, the problem of the study can be summarized in the following research questions:

1.2. Primary Research Question 1

What is the impact of financial intelligence, with its dimensions (professional skills, technical skills and cognitive skills), on investment decisions, with their combined dimensions (time horizon, decision conditions and financial structure), in industrial companies listed on the Amman Stock Exchange? This primary question is further divided into the following sub-questions:
1. What is the impact of financial intelligence, with its dimensions (professional skills, technical skills and cognitive skills), on the time horizon of investment decisions?
2. What is the impact of financial intelligence, with its dimensions (professional skills, technical skills and cognitive skills), on the decision conditions of investment decisions?
3. What is the impact of financial intelligence, with its dimensions (professional skills, technical skills and cognitive skills), on the financial structure of investment decisions?

1.3. Primary Research Question 2

What is the modifying role of behavioral finance in the relationship between financial intelligence and

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investment decisions in industrial companies?

1.4. Significance of the Study

The significance of this study lies in its exploration of the impact of financial intelligence on investment decisions while considering the modifying role of behavioral finance in industrial companies listed on the Amman Stock Exchange. This study is expected to serve as a valuable contribution to the existing body of knowledge, providing a crucial reference and a comprehensive database for future researchers in this field, in comparison with previous studies. Furthermore, it is hoped that the findings of this study will offer practical insights and useful recommendations for companies, ultimately contributing to the enhancement of creative behavior and fostering a greater passion for work among employees.

This study primarily aims to examine the impact of financial intelligence, with its combined dimensions (professional skills, technical skills and cognitive skills), on investment decisions, with their combined dimensions (time horizon, decision conditions and financial structure).

From this main objective, the following sub-objectives are derived: To determine the impact of financial intelligence, with its combined dimensions (professional skills, technical skills and cognitive skills), on the time horizon of investment decisions. To examine the impact of financial intelligence, with its combined dimensions (professional skills, technical skills and cognitive skills), on the decision conditions of investment decisions. To analyze the impact of financial intelligence, with its combined dimensions (professional skills, technical skills and cognitive skills), on the financial structure of investment decisions. To investigate the modifying role of behavioral finance in the relationship between financial intelligence and investment decisions in industrial companies. Figure 1 shows the model used in this study.
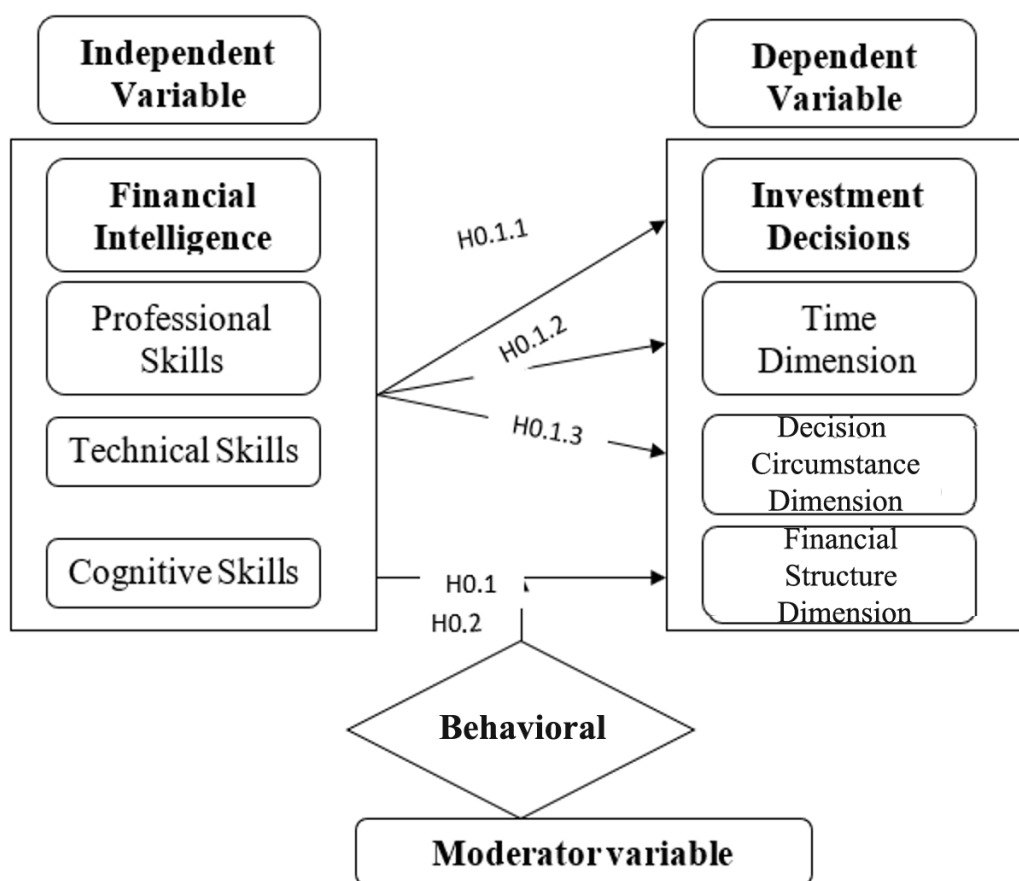

Figure 1: The study model.

1.5. Research Hypotheses

To address the research questions, the study adopts the following main hypothesis:Main Hypothesis 1:

Ho.1: There is no statistically significant impact at the significance level ($\alpha \leq 0.05$) of financial intelligence, with its dimensions (professional skills, technical skills and cognitive skills), on investment decisions, with their combined dimensions (time horizon, decision conditions and financial structure), in industrial companies listed on the Amman Stock Exchange.

This main hypothesis is further divided into the following sub-hypotheses:

-Ho.1.1: There is no statistically significant impact at the significance level ($\alpha \leq 0.05$) of financial intelligence, with its dimensions (professional skills, technical skills and cognitive skills), on the time horizon of investment decisions in industrial companies listed on the Amman Stock Exchange.

-Ho.1.2: There is no statistically significant impact at the significance level (α ≤ 0.05) of financial intelligence, with its dimensions (professional skills, technical skills and cognitive skills), on the decision conditions of investment decisions in industrial companies listed on the Amman Stock Exchange.

-Ho.1.3: There is no statistically significant impact at the significance level (α ≤ 0.05) of financial intelligence, with its dimensions (professional skills, technical skills and cognitive skills), on the financial structure of investment decisions in industrial companies listed on the Amman Stock Exchange.

Main Hypothesis 2:

Ho.2: There is no statistically significant impact at the significance level (α ≤ 0.05) of behavioral finance as a moderating factor in the relationship between financial intelligence and investment decisions in industrial companies listed on the Amman Stock Exchange.

1.6. Theoretical Framework and Previous Studies

Financial intelligence refers to the ability to manage money more effectively and efficiently by understanding and analyzing financial matters, properly managing income and balancing investments. The behaviors of investment decision-makers vary in response to fluctuations in stock prices and constantly changing trading indicators. Moreover, the psychological influences on investment decision-makers play a crucial role in the decision-making process, as individuals differ in how they seize opportunities and maximize benefits (Mohammed, 2020).

1.7. Financial Intelligence

The philosophy of financial intelligence is based on the premise that the performance of business enterprises can be enhanced through a clear and well-informed perception of financial markets. Additionally, it involves identifying financial success criteria and understanding their implications for overall corporate performance. Ibrahim and Al-Rawi (2014) stated that the primary objective of financial intelligence is to assist decision-makers in enhancing a company's performance. This can be achieved through a solid understanding of financial fundamentals, proficient handling of financial statements, and the application of analysis based on scientifically grounded information. Additionally, financial intelligence aims to provide a better understanding of the company's overall position, including its economic, competitive, technological and legal environment.

1.8. Dimensions of Financial Intelligence

The dimensions of financial intelligence are as follows:

- Cognitive Skills: These encompass a clear understanding and comprehensive knowledge of the fundamentals of financial management and accounting, including familiarity with accounting principles and assumptions (Al-Awadli & Shusha, 2023).

- Professional Skills: These involve an awareness of the nature of work and a thorough understanding of its aspects by possessing advanced competencies in financial analysis techniques and tools. Additionally, they include the ability to interpret financial statements in a manner that aligns with the objectives of decision-makers (Issa, 2018).

- Technical Skills: These are reflected in the ability to predict and draw conclusions in light of dynamic environmental conditions, as well as the capability to present relevant data through detailed reports tailored to the needs of stakeholders (Al-Rawaziq, Kazem & Al-Amiri, 2020).

1.9. Investment Decisions: Concept and Definition of Investment Decisions

Investment decisions are among the most complex decisions made by management or investment decision-makers due to their significant impact on the continuity and sustainability of an investment company (Shaab & Wajda, 2019). An investment decision-maker is an individual who is part of the society in which they live. Therefore, the success of an investment decision requires a thorough understanding of financial and psychological conditions, as well as a readiness to address and manage potential risks (Al-Najjar, 2017). There are various definitions of investment decisions. One definition describes them as decisions that require a certain amount of capital, which a company is willing to risk when approving an investment proposal (Al-Ghali, 2013). Another definition refers to them as the allocation of a specific amount of money and investment resources, involving present sacrifices for future benefits (Saleh, 2014). Additionally, investment decisions can be defined as the process of selecting the most suitable alternative from among several available options, with the objective of generating profits over successive years (Al-Jubouri, 2014).

1.10. Characteristics of Investment Decisions

Investment decisions are associated with various characteristics, including factors related to time, decision conditions and the financial structure of a project. Accordingly, the dimensions of investment decisions can be summarized as follows (Al-Hayali & Al-Jaafar, 2015; Abdul Kareem, 2021; Ahmad & Liaqat, 2020):

1.11. First Dimension: Time Horizon

There is a time gap between the initial expenditures and the realization of the expected future returns. This dimension encompasses several key characteristics (Abdul Kareem, 2021):

- Considering the time value of money when planning investment decisions.
- The long-term time frame significantly influences investment decision planning.
- Delays in providing information about the required timeframe may reduce the effectiveness of making an appropriate investment decision.

Second Dimension: Decision Conditions

Investment decisions are surrounded by various challenges and conditions that must be overcome, such as uncertainty and risk. This dimension includes several characteristics (Ahmad & Liaqat, 2020):

- Expected returns are uncertain, as investment decisions are inherently linked to risk and future conditions.
- Investment decisions are difficult to reverse, requiring extensive specialized studies to ensure their long-term success.
- Conducting an economic feasibility study is essential before making an investment decision.

Third Dimension: Financial Structure

This dimension comprises several key characteristics (Ahmad & Liaqat, 2020):

- The financial burden and cost of funding impact how a project is financed in the investment decision-making process.
- Comparing external loan financing with equity financing when making investment decisions.
- Retaining a portion of the company's profits for potential future investment opportunities.

1.12. Stages of Investment Decision-Making

According to Lehner (2021), the investment decision-making process consists of the following stages:

- Alternative Generation Stage: This stage involves addressing gaps in the investment decision process by seizing opportunities and mitigating potential threats from the external environment surrounding the investment decision-maker.
- Alternative Evaluation Stage: At this stage, investment alternatives are assessed based on key criteria, including their suitability to both the internal and external environment and their overall investment viability.
- Alternative Selection Stage: This stage focuses on identifying the most appropriate investment alternative.

1.13. Objectives of Investment Decisions

- Ensuring the availability of sufficient liquidity to address any unforeseen circumstances or financial obligations arising from the investment decision (Habbash & Manaa, 2018).
- Preserving the original capital of the project and protecting it from depletion or reduction during the investment process (Al-Ghali, 2013).
- Selecting the optimal investment alternative that guarantees the continuity and growth of cash flows (Saleh, 2014).
- Achieving the profits and returns sought by the investment company, ensuring the project's long-term sustainability.

1.14. Factors of Behavioral Finance

The concept of behavioral finance has been defined in various ways. It is commonly regarded as the study of psychological influences and their impact on investment decision-making, where such decisions are often driven by intuition and emotion (Rima, 2019). Behavioral finance also refers to intellectual openness in addressing financial problems, requiring an assessment of whether investment decision-makers, who are deeply engaged in economic analysis, behave rationally or irrationally (Mansour & Manaa, 2016). Additionally, behavioral finance serves as an interdisciplinary approach that bridges the gap between investor behavior and observed market phenomena by integrating insights from psychology and financial theory (Al-Najjar, 2017). From these definitions, it can be inferred that behavioral finance provides diverse, complex and unconventional perspectives. It suggests that investment decisions are significantly influenced by psychological factors and emotions, including panic, fear, envy, greed, satisfaction, arrogance and ambition. These emotions interact to varying degrees in the investment decision-making process. Accordingly, behavioral finance refers to the emerging trends that focus on explaining anomalies observed in financial markets and the behavior of investment decision-makers. It seeks to clarify aspects that the efficient market hypothesis fails to explain by integrating psychology with finance. As a result, behavioral finance has become a field rooted in psychological factors and psychological theories, influencing investment decision-making. Investment decisions are now based on the knowledge acquired

by decision-makers or on rational behaviors guided by logical reasoning within the frameworks of prospect theory and the ability to anticipate market movements (Waweru, Munyoki & Uliana, 2008). The key factors of behavioral finance can be summarized as follows: First Factor: Prospect Theory. Prospect theory focuses on investment decision-making influenced by investors' value systems, whereas the expected utility theory emphasizes the expectations of rational investors (Sukanya, 2015). Prospect theory identifies the factors that influence investment decision-making, which include regret avoidance, loss aversion and mental processes (Mohd & Alnajjar, 2016; Al-Mahmoudi, 2012; Sukanya, 2015).

Second Factor: Herding Behavior

The concept of herding behavior emerged due to the presence of investment decision-makers in financial markets who lack proper standards and foundations for making sound investment decisions (Sukanya & Stephen, 2015). Herding behavior refers to the tendency of investment decision-makers to imitate and follow others when making investment decisions within financial markets (Bennet et al., 2016).

Third Factor: Cognitive Bias

Cognitive bias is defined as the tendency of investment decision-makers to think in a particular manner that leads them away from rationality and sound judgment (Al-Zahrani & Hamdi, 2017). It is also described as a systematic deviation from rational judgment, where investment decision-makers create their own subjective reality based on their perceptions of inputs, rather than maintaining objectivity. This results in cognitive distortion, inaccurate judgments and illogical interpretations, which are classified as irrational behaviors (Geetha & Vimala, 2016). Cognitive bias is closely linked to the concept of conservatism, whereby new data is either disregarded or given insufficient attention (Bouajmi, Boujerfa & Ghalmi, 2019).

Fourth Factor: Overconfidence

Overconfidence is defined as the tendency of investment decision-makers to overestimate their cognitive abilities and investment skills. An investor with overconfidence believes they possess superior knowledge and expertise in making investment decisions compared to others (Mohammed, 2020). Overconfidence bias refers to an investor's belief that they have access to more information than is actually necessary for decision-making (Lodhi, 2017). It is also described as an investor's tendency to overestimate their judgment and predictive abilities (Kengatharan, 2015).

1.15. Previous Studies

Brho et al. (2025): This study aimed to develop a new financial model for understanding investment decisions, known as the Alpha Model, which addresses existing gaps in the field. The findings indicated that the Alpha Model is an effective framework for comprehending investment decisions. Additionally, the study provided practical implications for key stakeholders, including investment decision-makers. Ofir & Wiener (2025): This study examined the effects of behavioral biases among professional investors, using the case of investments in structured products. The results revealed that the examined biases influence professional investors to varying degrees. Suresh (2024): This study aimed to examine the combined impact of financial literacy and behavioral biases on investment decisions. The findings revealed that heuristic bias had a significant positive correlation with the formation of behavioral biases in decision-making. However, the effects of framing, cognitive illusions and herd mentality showed negative correlations in shaping behavioral biases. Elessa & Yassin (2023): This study aimed to examine the impact of behavioral finance factors, in their various dimensions, on investment decisions. The study employed a descriptive-analytical methodology suitable for its objectives. The findings indicated a statistically significant impact at the significance level ($\alpha \leq 0.05$) of behavioral finance factors, both collectively and individually, on investment decisions, also in both collective and individual dimensions. Moreover, all relationships were found to be strong and positively correlated in investment companies in Jordan. Khan et al. (2021): This study aimed to explore the impact of behavioral finance biases, specifically availability bias and representativeness bias, on investors' decision-making in the Pakistani stock market. The findings revealed that both availability bias and representativeness bias have a significant and positive influence on investment decisions among investors. Fatehi & Hajiha (2021): This study aimed to examine the impact of financial intelligence on the four core functions of operational managers and the financial performance of the Iranian Oil Refining and Distribution Company. The findings indicated that financial intelligence significantly influences both the operational functions of managers and the financial performance of the National Iranian Oil Refining and Distribution Company. Therefore, financial intelligence is considered a key factor in the financial success of an organization. Ahmad & Liaqat (2020): This study aimed to examine the impact of personal characteristics on investors' investment decisions, focusing on risk tolerance and extroversion. The findings revealed that extroversion has a significant positive effect on investment decisions, while risk tolerance partially mediates the relationship between extroversion and investment decisions. Bineshian et al. (2019): This study aimed to examine the role of biased behavior based on economic behavior and financial intelligence in the investment decision-making process. The findings indicated that greater control over biased behaviors related to economic behavior,

along with enhanced financial intelligence, leads to better investment decisions.

What sets this study apart from previous research is its comprehensive examination of all dimensions collectively. It specifically investigates the impact of financial intelligence on investment decisions while considering the moderating role of behavioral finance. Additionally, this study focuses on the role of financial intelligence in investment decision-making within industrial companies, aiming to enhance financial intelligence levels to achieve the desired performance outcomes.

2. RESEARCH METHODOLOGY AND PROCEDURES

The researcher adopted two primary statistical approaches commonly used in scientific research: Descriptive statistics and inferential statistics. Descriptive statistics involve a set of procedures used to summaries and describe the data collected. One of the key tools in descriptive statistics is measures of central tendency, which are widely employed to analyze and interpret data (Saunders et al., 2019).

2.1. Study Population and Sample

The study population consisted of all employees working in the financial departments of industrial companies listed on the Amman Stock Exchange, totalling 32 companies (N = 32). The study sample was selected using a simple random sampling technique. Data collection was conducted through an electronically distributed questionnaire, which was sent to all employees in the financial departments of the listed industrial companies. A total of 229 completed questionnaires were received, all of which were valid for statistical analysis. There were no missing responses, as the questionnaire was designed with mandatory answer fields using Google Drive. Accordingly, the final sample size for analysis was n = 229.

2.2. Data Collection Sources

1. Secondary Sources: The secondary sources included references such as books, journals, research papers and both Arabic and foreign studies related to the variables and dimensions of the current study.

2. Primary Sources: The primary data was collected through a questionnaire as a measurement tool to capture different perspectives from the study sample. The researcher structured the questionnaire into two main sections:

- The first section included demographic and professional information about the respondents.
- The second section consisted of 26 questions distributed across three key dimensions:

- The first dimension contained 12 questions measuring the independent variable (financial intelligence) and its sub-dimensions (professional skills, technical skills and cognitive skills).
- The second dimension included 9 questions assessing the dependent variable (investment decisions) and its sub-dimensions (time horizon, decision conditions and financial structure).
- The third dimension comprised 5 questions measuring the moderating variable (behavioral finance). To evaluate the relative estimation level of the participants' responses, the following mathematical equation was applied:

$$C = \frac{U.L - L.L}{3} \tag{1}$$

where: C represents the class width, U.L is the upper limit, L.L is the lower limit. Using this equation:

$$C = \frac{5 - 1}{3} = 1.33 \tag{2}$$

When distributed across three levels, this classification helps determine the relative estimation level of responses based on their corresponding arithmetic means (Bluman, 2017).

2.3. Validity and Reliability of the Measurement Tool

The validity and reliability of a measurement tool are typically determined by examining the relationship between respondents' performance on the tool and its intended function. Several indicators can be used to assess and enhance the validity and reliability of the instrument. The most commonly used methods in scientific research include the following:

2.3.1. Construct Validity (Concept Validity) of the Measurement Tool

Construct validity, also known as concept validity, refers to the ability of a test to predict theoretical expectations related to the trait being measured. This type of validity assumes the presence of a positive correlation exceeding 25% between each question and its corresponding dimension, using Pearson's correlation coefficient (r). If a question does not meet this correlation threshold, it is preferable to remove it to ensure the overall validity of the measurement tool (Patten & Newhart, 2023).

Table 1: Results of the construct or conceptual validity of the measurement tool.

Financial intelligence Professional Skills	Question	1	2	3	4
	R	0.748	0.805	0.816	0.746
Technical skills	Question	5	6	7	8
	R	0.790	0.863	0.759	0.758
Cognitive skills	Question	9	10	11	12
	R	0.838	0.830	0.797	0.776
Investment Decisions					
Time dimension	Question	13		14	15
	R	0.779		0.874	0.844
Decision Circumstance Dimension	Question	16		17	18
	R	0.883		0.880	0.715
Financing Structure Dimension	Question	19		20	21
	R	0.820		0.831	0.808
Behavioral Finance					
The Question	21	22	23	24	25
R	0.793	0.779	0.808	0.739	0.752

Based on the outputs of Table 1, it is evident that all measurement scale questions exhibit a positive correlation exceeding 25%, as indicated by the Pearson correlation coefficient (r). Consequently, all questions were retained, as they demonstrate an overall construct validity of the measurement tool.

2.3.2. Reliability of the Measurement Tool

Reliability was assessed using the Cronbach's Alpha Coefficient, which measures the internal consistency and homogeneity of the questionnaire items. A Cronbach's Alpha value of 70% or higher is considered statistically acceptable, with higher values indicating greater reliability (Creswell & Creswell, 2022). The results of the reliability test for the measurement tool are presented in Table 2.

Table 2: Reliability.

Variable	Dimension		No. of the Questions	Cronbach Alpha
Financial		Professional Skills	4	78.3%
Intelligence		Technical Skills	4	80.2%
		Cognitive Skills	4	82.5%
		General Index of Financial Intelligence Questions	12	82.2%
Investment	Time dimension		3	77.7%
Decisions	Decision circumstances		3	76.5%
	Financing structure		3	75.4%
	General Index of Investment Decision Questions		9	85.4%
Behavioral Finance	General Index of Behavioral Finance Questions		5	83.2%
General Index of Stability of All Scale Questions			26	91.2%

Based on the results of the reliability test presented in Table 2, it is evident that the questionnaire items demonstrate internal consistency, as indicated by the Cronbach's Alpha coefficient, which exceeded the acceptable threshold of 70%. This confirms the reliability of the measurement tool.

2.4. Multicollinearity Test Among Independent Dimensions

One of the key conditions for applying multiple linear regression is that the independent dimensions must not be linearly correlated. In other words, there should be no linear relationship between two or more independent variables. This issue, known as multicollinearity, arises when at least one of the independent dimensions forms a linear combination with other independent dimensions. When this condition is violated, it becomes difficult to accurately estimate the explanatory coefficients in the regression model (Salami, 2020). To determine whether there is any linear correlation between independent variables, the Variance Inflation Factor (VIF) was utilized. The VIF provides an accurate assessment to ensure that no unreasonable inflation of variance exists among the independent dimensions. Specifically, a VIF value not exceeding (5) for any of the independent dimensions indicates the absence of multicollinearity. In addition, the Tolerance value can be calculated by dividing 1 by the VIF value. If the tolerance falls within the range of (0.2 to 1), it further confirms that there is no multicollinearity problem among the independent dimensions (Hair et al., 2018).

Table 3: Examining multicollinearity between independent dimensions.

independent variable Dimensions	Professional Skills	Technical Skills	Cognitive Skills
Variance Inflation Factor (VIF)	1.137	1.282	1.169
Allowed Variance (1/VIF)	0.880	0.780	0.855

The results presented in Table 3 indicate that no multicollinearity issue exists. This conclusion is based on the Tolerance values, which fall within the acceptable range of 0.2 to 1, and the Variance Inflation Factor (VIF) values, which do not exceed 5. These findings confirm that the independent dimensions are not excessively correlated, ensuring the validity of the multiple regression model.

2.5. Statistical Tests Used in the Study

To address the research questions, evaluate the study model and achieve its objectives, the Statistical Package for the Social Sciences (SPSS) was used. This statistical software enabled the implementation of various descriptive and inferential statistical tests, which contributed to obtaining meaningful analytical results. The key statistical methods employed in this study include:

2.5.1. Descriptive Statistical Measures
- Calculation of means, standard deviations, frequencies and percentages to describe the demographic and professional characteristics of the study sample and to assess their perspectives on the study variables and dimensions.

2.5.2. Inferential Statistical Measures
Cronbach's Alpha: Used to test the reliability and internal consistency of the study instrument.

Variance Inflation Factor (VIF): Applied to test for multicollinearity among the independent variables and to assess the robustness of the study model. Durbin-Watson Test: Used to evaluate the presence of autocorrelation in the residuals of the regression model. Multiple Linear Regression (M.R): Employed to analyze the impact of multiple independent dimensions (more than two) on a single dependent variable. Hierarchical Regression (H.R): Used to examine the moderating role of behavioral finance in the relationship between financial intelligence and investment decisions.

3. RESULTS AND DISCUSSION
3.1. Description of Demographic and Professional Information

This section aims to present the frequencies and percentages of the demographic and professional information of the respondents. The analysis provides insights into the characteristics of the study sample, helping to understand the distribution of respondents based on key variables such as age, gender, educational background, job position and years of experience.

Table 4: Frequencies and percentages of the participants.

Variable	#	Categories	Freq.	%
Gender	1	Male	183	79.9%
	2	Female	46	20.1%
	Total		229	100%
Education	1	Diploma	36	15.7%
	2	Bachelor's	151	65.9%
	3	Master's	38	16.6%
	4	PhD	4	1.7%
	Total		229	100%
Work experience	1	From 1 to Less than 5 years	12	5.2%
	2	From 5 to less than 10 years	36	15.7%
	3	From 10- to less than 15 years	118	51.5%
	4	From 15 years and over	63	27.5%
	Total		229	100%
Job Title	1	Administrative/Technical	31	13.5%
	2	Head of Department	27	11.8%
	3	Financial/Administrative Manager	23	10%
	4	Executive Manager (General)	9	3.9%
	5	Other	139	60.7%
	Total		229	100%

The results presented in Table 4 indicate the following key findings:
- Gender Distribution: The vast majority of respondents in the study sample were male, accounting for 79.9% (n = 183), while female respondents constituted only 20.1% (n = 46). The researcher attributes the higher proportion of males in the studied sector to the nature of the work, which often requires long working hours and full-time commitment, particularly at the end of the financial year. These conditions

may not align with the commitments of many women. Additionally, social factors play a role in directing men toward this field more than women.

- -Educational Qualification: The majority of respondents held a bachelor's degree, representing 65.9% (n = 151), while the lowest proportion, 1.7% (n = 4), held a PhD. These levels of educational attainment suggest that respondents have a strong understanding of the study's questionnaire and its significance in scientific research, ensuring accurate and competent responses.

- Years of Experience: Most respondents had 10 to less than 15 years of experience, making up 51.7% (n = 118), whereas the smallest proportion, 5.2% (n = 12), had 1 to less than 5 years of experience. This indicates that the majority of the sample consists of experienced professionals, which enhances the reliability and accuracy of their responses regarding the prevailing conditions in the studied sector.

- Job Position: The largest proportion of respondents held positions not explicitly listed, including accountants, financial auditors and cost accountants, accounting for 60.7% (n = 139). Conversely, the smallest proportion of respondents were executive managers, comprising only 3.9% (n = 9). The researcher attributes the relatively high proportion of accountants and financial auditors to the organizational structure of financial departments in industrial companies listed on the Amman Stock Exchange, which primarily relies on these roles, followed by administrative and technical staff, with executive managers forming the smallest group.

3.2. Descriptive Statistics for Study Variables and Dimensions

Results of Descriptive Statistical Analysis for the Independent Variable (Financial Intelligence) In this section, the mean and standard deviation were calculated for the questions related to the dimensions of the independent variable (financial intelligence), leading to an overall indicator. The questions were then ranked, organized, and assessed to determine the degree of their application. The results are presented in Table 5.

Table 5: Descriptive statistics for the independent variable dimensions (financial intelligence).

Question	Mean	S/D	%	Applicability	Level
General Index of Professional Skills	4.19	0.494	83.8	High	1
General Index of Technical Skills	3.93	0.604	78.6	High	3
General Index of Cognitive Skills	3.96	0.614	79.2	High	2
Overall Index of Financial Intelligence	4.03	0.419	80.6	High	
General Index of Time Dimension	4.10	0.563	82	High	1
General Index of Decision Circumstances Dimension	4.05	0.576	81	High	2
General Index of Financing Structure Dimension	4.00	0.601	80	High	3
Overall Index of Investment Decisions	4.05	0.478	81	High	
General Index of Behavioral Finance	4.10	0.556	82	High	

After calculating the descriptive statistical indicators presented in Table (4-2), the overall financial intelligence index recorded a mean of 4.03 with a standard deviation of 0.419. Upon analyzing the dimensions of financial intelligence, the results indicate the following rankings:

-Professional Skills ranked first, achieving a high level of application with a mean of 4.19 and a standard deviation of 0.494.

- Cognitive Skills ranked second, also demonstrating a high level of application, with a mean of 3.96 and a standard deviation of 0.614.

- Technical Skills ranked third, maintaining a high level of application, with a mean of 3.93 and a standard deviation of 0.604.

After calculating the descriptive statistical indicators, the overall investment decisions index recorded a mean of 4.05 with a standard deviation of 0.478. Upon analyzing the dimensions of investment decisions, the results indicate the following rankings:

- Time Horizon ranked first, with a high level of importance, achieving a mean of 4.10 and a standard deviation of 0.563.

- Decision Conditions ranked second, also with a high level of importance, recording a mean of 4.05 and a standard deviation of 0.576.

- Financial Structure ranked third, maintaining a high level of importance, with a mean of 4.00 and a standard deviation of 0.601.

The overall mean for the moderating variable (behavioral finance) was 4.10, with a standard deviation of 0.556. This result indicates a high level of relative importance attributed to behavioral finance in industrial companies listed on the Amman Stock Exchange.

3.3. Results of the Statistical Test for the Study Hypotheses

The study hypotheses were tested using Multiple Regression Analysis (M.R) for the first main hypothesis, which includes three sub-hypotheses, and Hierarchical Regression Analysis (H.R) for the second main hypothesis. The results are presented as follows:

3.3.1. Statistical Test for the First Main Hypothesis

HO.1: "There is no statistically significant effect at the significance level ($\alpha \leq 0.05$) of financial intelligence, with its dimensions (professional skills, technical skills, and cognitive skills), on investment decisions, with their combined dimensions (time horizon, decision conditions, and financial structure) in industrial companies listed on the Amman Stock Exchange."

Table 6: Results of the first main hypothesis test.

Model Summary							ANOVA Sig.
R	R Square	Adjusted R Square	Df	F	F-Tabulated		
0.615	0.378	0.369	3 225	45.511	2.60	0.000	
D.V	I.V	B	Std. Error	Beta	Coefficient t	Sig	
Investment decisions	Constant	1.142	0.255		4.474	0.000	T-Tabulated= (1.96)
	Professional Skills	0.301	0.054	0.311	5.541	0.000	
	Technical Skills	0.212	0.047	0.268	4.503	0.000	
	Cognitive Skills	0.205	0.044	0.264	4.634	0.000	

The results presented in Table 6 and the model summary indicate that the correlation coefficient (R) is (%), and when squared, the coefficient of determination (R^2) = (0.), meaning that (%) of the variance in investment decisions can be explained by the application of financial intelligence. The Analysis of Variance (ANOVA) results confirm the statistical validity of the model, as indicated by the F-significance value (F.Sig = 0.000), which is less than 0.05, and the calculated F-value (F = 45.511), which is greater than the critical F-value at (df = 3/225). The standardized coefficients show that all dimensions of financial intelligence significantly contribute to investment decisions, as evidenced by the p-value (t.Sig < 0.05) and the calculated t-values, which exceed the critical value (1.96). The Beta coefficients (β) indicate that a one-unit increase in professional skills leads to a 0.311 increase in investment decisions, a one-unit increase in technical skills leads to a 0.268 increase, and a one-unit increase in cognitive skills leads to a 0.264 increase. Based on the Multiple Regression (M.R) analysis results, the null hypothesis (HO) is rejected, and the alternative hypothesis (Ha) is accepted, which states: *"There is a statistically significant effect at the significance level ($\alpha \leq 0.05$) of financial intelligence, with its dimensions (professional skills, technical skills, and cognitive skills), on investment decisions, with their combined dimensions (time horizon, decision conditions, and financial structure) in industrial companies listed on the Amman Stock Exchange."* Thus, the statistical analysis results for the first main hypothesis provide an answer to the first research question of the study.

3.3.2. First Sub-Hypothesis

HO.1.1: "There is no statistically significant effect at the significance level ($\alpha \leq 0.05$) of financial intelligence, with its dimensions (professional skills, technical skills, and cognitive skills), on the time horizon of investment decisions in industrial companies listed on the Amman Stock Exchange."

Table 7: Results of the first sub-hypothesis test.

Model Summary			ANOVA			Sig.
R	R Square	Adjusted R Square	Df	F	F Tabulated	
0.495	0.245	0.235	3 225	24.350	2.60	0.000
D.V	I.V	B	Std. Error	Beta	Coefficient t / Sig	
Time dimension of investment decisions	Constant	1.321	0.331		3.987 / 0.000	T-Tabulated= (1.96)
	Professional Skills	0.301	0.070	0.264	4.274 / 0.000	
	Technical Skills	0.163	0.061	0.174	2.658 / 0.008	
	Cognitive Skills	0.222	0.057	0.242	3.868 / 0.000	

The results presented in Table 7 and the model summary indicate that the correlation coefficient (R) = 49.5%, and when squared, the coefficient of determination (R^2) = 0.245, meaning that 24.5% of the variance in the time horizon of investment decisions can be explained by the application of financial intelligence. The Analysis of Variance (ANOVA) results confirm the statistical validity of the model, as indicated by the F-significance value (F.Sig = 0.000), which is less than 0.05, and the calculated F-value (F = 24.350), which is greater than the critical F-value at (df = 3/225). The standardized coefficients show that all dimensions of financial intelligence significantly contribute to the time horizon of investment decisions, as evidenced by the p-value (t.Sig < 0.05) and the calculated t-values, which exceed the critical value (1.96). The Beta coefficients (β) indicate that a one-unit increase in professional skills leads to a 0.264 increase in the time horizon of investment decisions, a one-unit increase in cognitive skills leads to a 0.242 increase, and a one-unit increase in technical skills leads to a 0.174 increase. Based on the Multiple Regression (M.R) analysis results, the null hypothesis (HO) is rejected, and the

alternative hypothesis (Ha) is accepted, which states: "There is a statistically significant effect at the significance level ($\alpha \leq 0.05$) of financial intelligence, with its dimensions (professional skills, cognitive skills, and technical skills), on the time horizon of investment decisions in industrial companies listed on the Amman Stock Exchange." Thus, the statistical analysis results for the first sub-hypothesis provide an answer to the first sub-question of the study.

3.4. Statistical Test for the Second Sub-Hypothesis

HO.1.2: "There is no statistically significant effect at the significance level ($\alpha \leq 0.05$) of financial intelligence, with its dimensions (professional skills, technical skills, and cognitive skills), on the decision conditions of investment decisions in industrial companies listed on the Amman Stock Exchange."

Table 8: Results of the second sub-hypothesis test.

R	R Square	Model Summary Adjusted R Square	Df	F	F tabulated		ANOVA Sig.
0.569	0.324	0.315	3 225	35.904	2.60		0.000
D.V	I.V	B	Std. Error	Beta	t	Sig	Coefficient
The investment decision Circumstances dimension	Constant	0.801	0.321		2.498	0.013	T-Tabulated=(1.96)
	Professional Skills	0.330	0.068	0.283	4.837	0.000	
	Technical Skills	0.222	0.059	0.233	3.753	0.000	
	Cognitive Skills	0.249	0.056	0.266	4.486	0.000	

The results presented in Table 8 and the model summary indicate that the correlation coefficient (R) = 56.9%, and when squared, the coefficient of determination (R^2) = 0.324, meaning that 32.4% of the variance in the decision conditions of investment decisions can be explained by the application of financial intelligence. The Analysis of Variance (ANOVA) results confirm the statistical validity of the model, as indicated by the F-significance value (F.Sig = 0.000), which is less than 0.05, and the calculated F-value (F = 35.904), which is greater than the critical F-value at (df = 3/225). The standardized coefficients show that all dimensions of financial intelligence significantly contribute to decision conditions, as evidenced by the p-value (t.Sig < 0.05) and the calculated t-values, which exceed the critical value (1.96). The Beta coefficients (β) indicate that a one-unit increase in professional skills leads to a 0.283 increase in decision conditions, a one-unit increase in cognitive skills leads to a 0.266 increase, and a one-unit increase in technical skills leads to a 0.233 increase. Based on the Multiple Regression (M.R) analysis results, the null hypothesis (HO) is rejected, and the alternative hypothesis (Ha) is accepted, which states: "There is a statistically significant effect at the significance level ($\alpha \leq 0.05$) of financial intelligence, with its dimensions (professional skills, cognitive skills, and technical skills), on the decision conditions of investment decisions in industrial companies listed on the Amman Stock Exchange." Thus, the statistical analysis results for the second sub-hypothesis provide an answer to the second sub-question of the study.

3.5. Statistical Test for the Third Sub-Hypothesis

HO.1.3: "There is no statistically significant effect at the significance level ($\alpha \leq 0.05$) of financial intelligence, with its dimensions (professional skills, technical skills, and cognitive skills), on the financial structure of investment decisions in industrial companies listed on the Amman Stock Exchange."

Table 9: Results of the third sub-hypothesis test.

Model Summary R	R Square	Adjusted R Square	Df	F	ANOVA F Tabulated	Sig.
0.462	0.214	0.203	3 225	20.370	2.60	0.000
D.V	I.V	B	Std. Error	Beta	t — Coefficient Sig.	
Financing structure of investment decisions dimension	Constant	1.304	0.361		3.615 — 0.000	T-Tabulated =(1.96)
	Professional Skills	0.271	0.077	0.223	3.536 — 0.000	
	Technical Skills	0.252	0.067	0.253	3.781 — 0.000	
	Cognitive Skills	0.143	0.062	0.147	2.295 — 0.023	

The results presented in Table 9 and the model summary indicate that the correlation coefficient (R) = 46.2%, and when squared, the coefficient of determination (R^2) = 0.214, meaning that 21.4% of the variance in the financial structure of investment decisions can be explained by the application of financial intelligence. The Analysis of Variance (ANOVA) results confirm the statistical validity of the model, as indicated by the F-significance value (F.Sig = 0.000), which is less than 0.05, and the calculated F-value (F = 20.370), which is

greater than the critical F-value at (df = *3/225*). The standardized coefficients show that all dimensions of financial intelligence significantly contribute to the financial structure of investment decisions, as evidenced by the p-value (t.Sig < 0.05) and the calculated t-values, which exceed the critical value (1.96). The Beta coefficients (β) indicate that a one-unit increase in technical skills leads to a *0.253* increase in the financial structure of investment decisions, a one-unit increase in professional skills leads to a *0.223* increase, and a one-unit increase in cognitive skills leads to a *0.147* increase. Based on the Multiple Regression (M.R) analysis results, the null hypothesis (HO) is rejected, and the alternative hypothesis (Ha) is accepted, which states: "There is a statistically significant effect at the significance level (α ≤ 0.05) of financial intelligence, with its dimensions (technical skills, professional skills, and cognitive skills), on the financial structure of investment decisions in industrial companies listed on the Amman Stock Exchange." Thus, the statistical analysis results for the third sub-hypothesis provide an answer to the third sub-question of the study.

3.6. Statistical Test for the Second Main Hypothesis

Ho.2: "There is no statistically significant effect at the significance level (α ≤ 0.05) of behavioral finance as a moderating factor in the relationship between financial intelligence and investment decisions in industrial companies listed on the Amman Stock Exchange." This hypothesis was tested using Hierarchical Regression Analysis (H.R), which represents the answer to the second main research question. The results of the analysis are presented in Table 10.

Table 10: Results of the second main hypothesis test.

Dependent variable	Statement	Model 1			Model 2			Model 3		
		T	Beta	(sig.)	T	Beta	(sig.)	T	Beta	(sig.)
Investment Decisions	Financial Intelligence	11.602	0.610	0.00	6.860	0.375	0.00	4.261	0.288	0.00
	Behavioral Finance				8.093	0.443	0.00	3.615	0.304	0.00
	Bilateral Interaction							2.157	0.222	0.032
	(R) value	0.610			0.716			0.723		
	value Δ (R)				0.106			0.113		
	value (R²)	0.372			0.513			0.523		
	value Δ (R²)				0.141			0.151		
	Calculated F value	134.595			119.166			82.279		
	Sig F.	0.00			0.00			0.00		

Table 10 presents the results of the Hierarchical Regression Analysis (H.R). In the first model, the effect of financial intelligence on investment decisions in Jordanian industrial companies was examined. The results confirm a significant impact, as indicated by the F-value (134.595), which is statistically significant at (α ≤ 0.05). This finding is further supported by the Beta coefficient (Beta = 0.610), which shows a positive relationship, and the T-value (T = 11.602), which is also significant at (α ≤ 0.05). Additionally, financial intelligence explained 37.2% of the variance in investment decisions, as indicated by the coefficient of determination (R^2 = 0.372). In the second model, behavioral finance was introduced as a moderating variable to assess its effect on investment decisions. The results indicate a significant impact of behavioral finance, as demonstrated by the F-value (119.166), which is statistically significant at (α ≤ 0.05). This result is further supported by the Beta coefficient (Beta = 0.443), which also shows a positive relationship, and the T-value (T = 8.093), which is significant at (α ≤ 0.05). Furthermore, the inclusion of behavioral finance led to an increase of 14.1% in R^2, indicating an improved explanatory power of the model compared to the first model.

3.7. Analysis of the Third Model in the Hierarchical Regression (H.R) Test

In the third model, the interaction term between financial intelligence and behavioral finance was introduced to assess its moderating effect. The results indicate a significant impact of this interaction, as demonstrated by the F-value (82.279), which is statistically significant at (α ≤ 0.05). This finding is further supported by the Beta coefficient (Beta = 0.222), indicating a positive relationship, and the T-value (T = 2.157), which is also significant at (α ≤ 0.05). Additionally, the coefficient of determination (R^2) increased by 15.1% when comparing the first model to the third model, further confirming the moderating role of behavioral finance in the relationship between financial intelligence and investment decisions. Accordingly, it can be concluded that behavioral finance acts as a moderating variable in the relationship between financial intelligence and investment decisions, in a positive direction. This means that as financial intelligence increases, the presence of behavioral finance further enhances investment decisions. Based on the statistical analysis results and in adherence to decision-making rules, the null hypothesis (HO) is rejected, and the alternative hypothesis (Ha) is accepted, which states: "There is a statistically significant effect at the significance level (α ≤ 0.05) of behavioral finance as a moderating factor in the relationship between financial intelligence and investment decisions in industrial companies listed on the Amman Stock Exchange."

4. CONCLUSIONS

This chapter presents the key findings of the study, along with proposed recommendations based on these results. These recommendations aim to reinforce strengths and address weaknesses to achieve the intended objectives of examining the impact of financial intelligence on investment decisions, with the moderating role of behavioral finance in industrial companies listed on the Amman Stock Exchange.

-The study confirmed the existence of a statistically significant effect at the ($\alpha \leq 0.05$) level of financial intelligence, with its dimensions (professional skills, technical skills, and cognitive skills), on investment decisions, with their combined dimensions (time horizon, decision conditions, and financial structure) in industrial companies listed on the Amman Stock Exchange.

-This finding aligns with the study by Al-Jubouri (2021), which also concluded that financial intelligence influences investors' decision-making, helping them achieve their financial goals. The researcher interprets this result by emphasizing that high professional qualifications enhance the ability to effectively handle financial statements and decision-making processes. The study confirmed the existence of a statistically significant effect at the ($\alpha \leq 0.05$) level of financial intelligence, with its dimensions (professional skills, cognitive skills, and technical skills), on the time horizon of investment decisions in industrial companies listed on the Amman Stock Exchange. This finding aligns with the study by Fatehi & Hajiha (2021), which concluded that financial intelligence influences the four core functions of operational managers and financial performance. The researcher interprets this result by stating that the time horizon plays a crucial role in investment decision planning, as it directly affects the feasibility and strategic outlook of investment choices. The study confirmed the existence of a statistically significant effect at the ($\alpha \leq 0.05$) level of financial intelligence, with its dimensions (professional skills, cognitive skills, and technical skills), on decision conditions in investment decisions in industrial companies listed on the Amman Stock Exchange. This finding aligns with the study by Bineshian et al. (2019), which concluded that greater control over biased behaviors based on economic behavior, combined with enhanced financial intelligence, leads to better investment decisions. The researcher interprets this result by suggesting that companies have a strong awareness of the prevailing culture in the environment in which they operate, enabling them to make more informed and strategic investment decisions. The study confirmed the existence of a statistically significant effect at the ($\alpha \leq 0.05$) level of financial intelligence, with its dimensions (technical skills, professional skills, and cognitive skills), on the financial structure of investment decisions in industrial companies listed on the Amman Stock Exchange. This finding aligns with the study by Al-Awadli & Shosho (2023), which concluded that financial intelligence plays a crucial role in financial decision-making. The researcher interprets this result by emphasizing that financial burden and funding costs significantly impact the method of project financing, influencing investment decision-making processes. The study confirmed the existence of a statistically significant effect at the ($\alpha \leq 0.05$) level of behavioral finance as a moderating factor in the relationship between financial intelligence and investment decisions in industrial companies listed on the Amman Stock Exchange. This finding aligns with the study by Elessa & Yassin (2023), which concluded that behavioral finance influences investment decisions, with rationality acting as a mediating factor. The researcher interprets this result by suggesting that when uncertainty or turbulence arises in the surrounding environment, companies tend to exercise caution and verify their decisions rather than reacting impulsively.

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