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Financial engineering's role in improving financial performance A sample of commercial banks listed on the Iraqi Stock Exchange was investigated.

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Abstract: The current research aims to indicate the role of financial engineering on one of its instruments, namely, financial derivatives in the development of financial performance in the opinion of the directors of commercial banks, and raised the problem of research with a range of questions centered on the nature of the link and the impact between the search variables and their effect, and used the questionnaire form as a tool for obtaining information, as the questionnaire forms were distributed to the Dra and specialists in banks and its numbers (50) form have been retrieved (44) form and were analyzable, and to know the validity of the hypotheses were many tests were conducted by the use of the statistical analysis program and the research produced the descriptive analytical approach, where the research reached a set of conclusions, the most important of which is there There is a statistically significant correlation between financial engineering (derivatives) and the financial performance of commercial banks research sample, this confirms the benefit of the banks researched in identifying financial engineering products and their contribution to financial performance, as well as the presence of a positive impact and moral levels of the financial engineering variable in the financial performance variable , and the research recommends the need to invest strong relationships between financial engineering and Financial performance at the macro and partial levels and the investment of this relationship to serve the private banks that are under consideration.

Keywords: Financial engineering, derivatives, financial performance.

Introduction

The last years of the twentieth century have witnessed significant developments and changes in various areas, including in the financial and banking industries, namely, the communications and information technology revolution and price fluctuations, including commodity prices and interest rates, and the severe competitive pressures they impose in financial institutions in general and banks in particular.

Good financial performance is the main factor of the financial system to achieve its main objective, which is economic efficiency, plays an important and pivotal role in the risk management process in financial institutions and lifts restrictions on capital, currencies and monetary centers, which has led to the emergence of new opportunities for banks to

increase their financing and manage their risks in new ways and using financial engineering and their products. Financial engineering in banks has made it possible to use several types of returns in banking on a daily basis for financial instruments, and financial engineering has become a development process and has a major role to play in revitalizing financial institutions and banks.

From this point of view, the current research examined the role of financial engineering in the development of financial performance through four chapters, the first chapter dealt with the methodology of research, while the second chapter touched on the theoretical aspect of the variables of financial engineering and financial performance, as the third chapter was devoted to the theoretical aspect of the study, while the fourth chapter of the study touched on the conclusions and recommendations.

Chapter 1: Research Methodology

First: The problem of research: Despite numerous research on the subject of financial engineering and its products and the possibility of their use in financial institutions and banks, interest in it in Iraq, specifically commercial banks, is still limited and the role of financial engineering operations in banks seeking to develop the financial performance of the banks Limited and raises many questions and intellectual controversy from its theoretical and applied aspects, where financial engineering and its products such as securitation and derivatives are among the most controversial topics between researchers and dealers of these financial instruments for the purpose of improving financial performance including improving liquidity and generating bank credit, and these researchers and clients differed opinions on the nature of the relationship and from the above we can formulate the main research problem as follows: What is the role of financial engineering in developing financial performance? These key forms include a set of questions:

1. How well do researched banks know the concept of financial engineering and its instruments so that they can develop their financial performance?

2- Can the researcher's view of the variable of financial engineering and financial performance be compatible?

3. Is there a correlation and impact between the variable of financial engineering and financial performance?

Second: The importance of research: The importance of research is reflected in the following:

Academic importance:

❖ Combining two modern variables in the field of financial management that are largely limited in addressing financial engineering and financial performance .

❖ Presenting a theoretical framework in a contemporary direction that links these two variables, this linkage may represent a modest scientific attempt to enrich the knowledge library.

Field importance:

❖ We draw the importance of research from the theme "The role of financial engineering in developing financial performance" in the fact that the function of financial engineering is one of the most important functions that are filled to keep up with the purpose of developing the performance of commercial banks from keeping pace with development and technology.

❖ Achieving better financial investment opportunities in the banking sector, this highlights the importance of research in being a scientific attempt to understand and study the nature of the type of relationship and impact that emphasizes the credibility of financial engineering products, which have increased significantly in the last three decades and the need to create new credible financial innovations and achieve high efficiency and economic efficiency.

❖ The importance of demonstrating the role that financial engineering in the banking and financial industry can play in supporting financial and banking institutions in increasing their competitiveness, especially if authentic and diversified financial products are developed and are able to meet the financial needs of financial applicants and investors.

Third: Search objectives:

1- This research aims to achieve a range of objectives by identifying the financial engineering and the foundations on which it is based, and then learning about the various financial aspects associated with financial performance.
2-Enriching the theoretical and intellectual aspect of the subject of financial engineering and financial performance.
3-Learn about the most important products of financial engineering, and then stand up to the possibility of applying engineering products and the extent to which they are applied in banks.
4- Learn about the nature of relationships and the impact between search variables.
5-Make proposals that can contribute to the service of researched banks in the light of the conclusions to be reached by the research.

Fourth: Research hypotheses:

The research has formulated a number of hypotheses to achieve the objectives of the current research as follows:

1- **The first main hypothesis**: the opinions of researchers in commercial banks differ towards describing the variables of the current research.
2- **The second main hypothesis:**

- **The second basic hypothesis**: (HO:2) There is no statistically significant correlation between financial engineering (derivatives) and the financial performance of commercial banks research sample.

- **Its alternative hypothesis** (H1:2): There is a correlation with statistically significant correlation financial engineering (derivatives) and the financial performance of commercial banks research sample.

Fifth: Search limits:

1- Spatial boundaries: The research dealt with commercial banks listed on the Iraqi Stock Exchange.
2- Temporal boundaries: The duration of the application study in commercial banks was the research sample and began distributing, retrieving and analysing questionnaire forms from 18 February 2021 to 27 April 2002.
3- Human boundaries: The current research included managers and specialists in commercial banks.

4- Scientific Boundaries: The research was limited to knowing the role of financial engineering in developing financial performance by managers in commercial banks listed on the Iraqi Stock Exchange.

Chapter 2: The Theoretical Aspect

Axis 1: **Financial Engineering**

First: The concept of financial engineering: financial engineering is one of the modern financial terms that entered the world of finance and investment, and the financial industry has differed in the interpretation and definition of financial engineering, some of them circulated it to all branches of finance, including those who allocated it to a branch of its branches such as financial management or financial markets. Financial and enterprise value determination, risk distribution, introduction of new ways of financing, liquefaction of financial assets, portfolio management and other methods and tools that have contributed to the interdependence and efficiency of financial markets, as well as financial engineering is a financial entry point used by financial institutions to reach appropriate solutions to the problems facing their various clients.
. (Merton, 1995: 28-29) And I knew a few acquaintances from her.

source	Definition
(Henidi, 2006:14)	It is a science that demonstrates design and development and the application of new financial processes and instruments and the provision of creative and creative solutions to financial problems
(2000:79 (Marshall,	That is, they reflect investment and speculation processes that help achieve the advantages of the trade-off between return and risk.
(2011:3 Ross,)	As the process of fine-tuning current financial products to improve returns and reduce risks in light of changing market conditions

Through the above, financial engineering has been defined as a set of new and development financial instruments, carrying out innovative technical processes and financial sports models with the aim of exploiting opportunities, providing and improving liquidity financing, streamlining the handling of these innovative methods, reducing and protecting the risks to financial and banking establishments, and providing new and innovative services and products, including:

1- New financial innovations.
2- Provide solutions to financial problems.
3- Reduce risk and reduce financial and business costs.

Second: Financial engineering products: Financial engineering has provided customers with new tools to find creative solutions to financing problems as well as to hedge the risks that increase in the investment environment represented by these instruments in various types of derivatives. These financial institutions operate in them, particularly banks, where securitization and derivatives are among the most important financial engineering products approved for current research as follows:

1- **Securitization:** Securitization was the leading reason for the introduction of this new technology in the United States of America in the early 1970s and 1980s and addressed the financial crises involving the distribution of mortgages, which were dominated by useless transactions that led to several crises, most notably the crisis of "savings and reserve associations" since the early 1980s, which used short-term savings to finance long-term housing loans, which caused the united States financial crisis strongly and effectively (Khamisi, 20400). : 17). As well as reducing risk and ensuring the continued flow of liquidity 277) 2005: (Peter Ross & Sylvia C. Hudgines, . . . securitizing) is the technique by which non-liquid financial assets such as loans and other non-liquid funds are changed into securities or cash liquidity (shares and bonds) that can be traded in the capital markets (Improved, 2001: 11: 11).

Bank securitization is an emerging financial instrument that a financial institution mobilizes a range of homogeneous and secured debt as assets, puts it in the form of a single credit-enhanced debt and then presents it to the public through a specialized securities subscription facility to reduce risk, and to ensure the continued flow of the bank's cash flow (Talib, 2007: 44).

2- **Derivatives:** At first derivatives can be defined as a language and a term, deriving is taking something from something that has taken an apartment or half of it (the origin of the language), but the term does not stray from the meaning of the language, and can be defined as cutting a branch out of The term derivatives is referred to as a wide range of financial instruments concentrated in options and future contracts, which are instruments valued from the price and variables. Others, related to other assets, have no value of their own and derive their value from other financial assets. Derivatives can be defined as a way to reap something from something else, or as a derivative tool whose value is determined by the value of another financial asset that may be securities and others(Ashutosh satish, 16:0102) Where it was known that derivatives "are new and diversified investment instruments, named after this name because they are derived from traditional investment instruments such as stocks or bonds, and depend on the prices of these instruments, and include a range of financial contracts that vary according to their nature, risks and maturities (Boumediene, 2013: (128.

As we found out, derivatives markets in the United States, Britain and Europe began in the 1970s, as we mentioned earlier, 438 2006: Gangadhar. The first regulated derivatives market was established in Chicago in April 1973 and spread to other U.S. exchanges, and the last quarter of the twentieth century saw a significant growth in trade and diversity in derivatives and the number of users of these contracts increased, and transactions in these contracts between 1986 and 1996 increased more than thirty times to more than $30 trillion. (Arnold, 1998: 893) Several factors are required to drive the right direction for the proper use of derivatives, including:

1- Give appropriate attention and allocate adequate resources towards risk control management.

2- Derivatives dealers have sufficient experience even in complex cases.

3- Avoid some factors affecting the misuse of derivatives such as personal greed, political interference and others (2012 415: Simon,). Derivatives also explained that "it is known that the prices of stocks, metals and currencies fluctuate over time, that the possibility of negative price changes in the future creates risks for companies, and derivatives are used to eliminate or reduce the price caused by unexpected price changes

. (Narender, 155:6002) derivatives are known as "new and diversified investment instruments, named after them because they are derived from traditional investment instruments such as stocks or bonds, and depend on their value on the prices of these instruments, and include a range of financial contracts that vary according to their nature, risks and maturities. (Boumediene, 2013: 128)

Axis 2: Financial Performance

First: The concept of the financial performance of banks:

There was a lot of literature on the subject of performance and tried to give a specific concept to it, but it indicated that no agreement could be reached on a specific concept because of different views on determining its own criteria and indicators that should be used as well as other performance-related variables.

Financial performance is a broadly inclusive concept, involving success, failure, capacity and effectiveness, and since businesses are in a state of constant change, management faces a fundamental issue, namely, modifying its strategic options, and the only way for management to make such an adjustment is to continue to evaluate and control financial performance, so financial performance is considered A tool to identify the financial situation of banks at a given moment as a whole, or for a certain aspect of the performance of those banks mentioned above, or to perform their shares in the market on a specific day, and for a certain period (Khatib, 2010: 44-45), miller & Bromiley, 1990: 757) defined the performance as a reflection of the way the Organization uses its material and human resources to achieve its objectives, And he also knew him.

(Zarfi, 78:2013) that financial performance is to employ the organization's capabilities in clearly setting financial objectives and before starting to complete activities, by drawing up a plan on the efficiency of optimal allocation of available resources, and structuring fiscal policy to ensure the effectiveness of the financial position expressing the reality of the financial conditions of the organizations,

After reviewing a range of financial performance concepts, the researcher believes that financial performance is an important strategic tool that managers can use to determine the overall performance level of the organization, and the internal strengths it shows, and banks with strong financial performance are more able to respond in dealing with new environmental opportunities and threats, and are under less pressure from stakeholders and rights than other banks that suffer from poor financial performance.

Second: Indicators of measuring financial performance:

Financial indicators are important tools for any business builder, through which they can compare their financial performance with their previous performance and evaluate their financial decisions over time, as well as rely on them in the development of future strategies and trade-offs between them, and define them (Zubeidi, 2008, 121) as results or perceptions that give the answer to many questions related to financial or monetary status, as well as the performance of the company and the process of evaluating investment and financing decisions, As for (Samurai, 2014, 98), he defined financial indicators as an important and effective means of identifying the financial performance of any economic company, because these indicators reflect a correlation between each of the paragraphs in the financial statements, and identified (Vanhorne,2002, 350) as the tools used to assess the financial situation and performance of the company, and that the analysis of these indicators or ratios and their interpretation give analysts skill and experience to understand the financial situation and the level of performance of the company, More than they might get from analyzing the financial statements alone, as well as defining them (Brigham and Houston, 2007, 102) as those financial indicators that reflect the company's position at a given time

and its operations over the past period and therefore its real value lies in the fact that it can be used to predict future revenues and profits, this from the investor's point of view, either from the point of view of management, Analysis of financial statements is useful for predicting future conditions, as it is a starting point for planning actions that are outrageous to improve future performance.

Indicators or financial ratios are used for most of our daily lives, when we think about buying a car we calculate the number of gallons per mile you travel, as well as when we evaluate the baseball player on the basis of the average strikes he achieves as well as for the basketball player based on the goals he achieves, and these examples that we reviewed reflect the use of ratios in judging the performance of a particular person by comparison, Financial indicators also serve similar purposes, but we must understand what is measured and then understand the resulting number for the purpose of using it to assess and evaluate the company's operational performance (Block et al, 2011, 56).

We can only draw up a list of performance evaluation results if specialists can choose or identify appropriate criteria and indicators, and this selection should not be made in a random manner but according to the wishes of the body that evaluates the performance and its goal, and in order to avoid the random selection process of these indicators, the specialists tried to develop practical ways in identifying these indicators that reflect the actual performance of the institution and these scientific methods are the selection of indicators in three stages specified (ashi), 2002, 37) namely:

Phase 1: Setting basic goals and tasks.

Phase 2: Identify the success factors that officials respond to in order to achieve these goals.

Phase 3**:** Find indicators that allow monitoring of success factors.

Among the most important indicators of financial performance:

1- **Return on equity**: This ratio measures the return made by the investor from his funds that he has invested in ordinary shares for one year, and the return on investment consists of two parts, the first is the return on dividends (Divid and Yield), and the second is the rate of profit or loss of capital Gians or Ioss Rate (Ameri, 2015, 108), The equation below shows:

$$Rj = \frac{D_o}{P_o} + \frac{P_1 + P_0}{P_0}$$

R_j = rate of return on investment in shares.

D_0 = dividends per share.

P_1 = share sale price at the end of the term.

P_0 = share purchase price at the beginning of the period.

2- **Roe ratio:** This ratio reflects the return made by equity investors, to use net income as a measure of this return (Damodaran, 2015, 191), which focuses on ordinary shareholders (Melville, 2017,365), and is calculated as follows:

Return on Equity = Net Profit After Tax / Equity * 100%

They can also be classified as investment ratios as investors can use them to assess the attractiveness of the company's common shares (Mutawa, 2010, 56).

Axis 3: The theoretical relationship between financial engineering and financial performance

Since the early 1960s, changes have emerged in the global financial markets, a qualitative breakthrough in financial innovation, on which the cornerstone of the idea of establishing financial engineering, which is interested in the creation of modern financial instruments, is often revealed financial engineering with financial performance, so the difference between financial engineering and financial performance is difficult to separate or break up, and

perhaps the only thing when researching the subject of the relationship between these two concepts can be referred to is Financial engineering has two concepts: broad and narrow, the difference between financial engineering and financial performance is that there is a growing belief that the two concepts should be distinguished, as Merton, one of the largest theorists of financial innovation, sees financial engineering as a means of implementing financial performance development. What appears to be a development in performance and the biggest difference between them is that they are complementary processes and overlap in many stages, the performance depends on financial engineering. 2047: 71**).** According to the **researcher of the previous studies of concepts, financial engineering is a basic planning procedure for the development** of financial performance **, to know financial engineering must first understand** the **events of improvement in financial performance, which had a great and** major **advantage in the transformation of the global financial system**.

Chapter 3: Practical

The research variables have been described and diagnosed using spss by data extraction (computational medium, standard deviation, repetitions, correlation coefficient), through a descriptive study in an analysis of the opinions of a sample of some banks identified in the distribution of questionnaire forms and this study will be explained by the following:

First: Distribution of questionnaire form:

Table 1 indicates the number of forms distributed and recovered by questionnaire respondents

Table (1) showing the number of forms distributed and recovered

to	Study community	Sample size	Form		
			Distributed	Recovered	Recovery rate
1	**Al , Mansour Commercial Bank**	10	10	10	%100
2	United Investment Bank	10	10	9	%90
3	**Gulf Commercial** Bank	10	10	8	%80
4	**Baghdad Commercial** Bank	10	10	10	%100
5	Sommer Commercial Bank	10	10	7	%70
Total		50	50	44	-

Source: Researcher numbers based on questionnaire form

Second: Description of the search sample:

The search sample was randomly identified, including a number of employees at banks and the following tables illustrating the characteristics of the search sample.

1. Description of the search sample by sex

Table 2 describes sex by preparing respondents for the questionnaire form

Variables	Target sample	Iteration	Percentage

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Sex	male	26	0.59
	female	18	0,41
	Total	44	%100

Source: Researcher numbers based on questionnaire form

2. Description of the search sample by age

Table 3 places age groups and prepares respondents for the questionnaire form

Variables	Target sample	Iteration	Percentage
lifetime	25 Vaqel	2	0.045
	26 to 35 years old	15	0.034
	36 to 45 years old	20	0.045
	46 years and older	7	0.15
	Total	44	%100

3. Description of the research sample by scientific qualification

The results are shown in table 4 scientific qualification according to the questionnaire respondent

Table (4) showing the research sample by educational attainment

Variables	Target sample	Duplicate	Percentage
Education	diploma	4	0.09
	Bachelor	22	0.5
	Master	12	0.27
	Doctor	6	0.13
	Total	44	%100

Source: Researcher numbers based on questionnaire form

4. Description of the research sample by total functional service:.

Table 5 shows the search sample according to the total functional service.

Table 6 shows the same search by service duration

Variables	Target sample	Iteration	Percentage
Years of service	Less than 5 years	10	0.22
	6 to 10 years old	16	0.36
	11 to 20 years.	14	0.31
	21 years and older	4	0.09
	Total	44	%100

Source: Researcher numbers based on questionnaire form

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Third: Analysis of the answers of the sample researched for the independent variable financial engineering based on derivatives

Table (7) Analysis of the answers to the sample researched for the independent variable

Standard deviation	Arithmetic medium	Strongly agreed (5)		Agreed (4)		Neutral3		No agreement (2)		I don't strongly agree (1)		Variables
		Number	%	Number	%	Number	%	Number	%	Number	%	
1.106	3.55	16	0.363	10	0.227	9	0.204	7	0.159	2	0.045	X1
1.040	3.60	15	0.340	10	0.227	9	0.204	8	0.181	2	0.045	X2
0.995	3.78	14	0.318	12	0.272	11	0.25	6	0.136	1	0.022	X3
0.991	3.80	22	0.5	9	0.204	8	0.181	2	0.045	3	0.068	X4
1.020	3.56	17	0.386	12	0.272	9	0.204	5	0.113	1	0.022	X5
0.898	3.70	20	0.454	11	0.25	6	0.136	7	0.159	0	0	X6
0.908	3.68	23	0.522	10	0.227	5	0.113	5	0.113	1	0.022	X7
0.870	3.85	27	0.613	5	0.113	4	0.090	6	0.136	2	0.045	X8
0.850	4.01	24	0.545	6	0.136	11	0.25	2	0.045	1	0.022	X9
0.903	3.62	22	0.5	11	0.25	5	0.113	5	0.113	1	0.022	x10
0.868	3.81	27	0.613	6	0.136	4	0.090	6	0.136	1	0.022	X11
0.850	4.02	24	0.545	11	0.25	6	0.136	2	0.045	1	0.022	X12

Source: Researcher numbers based on questionnaire form

1- The calculation of the term (the management of the bank is considered derivatives as a key tool for managing risks and solving financing problems) (3.55) and standard deviation (1.106) and when comparing the calculated arithmetic medium with the hypothetical average valued (3) we find that the calculated arithmetic medium is greater than the hypothetical medium and this refers to agreement with the previous statement.

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2- The arithmetic average of the term (the bank's management uses derivatives contracts to facilitate the transfer and diversification of risks) (3.60) and standard deviation (1.040) and when comparing the calculated arithmetic average with the hypothetical average value (3) we find that the calculated arithmetic medium is greater than the hypothetical medium and this refers to the agreement with the previous statement.
3- The calculation of the term (bank management relies on derivatives to obtain accurate risk results predicted with the levels presented) (3.78) and the standard deviation (0.995) and when comparing the calculated arithmetic average with the hypothetical average valued (3) we find that the calculated arithmetic medium is greater than the hypothetical medium and this refers to agreement with the previous statement.
4. The calculation of the term (the bank's management uses the derivatives strategy to reduce and eliminate the price resulting from the change in prices other than expected prices) (3.80) and the standard deviation (0.991) and when comparing the calculated arithmetic medium with the hypothetical average value (3) we find that the calculated arithmetic average is greater than the hypothetical average and this refers to the agreement with the previous statement.
5- The arithmetic average of the term (the bank's management takes into account the exchange rate of foreign currencies) (3.56) and the standard deviation (1.020) and when comparing the calculated arithmetic average with the hypothetical average valued (3) we find that the calculated arithmetic medium is greater than the hypothetical medium and this refers to agreement with the previous statement.
6. The calculation of the term (the bank's management relies on options contracts for financial raising and improvement of investment returns) (3.70) and standard deviation (0.898) and when comparing the calculated arithmetic average with the hypothetical average value (3) we find that the calculated arithmetic medium is greater than the hypothetical medium and this refers to agreement with the previous statement.
7- The calculation of the term (bank management relies on futures contracts to reduce fluctuations in the prices of financial products) (3.68) and standard deviation (0.908) and when comparing the calculated arithmetic average with the hypothetical average valued (3) we find that the calculated arithmetic medium is greater than the hypothetical medium and this refers to the agreement with the previous statement.
8. The average account of the term (the bank's management emphasizes the use of derivatives to provide the cash needed for the bank's growth and financing of its expansion projects) (3.85) and the standard deviation (0.870) and when comparing the calculated arithmetic medium with the hypothetical average valued (3) we find that the calculated arithmetic average is greater than the hypothetical medium and this refers to the agreement with the previous statement.
9- Reached the arithmetic average of the term (the bank's management is careful not to overuse derivatives and maintain capital adequacy limits with the provision of guarantees in lending) (4.01) and standard deviation (0.850) and when comparing the calculated arithmetic average with the hypothetical average value (3) we find that the calculated arithmetic average is greater than the hypothetical medium and this refers to agreement with the previous term.
10. The calculation of the term (the bank's management seeks to raise financial awareness of the importance of derivatives for employees and investors) (3.62) and standard deviation (0.903) and when comparing the calculated arithmetic average with the hypothetical average of (3) we find that the calculated arithmetic medium is greater than the hypothetical medium and this refers to agreement with the previous statement.

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11. The calculation of the term (the bank's management uses financial engineering instruments to free itself from balance sheet constraints) (3.81), standard deviation (0.868) and when comparing the calculated arithmetic medium with the hypothetical medium valued (3) we find that the calculated arithmetic medium is greater than the hypothetical medium and this refers to agreement with the previous statement.
12. The calculation of the term (the bank's management seeks to ensure that the use of financial engineering instruments is appropriate for investors' objectives in terms of the diversity of its maturities, returns and risk constraints) (4.02), standard deviation (0.850) and when comparing the calculated arithmetic medium with the hypothetical average valued (3) we find that the calculated arithmetic medium is greater than the hypothetical medium and this refers to agreement with the previous term.

Fourth: Analysis of the answers to the sample researched for the child variable.

Table (8) Analysis of the answers to the sample researched for the variable of financial performance

Standard deviation	Arithmetic medium	Strongly agreed(5)		Agreed (4)		Neutral3		No agreement (2)		I don't strongly agree.1		Variables
		Number	%	Number	%	Number	%	Number	%	Number	%	
1.105	3.40	16	0.363	11	0.25	8	0.181	7	0.159	2	0.045	Y1
1.038	3.50	15	0.340	10	0.227	10	0.227	8	0.181	1	0.022	Y2
0.987	3.72	14	0.318	12	0.272	11	0.25	6	0.136	1	0.022	Y3
0.987	3.73	21	0.477	9	0.204	8	0.181	3	0.068	3	0.068	Y4
1.012	3.53	16	0.363	12	0.272	9	0.204	5	0.113	2	0.045	Y5
0.893	3.65	19	0.431	11	0.25	7	0.159	6	0.136	1	0.022	Y6
1.235	3.25	11	0.25	10	0.227	10	0.227	9	0.204	4	0.090	Y7
1.085	3.50	14	0.318	10	0.227	8	0.181	8	0.181	4	0.090	Y8
1.252	3.35	15	0.340	9	0.204	8	0.181	9	0.204	4	0.090	Y9
1.024	3.30	12	0.272	10	0.227	10	0.227	8	0.181	4	0.090	Y10
1.185	3.33	15	0.340	10	0.227	9	0.204	7	0.159	4	0.090	Y11

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1.235	3.25	12	0.272	9	0.204	9	0.204	9	0.204	5	0.113	Y12

Source: Researcher numbers based on questionnaire form

1. The computational average of the phrase (accounting system's ability to adapt to changes in financial performance standards) was 3.40) and a standard deviation (1.105), as the arithmetic medium is found to be greater than the default medium (3) and this refers to agreement with the previous statement.

2. The arithmetic of the term (the ability to update the financial system when any adjustments are received in the processors in accordance with financial performance standards) (3.50) and a standard deviation (1.038) as the arithmetic medium is found to be greater than the default medium (3) this refers to agreement with the previous statement.

3. The computational average of the term (financial performance standards can fully process process operations based on international standards) (3.58) and a standard deviation (0.958) as the computational medium is found to be greater than the default medium (3) and this refers to agreement with the previous statement.

4. The arithmetic average of the phrase (consistent with the performance criteria applied in the number of financial reports with IAS) was 3.72) and a standard deviation (0.098), as the arithmetic medium is found to be greater than the default medium (3) and this refers to agreement with the previous statement.

5. Reach the computational medium of the term (the existing performance standards in the enterprise and the possibility of replacing them with others are consistent with the financial system applied in the enterprise with international accounting standards with regard to the form of the budget and the methods of displaying its elements)

(3.53) With a standard deviation (1.012), the computational medium is found to be larger than the default medium (3) and this refers to agreement with the previous statement.

6. The computational medium of the term (the financial system was able to fully process processes based on international performance standards) (3.72) and a standard deviation (0.987), as the arithmetic medium is found to be larger than the default medium (3) this refers to agreement with the previous statement.

7. The arithmetic of the term (keeping pace with the financial system applied in the enterprise has reached developments, developments and requirements imposed by international performance standards) (3.65) and a standard deviation (0.893), as the arithmetic medium is found to be greater than the default medium (3) and this refers to agreement with the previous statement.

8. The arithmetic of the term (development of the financial system applied in the enterprise periodically and the holding of it qualifying courses for employees of the institution) (3.25) and a standard deviation (1.235) as it is found that the computational medium is larger than the default medium (3) and this refers to the agreement with the previous statement.

9. The computational medium of the term (the ability of the financial system applied in the enterprise to adapt to rapid and modern technological developments) (3.50) and a standard deviation (1.085) as it is found that the computational medium is greater than the default medium (3) this refers to the agreement with the previous term.

10. The computational medium of the phrase (the development of performance standards in the enterprise periodically and continuously reached the response of the existing financial system in the enterprise responding to the requirements of technological development and continuous modernization of accounting systems)

(3.30) with a standard deviation (1.024) as it is found that the computational medium is larger than the default medium (3) and this indicates agreement with the previous statement.

11. The computational medium of the term (the availability of regulations and instructions to the institution to regulate financial performance) (3.33) and a standard deviation (1.185) as the computational medium is found to be greater than the default medium (3) this refers to the agreement with the previous statement

12. Reach the accounting average of the term (there are financial records in which all the financial work of the enterprise is recorded)

(3.25) With a standard deviation (1.235), the computational medium is found to be larger than the default medium (3) and this indicates agreement with the previous statement.

Fourth: Analysis of the value of pearson's correlation factor between financial engineering (derivatives) and the financial performance of the banks research sample

Table (9) The value of pearson's correlation factor between financial engineering (derivatives) and the financial performance of the research sample banks

Approved variable / Independent variable		Financial performance	The type of relationship
Financial engineering (Derivatives)	CORR	0.88**	**THERE IS A STRONG STATISTICALLY SIGNIFICANT CORRELATION AT THE LEVEL (0.05)**
	Sig	0.0005	
	N	44	

Source: Preparing the researcher based on calculator outputs (**) means moral at the level of significance (0.01)

Through the results presented in Table 22-3, we find the following:

أ- There is a strong correlation between the **financial engineering** variable **(derivatives)** and the variable and the financial performance that means that relying on financial engineering tools (derivatives**)** leads to the development of financial performance, and vice versa.

ب- The value of p-value (Sig) (0.0005) was below the moral level (0.05). **This means rejecting the premise of nothingness for research sample banks that state (there is no statistically significant correlation** between **financial engineering (derivatives) and the financial performance of commercial banks research sample). Acceptance of the alternative hypothesis that states (there is a statistically significant correlation between financial engineering (derivatives) and the financial performance of commercial banks research sample).**

Chapter 4: Conclusions and Recommendations

First, conclusions:

1- The results of the description of the characteristics of the respondents showed that a good number of managers in the commercial banks researched have a service as managers in the banks, indicating that they have sufficient experience and knowledge to perform their work.

2- The results of the analysis showed a correlation of moral correlation and high levels between the variables financial engineering and financial performance and this indicates that whenever the banks researched rely on financial engineering to improve their financial performance.

3- The results of the analysis showed a positive moral correlation between the dimension of derivatives and the change in financial performance, indicating that

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whenever commercial banks relying on derivatives, financial performance is improved.

4- The results of the simple decline confirmed the moral impact of the financial engineering variable in the financial performance variable , we explore from this relationship that financial engineering affects the development of financial performance in researched banks.

Second: Recommendations

1- Researched banks should focus on assigning females to manage banks and create a working environment for them.
2- The mature age group should be assigned alongside young people to share experiences and knowledge among them.
3- The banking department should use the derivatives strategy to reduce and eliminate the price resulting from the change in prices other than expected prices.
4- The management of private banks should try to derive deposits based on the size of the original deposits.
5- The management of researched banks should be careful to rely on unknown financial methods to achieve higher profits and reduce risk.
6- The need to invest strong relationships between financial engineering and financial performance at the macro and partial levels and to invest this relationship to serve the private banks that are under consideration

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In the name of God the most Merciful, the most Compassionate
Questionnaire form

Al , Qadisiyah University
Faculty of Management and Economics
Department of Financial and Banking Sciences

M/ questionnaire form

We give you the most beautiful greetings...

The questionnaire in your hands is part of the master's degree requirements in the Department of Financial and Banking Sciences entitled "**Financial Engineering and its role in the development of financial performance/a sample of banks listed on the Iraqi Stock Exchange".**

We are very proud to offer you the hope to help us meet the paragraphs indicated in the board of this form as applied indeed, and not as you see it right, which will be used for scientific research purposes, knowing that all the written data will be confidential and scientific honesty, and that your contribution will have the greatest impact in helping us and the success of our mission...

With thanks and appreciation

Note: Please answer all questions because leaving any question unanswered means that the form is not valid in statistical analysis.

Researcher
M.M. Abbas Jalil Mohisen

First: - General data

Note: - Mark (correct) in front of the right choice.

1- Gender:

male		female	

2- lifetime

25 Vaqel		26 to 35 years old	
36 to 45 years old		46 years old, older	

3- Scientific qualification

diploma		Bachelor	
Master		Doctor	

4- Years of service

Less than 5 years.		6 to 10 years	
11 to 20 years old		21 years and older	

1- **Financial engineering based on derivatives:** they are new and diverse investment instruments, and are named after this because they are derived from traditional investment instruments such as stocks or bonds, and depend on the prices of these instruments, and include a range of financial contracts that vary according to their nature, risks and deadlines.

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to	Questions	I don't agree too much.	I don't agree.	neutral	agree	I strongly agree.
-1	The bank's management of derivatives is a key tool for managing risk and solving financing problems					
-2	The bank's management uses derivatives contracts to facilitate the transfer and diversification of risks					
-3	Bank management relies on derivatives for accurate risk results predicted with the levels offered					
-4	Bank management uses derivatives strategy to reduce and eliminate price resulting from price changes other than expected prices					
-5	The bank's management takes into account the exchange rate of foreign exchange rates when holding derivatives.					
-6	The bank's management relies on options contracts to raise money and improve investment returns					
-7	Bank management relies on futures contracts to reduce price fluctuations in financial products					
-8	The Bank's management emphasizes the use of derivatives to provide the necessary cash liquidity for the bank's growth and financing of its expansion projects.					
-9	The bank's management is careful not to overuse derivatives and maintain capital adequacy limits while providing guarantees in lending					
-10	The bank's management seeks to raise financial awareness of the importance of derivatives for employees and investors					
-11	The bank's management uses financial engineering tools to free itself from balance sheet constraints					
-12	The bank's management seeks to be that the use of financial engineering tools Suitability for investors' objectives in terms of diversity of maturities, returns and risks					

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2. Financial Performance:. Financial performance is a broad concept of inclusiveness, involving success, failure, capacity and effectiveness, and since businesses are in a state of constant change, management faces a fundamental issue.

to	Questions	I don't agree too much.	I don't agree.	neutral	agree	I strongly agree.
-1	The ability of the accounting system to adapt to changes in financial performance standards					
-2	The ability to update the financial system when any modifications are made to processors in accordance with financial performance standards					
-3	Financial performance standards can fully address processes based on international standards					
-4	Consistent with IAS performance standards applied in the number of financial reports					
-5	Existing performance standards in the organization and the possibility of replacing them with others provide compatibility with the financial system applied in the organization with international accounting standards in relation to the budget form and presentation methods of its elements					
-6	The financial system has been able to fully address processes based on international performance standards					
-7	Keeping pace with the financial system applied in the institution developments, developments and requirements imposed by international performance standards					
-8	Developing the financial system applied in the institution periodically and holding it qualifying courses for employees of the institution					
-9	The ability of the financial system applied in the institution to adapt to rapid and modern technological developments					
-10	Development of performance standards in the organization periodically and continuously the response of the existing financial system in the organization responds to the requirements of technological development and continuous					

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	modernization in accounting systems					
-11	Provides organization with regulations and instructions to regulate financial performance					
-12	There are financial records in which all the financial work of the organization is recorded					

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