



The Effect Of Credit Derivatives On Hedging Risk Of Non-Payment: Applied Research

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Abstract. *The purpose of the current research is to reveal the impact of credit derivatives by (purchased credit derivatives, the value of credit derivatives sold) in hedging the risk of non-payment at a sample of commercial banks in the Iraq Stock Exchange by (Middle East Bank, Gulf Commercial Bank, Trade Bank of Iraq, Bank of Baghdad, Credit Bank) for the financial period from (2016-2020), and for the purpose of analyzing the results, the Office package was adopted (Excel.V.2016) in order to extract the level of credit derivatives, And the risks of non-payment at the commercial banks surveyed, has been using a set of statistical methods to determine these variables, represented in (credit derivatives, arithmetic mean, correlation coefficient, and regression coefficient), as a result, the research came out with a set of results, foremost of which was that there is an effect of credit derivatives in hedging the risks of non-payment, and this shows that credit derivatives contribute to improving the ability to hedge against non-payment risks, allowing investors to reduce financial risks. The focus of the surveyed commercial banks on the use of credit derivatives to protect investors from fluctuations in interest rates and currency rates, which works to reduce the impact of non-payment risks on their profits, which means that these contracts allow the determination of a future price for financial assets.*

Keywords: *Credit derivatives, Risk of non-payment, Value of derivatives purchased, Value of derivatives sold.*

1. INTRODUCTION

In financial contracts and the investment world, credit derivatives are financial instruments used to hedge the risk of non-payment (Arenas-Falótico & Scudiero,2023:43). Credit derivatives are derivative contracts whose value depends on the performance of other financial assets such as credit bonds or loans. Credit derivatives aim to provide a way for investors to deal with the risk of non-payment and reduce exposure to financial losses (Owoeye et al.,2024:22).

Non-payment risk is also one of the main risks faced by individuals and businesses in financial systems. Non-payment may occur as a result of several factors such as a weak economy, financial crises, deteriorating markets, or weak financial capacity of individuals and companies (Karismaulia et al.,2023:383). Therefore, credit derivatives have been developed to provide an effective way to hedge the risk of non-payment. Credit derivatives allow investors and companies to transfer credit risk to three parties, such as banks and other financial institutions, who are willing to assume these risks in exchange for fees or margins (Muvunza&Jiang,2023:2075).

This hedging is achieved through the use of a variety of credit derivatives, such as options, futures and proactive contracts. These financial instruments are designed to provide protection against depreciation of financial assets and to provide avenues for investors to shift financial risk in multiple ways (Shao,1997:2024). In addition, credit derivatives provide opportunities for investors to profit from credit market fluctuations. Investors can use credit derivatives to take advantage of bond price changes and generate additional financial returns (Tabassum & Yameen,2024:202). In other words, it is important to note that the use of credit derivatives involves a degree of complexity and risk. It requires a thorough understanding of financial instruments, market analysis and risk management to verify that the use of credit derivatives is done in an appropriate and efficient manner. Hence, the current research came to highlight the impact of credit derivatives in hedging the risk of non-payment.

2. RESEARCH METHODOLOGY

First: The research problem

The banking sector is one of the most important sectors that play an effective role in promoting economic activity and is considered one of the essential elements in the development of the financial system of any country in the world. Bank credit activities are among the main banking activities that generate good profits, however, they increase the risk of non-payment by a greater percentage compared to other banking activities if they are not managed effectively and efficiently.

Despite the benefits provided by bank credit, it is considered one of the banking activities in which risk levels, especially credit, increase compared to other activities. This can sometimes lead to financial failure for banks as a result of loss of financial resources and expected revenue fluctuations. Therefore, the financial community analyzes these risks and assesses their impact, and then seeks to create modern financial products that help reduce them. The traditional methods and tools used to deal with non-payment risks have become ineffective and disproportionate to the threats to banks' credit activities. Therefore, it has become necessary for banks and other financial institutions to keep abreast of financial and banking developments and to design financial instruments that enable them to hedge against the credit risks they may face. Among these efficient and modern instruments, credit derivatives are the most recent.

Hence, the research problem arises through the need for commercial banks to develop new banking products and services that meet the renewed needs and desires of customers, achieve profits that satisfy shareholders and investors, and use credit derivatives to hedge

against the risks of non-payment. In order to answer this research problem, several questions must be raised:

1. What credit derivatives can improve banks' ability to hedge against non-payment risks?
2. What mechanisms can understand the nature analysis of the use of credit derivatives in hedging the risk of non-payment?
3. To what extent does the use of credit derivatives affect hedging the risk of non-payment?

Second: Objectives of Research

The main objective of the current research is to measure the impact of credit derivatives in hedging the risk of non-payment, and the research aims to achieve several issues:

1. Understand and analyse the nature and mechanisms of using credit derivatives in hedging the risk of non-payment.
2. Evaluate the benefits and advantages of using credit derivatives at the surveyed commercial banks.
3. Identify best practices and mechanisms to improve the use of credit derivatives in commercial banks to hedge against the risk of non-payment.
4. Provide a conceptual framework for commercial banks to implement their policies and objectives related to credit derivatives and hedging against non-payment risks.
5. Determine the level of interest of commercial banks in credit derivatives, and the risks of non-payment.

Third: Importance of Research

The importance of the current research in a better understanding of the risks and benefits related to credit derivatives and the mechanisms to hedge the risks of non-payment in order to achieve financial stability and gain the confidence of investors, and the importance of research can be summarized in the following points:

1. Improving the ability of commercial banks to manage their risk of non-payment through the use of credit derivatives mechanisms in the best way.
2. Support financial stability by building a banking system based on hedging potential risks.
3. Focus on providing means and mechanisms that reduce the consequences and negative effects of non-payment on financial and economic companies.
4. Gain the trust and credibility of investors by achieving transparency in dealing and providing adequate information on the mechanism of using credit derivatives and their impact on the risks of non-payment.

5. Supporting the ability of banks to meet the requirements of investors by hedging the risks of non-payment and providing the best innovative ways to address problems.

Fourth: Research Hypotheses

- H1: Significant correlation between credit derivatives and non-payment hedging mechanisms
- H2: The existence of a significant effect of credit derivatives in hedging the risk of non-payment.

Fifth: Research Community and Sample

The research population included the Iraq Stock Exchange for the fiscal period from (2016-2020), whilst the research sample included the banking sector by (Middle East Bank, Gulf Commercial Bank, Trade Bank of Iraq, Bank of Baghdad, Credit Bank) for the fiscal period from (2016-2020).

3. THEORETICAL FRAMEWORK

First: Credit Derivatives

1. Concept of Credit Derivatives

One of the tools that appeared in the nineties for use in hedging against credit risks is credit derivatives, which are relatively recent financial engineering products, which changed the way they deal with the risks associated with credit activity and helped banks design defensive strategies against credit risks (Al Houli et al.,2023:1213), and increased the ability of investors to create financial products and instruments that meet their need to maintain their financial positions and protect them from loss resulting from not obtaining an asset and returns. Debt instruments granted to borrowers such as loans and bonds (Kumar et al.,2023:70), The idea that credit derivatives originate from traditional derivatives such as futures, swaps, futures and options, which are defined as financial contracts with value derived from the value of an underlying asset aimed at hedging and managing risk (Hamada & Hameed, 2023:406). Abdel Hamid & Mahmoud, 2019:141 believes that credit derivatives represent a type of financial derivative that allows the separation of credit risk from other risks by trading these risks without trading the original asset, and is carried out outside the balance sheet of the institution in addition to not requiring the approval of the source of the original asset.

Credit derivatives are financial contracts that allow the transfer of credit risk from one market participant to another (Schwarcz,2020:546), capable of efficiently maximising facilities

through pricing and diversification of credit risk through financial market participants, and traded in unregulated markets (Laouissi & Hadif,2021:50). The underlying advantage of credit derivatives is the credit risk of a loan, bond or other financial instrument (Alfiana et al., 2023:1975), and the main advantage of credit derivatives is the segregation and isolation of credit risks and those who have traded them, that is, they enable investors to trade credit risk as if it were an asset, because they isolate and transform credit risk (Ashira&Jabbar, 2020: 355).

Credit derivatives are securities that provide protection against credit risk. The credit derivatives market is growing rapidly as credit derivatives have gained widespread use (Garg&Sharma,2024:1432). The paper describes the characteristics of credit derivatives. The contribution of credit derivatives to risk sharing in emerging markets is also examined. The problem with this research is to make high-quality investment decisions for institutional investors in emerging markets (Aman et al.,2024:487). It concerns investment in credit derivatives with the aim of reducing and (or) transferring credit risk in developing markets (Radivojac & Grujić,2020:1). Credit risk transfer Credit derivatives facilitate the transfer of credit risk from one party (beneficiary) to another (guarantor) without the need to sell the underlying asset. This transfer is made through the use of contractual agreements that define the terms and conditions of credit protection (Gupta et al., 2023:53).

From the above, it can be said that credit derivatives represent a group of financial instruments derived from debt financial assets aimed at enabling banks to deal with various risks and reduce them.

2. Objectives of Credit Derivatives

The Credit Derivatives Department aims to achieve the following (Naresh & Rao, 2015:90; Zhuravleva& Nazarkina,2016:30 ; Liu,2023:60):

- a. Develop an integrated framework for classifying different types of loans and advances, and determine the effects on the quality and risk of credit.
- b. Develop appropriate strategies at the institutional level to achieve the required levels, issue guidelines for strategic business units, and provide targeted standards for recovery rates, size of risk exposure, and others.
- c. Review cases of risk exposure and performance periodically.
- d. Develop appropriate mechanisms for monitoring and controlling risk.
- e. Develop analytical tools to assess credit risk.

3. Types of Credit Derivatives

Credit derivatives consist of several types, but the current research focused on two important types: (Abdel Baqi,2021:438):

- Purchased credit derivatives: represent the party transferring the credit risk of the reference entity to the viable party, the seller.
- Credit derivatives sold: represent the party that accepts the transfer of credit risk to him.

Second: Default Risks

1. Concept of Default Risks

Default risks have received considerable attention in recent years due to events such as the 2008 financial crisis as a clear example of a credit crisis (Shubbar,2023:137), and it is only natural for market practitioners to look for effective ways to cover these risks (Rivas&Zhao,2023:376). Especially with regard to swaps, options and futures contracts as the most common examples - contracts that enable the management of credit exposure. Credit deficit swaps have become the most widely used credit derivatives in recent years, with a market of \$60 trillion by the end of 2007. This incredible trading volume and incredible welcome paved the way for research into this very important tool (Noghondari et al., 2022:169). Risk is by its very nature an ongoing process of implementing a proactive strategy to plan, lead, organise and control the risk to which the bank is exposed in the short and long term (Kanchu & Kumar, 2013: 145), and it is also a continuous process to identify, measure and monitor each type of financial risk that the bank is exposed to by following an integrated and coherent approach to all risks with regular monitoring that enables managers to proactively manage their own portfolios and take corrective action when necessary (Drigă, 2012:164).

On the other hand, non-payment risk is seen as the possibility of a default, where default is defined as non-obligation to pay, entering into legal action default (i.e. the economic value of assets decreases from the value of outstanding debts, the economic value of assets is the value of expected future cash flows discounted and the value of which changes depending on market conditions). The probability of default during a given period of time is measured from historical statistics of defaults, and the default rate (default rate) can be used as a historical alternative to the probability of default, but the default rate does not reflect the projected probability of default (Halima & Bashir, 2018:28; Medina-Olivares et al.,2023:1458).

From the above, it can be said that the risks of non-payment refer to the possibility facing investors in their inability to pay the debts incurred by them as a result of the financial and economic obligations that fall on them as a result of the financial and economic effects.

2. Importance of Hedging Against Default Risks

The importance of hedging the risk of non-payment is highlighted by:

- a. Reducing business risks is a hedge through good unit planning and enables economic unity to avoid many of the risks that occur (Prymostka et al., 2024:70).
- b. Avoid default, hardship or bankruptcy with a range of hedging tools that can be used on hedging objectives and market conditions that can reduce the risk facing banks (Lestari & Pratiwi,2023:1114).
- c. Hedging the risks facing the economic unit and that the financial statements are the basis for reducing the exposure of companies and banks to risk. This is done by recording the changes that appear in the fair value of the hedging instrument during the accounting period, which enables the financial investor to evaluate its strategic effectiveness (Beams,2012,431).
- d. A means of measuring assets and liabilities that appear in the year-end balance sheet IFRS agrees that liabilities are settled between certain parties willing to engage in a commercial financial transaction (Tonye & Ojiaku,2023:42).

Part Three: Field Aspect

This part is concerned with measuring and testing the study variables and special in the impact of credit derivatives in hedging the risk of non-payment, through a set of steps:

Credit Derivatives Analysis

The net credit derivatives in the surveyed banks for the period (2016-2020) were analysed, which were calculated on the basis of credit contract swap contracts according to (value of derivatives sold - value of purchased derivatives).

Table (1) Credit Derivatives of Banks Research Sample

Bank Year	Middle East Bank	Gulf Commercial Bank	Trade Bank of Iraq	Consumption of Baghdad	Credit Bank	Mean
2016	267099600	280808200	92681143	2316386	32148000	135010665.8

2017	42678000	34582000	23508793	3549080	3385000	21540574.6
2018	60248000	52308000	45231752	646076	5234000	32733565.6
2019	52737000	65800000	6352000	852015	6426200	26433443
2020	48446000	68482000	8392000	755665	8236400	26862413
Mean	94241720	100396040	35233138	1623844	11085920	48516132.4

The results mentioned in Table (1) showed that there is a fluctuation in the values of credit derivatives of banks of the banks of the research sample and according to the annual average, as it was found that the highest level it reached was in 2016, which amounted to (135010665.8) million dinars, while the lowest level of net credit derivatives was in 2019, which reached (26433443) million dinars, as the investments of the sample banks in credit derivatives fluctuated during the years, which indicates instability in the volume of credit derivatives trading for those banks, and this In turn, it indicates that there is a difference in the investment policies adopted in them, On the other hand, at the average level of banks, it is clear that the highest level of investment in credit derivatives was at the (Credit) Bank, which reached (11085920) million dinars during the period (2016-2020), and this indicates the policy of distributing the risk of the aforementioned bank to other credit bodies and through investment in credit derivatives compared to other banks, followed by the Middle East Bank in the level of investment, which indicates that these banks adopt a policy of risk distribution in exchange for raising levels of return, while the lowest level of derivatives appeared. According to the average of banks at the Bank of Baghdad, which was equal to (1623844) dinars, and that there is a weakness in the levels of investment in credit derivatives, and therefore bear higher levels of credit risk when the loans granted by that bank default.

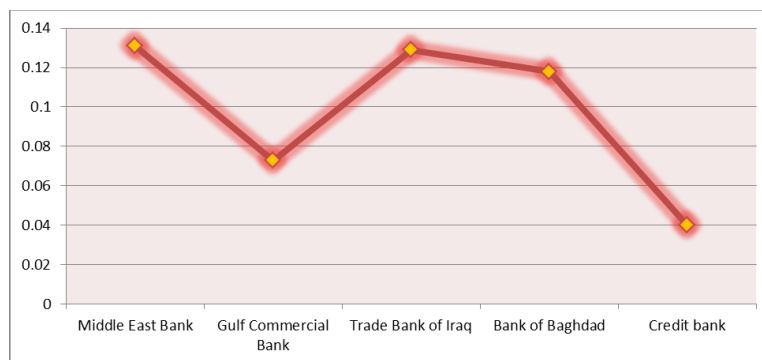


Figure (1) Distribution of credit derivatives for banks in the research sample

Second: - Hedging Against Default Risks

a. Ratio of loans and advances to total assets

The research in calculating the risk of non-payment relied on the quotient of dividing loans and advances by the total assets, and this ratio shows that the more it indicates the high

risk of non-payment to banks, so the default rates will be presented to the banks surveyed for each bank separately and then in general during the study period from 2016 - 2020 and according to the following sequence and as follows:

Table (2) Non-payment Risk Rates for Banks Research Sample

Bank Year	Middle East Bank	Gulf Commercial Bank	Trade Bank of Iraq	Consumption of Baghdad	Credit Bank	Mean
2016	0.118	0.256	0.434	0.004	0.277	0.218
2017	0.124	0.267	0.223	0.002	0.301	0.183
2018	0.164	0.215	0.192	0.0001	0.283	0.171
2019	0.135	0.189	0.194	0.017	0.283	0.164
2020	0.126	0.144	0.224	0.018	0.232	0.149
Mean	0.134	0.214	0.253	0.008	0.275	0.177

1- Middle East Bank

The results in Table (2) showed that in 2018, the bank faced the highest risk of non-payment amounted to (0.164), while in 2020 it reached the second highest non-payment risk rate by (0.126), followed by 2017 to reach (0.124) The lowest non-payment risk ratio was in 2016, as the non-payment risk ratio reached (0.1179) and from the table data, it appears that the trend of granting loans began to decline after 2018, fearing the political and economic transformations it is going through. Country.

2- Gulf Commercial Bank

The results in Table (2) showed that in 2017, the bank faced the highest non-payment risk ratio of (0.267), while in 2016, it reached the second highest non-payment risk rate by (0.256), followed by 2018 to reach (0.215), while the lowest non-payment risk ratio was in 2020, as the non-payment risk ratio was (0.1449), and when comparing the non-payment risk rates of this bank with the surveyed banks, we notice similarities with other surveyed banks, affected in general. by rising and falling and the economic cycle in the country.

3- Trade Bank of Iraq

The results in Table (2) showed that in 2016, the bank faced the highest non-payment risk rate of (0.434), while in 2020, it reached the second highest non-payment risk rate by (0.223), followed by 2017 to reach (0.2224), while the lowest non-payment risk ratio was in 2018, as the non-payment risk ratio was (0.191), and when comparing the non-payment risk rates of this bank with the surveyed banks, we notice similarities with other surveyed banks affected in general. by rising and falling and the economic cycle in the country.

4- Bank of Baghdad

The results in Table (2) showed that in 2020, the bank faced the highest non-payment risk rate of (0.018), while in 2019, it reached the second highest non-payment risk rate by (0.016), followed by 2016 to reach (0.004), while the lowest non-payment risk ratio was in 2018, as the non-payment risk ratio reached (0.0001), and when comparing the non-payment risk rates of this bank with the surveyed banks, we notice similarities with other surveyed banks, affected in general. by rising and falling and the economic cycle in the country.

5- Credit Bank

The results in Table (2) showed that in 2107, the bank faced the highest non-payment risk rate of (0.3001), while in 2018, it reached the second highest non-payment risk rate by (0.283), followed by 2019 to reach (0.282), while the lowest non-payment risk ratio was in 2020, as the non-payment risk ratio reached (0.2329) and from the table data, it appears that the trend of granting loans began to decline after 2018, fearing the political and economic transformations that are going through. by the country.

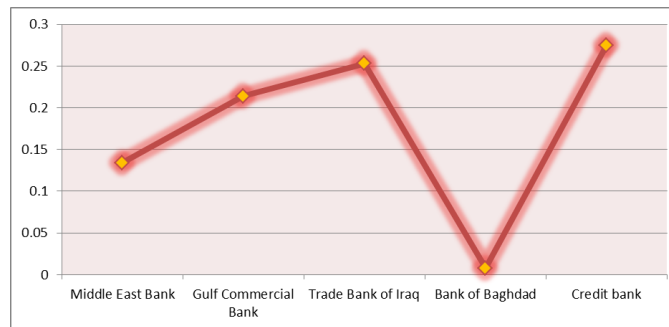


Figure (2) Default risk rates for the research sample banks

The ratio of loan loss provision to loans and advances

The research in calculating the rates of non-payment risk relied on the quotient of dividing the provision for loan losses into the total loans and advances, and this ratio aims to show the amount of loans in which borrowers were unable to repay them on the expected maturity dates, either because of unwillingness to do so or because the borrower was unable to meet due to circumstances or problems that accompanied the activity that he practices with the amount of loans or advances borrowed from the bank concerned, and the higher this ratio, the more it has negative indications on the bank on the one hand. And its reputation towards depositors and shareholders on the other hand, because it leads to a high risk of non-payment, that is, a high credit risk resulting from granting loans and advances, so the rates of non-

payment risks will be presented to the banks surveyed for each bank separately and then all banks in general during the research period from 2016 - 2020 and according to the following sequence as follows:

Table (3) Non-payment risk rates for banks Research Sample

Bank Year	Middle East Bank	Gulf Commercial Bank	Trade Bank of Iraq	Consumption of Baghdad	Credit Bank	Mean
2016	0.082	0.053	0.054	0.065	0.030	0.057
2017	0.075	0.057	0.132	0.116	0.035	0.083
2018	0.123	0.072	0.156	0.129	0.036	0.103
2019	0.155	0.087	0.162	0.123	0.039	0.113
2020	0.220	0.097	0.142	0.157	0.057	0.135
Mean	0.131	0.073	0.129	0.118	0.040	0.098

1- Middle East Bank

The results in Table (3) showed that in 2020, the bank faced the highest non-payment risk ratio of (0.220), while in 2019, it reached the second highest non-payment risk rate by (0.155), followed by 2018 to reach (0.123), while the lowest non-payment risk ratio was in 2017, as the non-payment risk ratio was (0.075) and from the table data, it appears that the trend of granting loans began to decline after 2018, due to the bank's tendency not to grant Loans to borrowers who are unable to provide collateral through which their loans can be repayed.

2- Gulf Commercial Bank

The results in Table (3) showed that in 2020, the bank faced the highest non-payment risk rate of (0.097), while in 2019, it reached the second highest non-payment risk rate by (0.087), followed by 2018 to reach (0.072), while the lowest non-payment risk ratio was in 2016, as the non-payment risk ratio was (0.053) and from the table data, it appears that the trend of granting loans began to decline after 2018, due to the bank's tendency not to grant Loans to borrowers who are unable to provide collateral through which their loans can be repayed.

3- Trade Bank of Iraq

The results in Table (3) showed that in 2019, the bank faced the highest non-payment risk ratio of (0.162), while in 2018 it reached the second highest non-payment risk rate by (0.156), followed by 2020 to reach (0.142) The lowest non-payment risk ratio was in 2016, as

the non-payment risk ratio was (0.054) and from the table data, it appears that the trend of granting loans began to decline after 2018, due to the bank's tendency not to grant Loans to borrowers who are unable to provide collateral through which their loans can be repayed.

4- Bank of Baghdad

The results in Table (3) showed that in 2020, the bank faced the highest non-payment risk rate of (0.157), while in 2018 it reached the second highest non-payment risk rate by (0.129), followed by 2019 to reach (0.123) The lowest non-payment risk ratio was in 2016, as the non-payment risk ratio was (0.065) and from the table data, it appears that the trend of granting loans began to decline after 2017, due to the bank's tendency not to grant Loans to borrowers who are unable to provide collateral through which their loans can be replayed.

5- Credit Bank

The results in Table (3) showed that in 2020, the bank faced the highest non-payment risk ratio of (0.057), while in 2019, it reached the second highest non-payment risk rate by (0.039), followed by 2018 to reach (0.036), while the lowest non-payment risk ratio was in 2016, as the non-payment risk ratio was (0.030) and from the table data, it appears that the trend of granting loans began to decline after 2017, due to the bank's tendency not to grant Loans to borrowers who are unable to provide collateral through which their loans can be replayed.

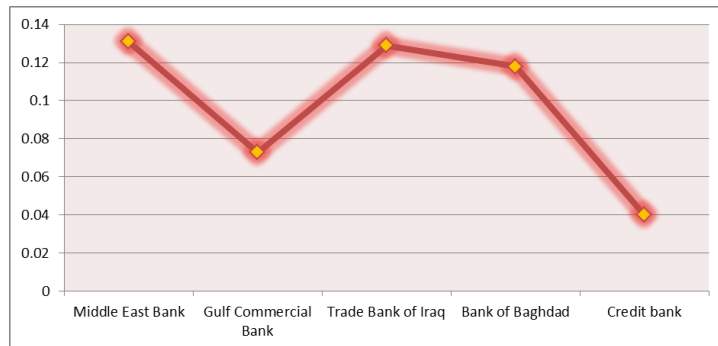


Figure (3) Default risk rates for the research sample banks

Third: - Regression Analysis

To identify the affective relationships between the research variables and based on the method of multiple regression analysis of the sample banks data and for the annual period from 2016 to 2020, as the regression equation for the research was as follows:

$$Y = a + \beta_1 X + e_i$$

- **Y**: represents net credit derivatives
- **X**: represents the risk of non-payment (loans and advances to total assets and losses on loans to loans and advances).
- **ie**: represents the standard error.

Table (4) Regression Analysis of the Effect of Credit Derivatives on Hedging Non-Payment Risk

Risk of Non-Payment								
Credit Derivatives	(Constant) a	Beta	Std.Error	T	F	R	R ²	Sig.
	0.126	0.600	0.036	16.667	18.706	0.694	0.482	0.001

It is noted from the results of Table (4) that there is a correlation between credit derivatives and non-payment risks and its remains (0.694), which shows that commercial banks have a remarkable interest in credit derivatives because of their role in reducing the risk of non-payment, and this leads to accepting the validity of the first hypothesis of the research hypotheses.

The results in Table (4) also show that increasing credit derivatives by one unit leads to an improvement of (0.600) at a constant coefficient of (0.126), with a standard error equal to (0.036), and this shows that the calculated value of (T) of (16.667) is greater than its tabular value.

It is also noted that credit derivatives contributed to the explanation of (0.482) of the effects that hinder the process of hedging the risks of non-payment at these banks, and this is what the regression equation showed:

$$Y = a + \beta_1 X + e_i$$

$$Y = 0.126 + 0.600 * X + 0.036$$

When the value of (X) is assumed to be equal to one unit, the regression equation is equal to:

$$Y = 0.126 + 0.600 * 1 + 0.036$$

$$Y = 0.762$$

4. CONCLUSIONS AND RECOMMENDATIONS

First: Conclusions

1. The existence of the effect of credit derivatives in hedging the risk of non-payment, and this shows that credit derivatives contribute to improving the ability to hedge the risk of non-payment, allowing investors to reduce financial risks.
2. The focus of the surveyed commercial banks on the use of credit derivatives to protect investors from fluctuations in interest rates and currency rates, which works to reduce the impact of non-payment risks on their profits, and this means that these contracts allow the determination of a future price for financial assets.
3. The surveyed commercial banks are keen to improve efficiency in planning and managing non-payment risks through the use of credit derivatives, which allows to reduce the costs resulting from this risk.
4. Banks and financial institutions can use credit derivatives to improve the quality of financial portfolios from the risk of non-payment, which means that taking into account the use of credit derivatives contributes to the assessment of financial losses significantly.
5. The use of credit derivatives requires high knowledge and experience, allowing investors to contract with experts in order to ensure that they get the most out of these tools.
6. The surveyed commercial banks are interested in using credit derivatives as a financial tool to understand the nature and plans of investors and address the risks of non-payment in order to gain their confidence in dealing with these banks.

Second: Recommendations

1. Commercial banks should ensure that there are clear mechanisms for the use of credit derivatives to set objectives and criteria to hedge the risk of non-payment through the use of experienced specialists in the trading and management of credit derivatives.
2. Commercial banks should build continuous communication with relevant actors and banks to exchange knowledge and past experiences in order to develop appropriate solutions to future problems.
3. The need for commercial banks to adhere to the applicable legal and banking standards, and to develop their own internal banking system to ensure continuous assessment of risks related to credit derivatives and update them continuously to face the risks of non-payment.
4. Effective internal policies and procedures should be developed to cap the financial exposure to credit derivatives and to commit to the bank's ability to provide sufficient capital for financial coverage in the event of financial breaches and non-payment.

5. The need to provide adequate training and continuous education for workers related to the use of credit derivatives in order to ensure clarity of the picture of the risks of non-payment, which could lead to the bankruptcy of the bank as a result of not being addressed.
6. Robust monitoring systems should be provided to assess the effects of hedging the risk of non-payment and to develop different strategies to address these effects, as well as assess the tolerance of this type of risk.

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