

Research Article

Extreme risks and its impact on exchange rates and its reflex on the value of the company (an applied study)

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Abstract: The research aims to clarify the impact relationship between extreme risks and exchange rates and the impact of that on banking returns, while identifying the means through which extreme risks can be managed efficiently in a way that is compatible with the requirements of the contemporary environment. The research sample is the Iraqi banks listed in the Iraq Stock Exchange for the period (2011-2020). The research reached a set of conclusions, the most important of which was that there is a set of factors and reasons that affect the exchange rates, as the position of the balance of payments is the important factor in determining the exchange rate of the Iraqi dinar, and the exchange rate is determined by economic factors that reflect the structural economic gaps in the Iraqi economy, Where the extreme risks affected the exchange rates during the period under study, as well as the continued presence of the aggregate demand gap in the local economy, this explains the continued rise in the Iraqi exchange rate during this period.

Keywords: relationship between extreme risks, Stock Exchange, aggregate

1. INTRODUCTION

Banking risks are an integral part of the banking business that accompanies banking units in general, due to the increase in the volume of banking transactions and the intensity of competition between these units. And risks in different forms at one time, and among the risks that banks face are the extreme risks, which are often the result of the intervention of other parties indirectly that may affect the returns of the banking business, and the banking units face difficulty in measuring the extreme risks and therefore not accurately identifying them and predicting them in the future to help in control or reduce them if it is difficult to eliminate, From this point of view, contemporary studies focus their attention on how to manage and control risks and take decisions in the light of strict supervisory and administrative systems and methods that guarantee the bank a clearer definition of those risks and their classification, and thus take appropriate decisions that lead to better achieving its objectives.

THE FIRST TOPIC: RESEARCH METHODOLOGY

1-1 Research problem:

The research problem is that banks face many risks that may not be controlled and therefore not measured accurately, which can negatively affect managing these risks efficiently and effectively, and among these risks are extreme risks, and the research problem can be expressed through the following question: Do extreme risks affect exchange rates and thus negatively affect bank returns? .

1- 2 Research importance:

The importance of the research comes from the importance of its variables represented by extreme risks and exchange rates. For extreme risks, they are risks that arise due to a change in the governing body of a country or sudden decisions affecting banking operations. Either exchange rates are an important means of influencing the allocation of resources between economic sectors and on profitability of these sectors.

1-3 Research objectives:

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The research aims to clarify the impact relationship between extreme risks and exchange rates and the impact of that on banking returns, while identifying the means through which extreme risks can be managed efficiently in a way that is compatible with the requirements of the contemporary environment.

1-4 Research hypothesis:

The research is based on a main hypothesis: that extreme risks negatively affect exchange rates and thus affect bank returns.

1-5 Research sample:

The research sample is represented by Iraqi banks listed in the Iraq Stock Exchange for the period from 2011 to 2020.

The second topic: the theoretical side of the research

2-1 The concept and types of banking risks:

Banks face many risks when carrying out banking activities, and the level of these risks increases with the increase in the size and spread of the institution and the degree of complexity and development in its activities and the services it provides (Frazer, *et.al.*, 2019:133).

Banking risks are viewed as the possibility of losing and losing money as a result of the investment decision, meaning that the actual and real returns of investment will differ from the expected return, and with the increase in investment risks, investors seek higher returns to compensate themselves for bearing these risks (Hamilton, 2018:34).

Banking risks are the fluctuations in the market value of the institution, and this concept is considered broad and reflects the point of view that risk management is the work to achieve the optimal return through the balance (Kasson, 2005:88). Banks face many types of risks, and these risks have been classified in many ways, as follows: (Goliath & Gourinchas, 2022:2)

1. Systemic risks: These are the risks that cannot be avoided or eliminated, but can be coexisted with and their negative effects can be reduced through diversification in the investment portfolio and the preparation of contingency plans to confront them, as they are related to the environment in which the bank operates, such as market risks, credit and operational risks, and country and political risks. legal and environmental risks.
 2. Non-systemic risks: These risks are related to the bank itself, and this type can be avoided, such as mismanagement and disinvestment, which can be avoided by setting appropriate policies, controls and procedures regulating work, choosing management with competence and experience, qualifying staff and improving internal control systems.
- In terms of banking and practice, the risks faced by banks can be divided into three main sections, which are as follows: (Hofmann, *et.al.*, 2022:14)

1. Country or country risk: Country risk or country risk is considered the main input on which banks rely on whether or not to enter a country and determine the level of acceptance of other risks based on the level of country risk.
2. Financial risks: These include credit risks, market risks, and liquidity risks. Credit risks are the potential losses resulting from the borrower's inability to meet his obligations on time.
3. Business risks: These are the risks resulting from the bank's management taking wrong decisions, implementing decisions incorrectly, or not taking decisions in a timely manner, which may lead to losses or loss of alternative opportunities.

2-2 Extreme risks and how to identify them:

Extreme risk indicates that the initiation of risk arises due to the change in the governing body of a country, and thus poses a risk to the investors. As a change in the tax rate can alter corporate profits, there are also some legal aspects that may challenge the way business is done, reduce profitability and enhance risks for investors (Layrton, 2019:4).

Extreme risks can be described as geopolitical risks that arise due to conflict between two countries and as a result there can be obstacles across the business and ultimately lower the level of investor confidence, these risks may arise at any level such as national level, federal level and state level, on the basis of scenarios, Political risks can be divided into two types, such as macro risks and partial risks (Fernandez, *et.al.*, 2016:549).

Macro risks are related to multinational companies that have business in the country and the negative impacts faced by those companies, while small risks arise from internal conflicts such as corruption, poverty and negative manipulation (Datum & M. Hutchison, 2013:201).

Many studies have indicated that there are no concrete measures through which such risks can be identified, but the following must be taken into account: (Mumbai & Muggier, 2015: 1371).

1. The current political scenario of the country should be taken into consideration and the change should be sought in the qualitative aspects of the economy.
2. Changes and the simultaneous impact on the business must be followed taking into account other external variables.
3. Following the change in the economic scenario on the state's regulations, despite the difficulty of predicting the position of the current government.

Some risks related to the macro level may arise during the civil war between the two countries which may lead to the closure of borders by those countries. Thus, the state of war can affect business scenarios as well as investments (Levy, 2010:7).

Depending on the partial scenarios involved, strict regulations coupled with changes in legal systems may alter profitability, while weak incentives may result in a sector boost. The above procedure may create competition among investors. (Villegas, *et.al.*, 2019:519).

The changes experienced by the business due to the change in the political scenario visualize the actual conditions of the change in actual terms, each business department has its own budget numbers and its own cash flow scenario estimates, therefore, the amount of deviation faced by the company must be recorded as a change in profitability due to the above risks, These risks can be measured by comparing the actual with the expected amount (Granger & Engle, 2013:95).

2-3 Concept and types of exchange rates:

The exchange rate is seen as the main tool that has a direct impact on the relationship between domestic prices and foreign prices, and it is often the most effective tool when it comes to encouraging exports and saving imports the local price of the commodity is linked through the exchange rate during a certain period of time (Truss & kasha, 2019: 8)

The exchange rate is the number of monetary units with which one unit of the local currency is exchanged for a foreign one. It thus embodies the link between the local economy and the rest of the economies, and it is an important means of influencing the allocation of resources between economic sectors, the profitability of export industries and the cost of imported resources (Villegas, *et.al.* ..2019:519).

And there are those who view the exchange rate as a link between commodity prices in the local economy and their prices in the global market, and the local price of the commodity is linked through the exchange rate during a certain period of time (Bored, 2012:35).

The currency exchange rate is currently determined as the price of any other commodity is determined by the intersection of the market demand curve for a specific currency with the market supply curve for that currency during a specific period. Minor exceptions, which include a kind of state intervention in this regard during a certain period of time (Mumbai & Muggier, 2015: 1371).

There are several types of exchange rates, namely the fixed exchange rate, the free exchange rate (floating or flexible), and the managed exchange rate (adjustable). These types can be explained as follows: (Granger & Engle, 2013:96).

1. Fixed exchange rate: And then the price of the national or local currency against other foreign currencies is fixed over time or at least during multiple periods. Fixed gold content, and the exchange rate of each currency is equivalent to the price of the amount of gold contained in this currency.
2. Free exchange rate (floating or flexible): Under this type, the monetary authorities leave the movement in the exchange rate of their currency against other world currencies free and subject to the forces of supply and demand for them resulting from the movement of foreign trade between them and other countries of the world.
3. The managed (adjustable) exchange rate: This type is common in almost all countries of the world, as we do not find today, in fact, any country that follows the two aforementioned types, due to the risks they pose to the national economy as a result of stability or freedom and keeping the monetary authorities away from intervention. As it is known that the exchange rate is one of the most important monetary policies in the hands of the state to direct the national economy and address the imbalance in the balance of payments.

2-4 The relationship between extreme risks and exchange rates:

There is a group of factors that play in the course of the events of the local exchange rate of a country through the increase or decrease in the number of foreign monetary units needed to buy it, and this is called the sources of demand for foreign currency as an explicit reflection of the influencing factors, which vary between the purposes of commercial

exchange, import and export, and arbitrage interest rates from During the movement of financial capital from low-interest countries to high-interest countries (Kasson, 2005:88).

Oil represents the lever of the dinar in the oil-producing countries, as it is the main source of exports, and this represents a demand for the local currency in the equation of its exchange rate, as independence is granted in managing monetary policy and sterilizing other economic policies in order to consolidate economic stability, as the petroleum dollar is purchased from The Ministry of Finance then re-injects part of it into the market, but the risk associated with this matter is represented in two aspects as follows: (Levy, 2010:8)

1. The risks arising from fluctuations in oil prices in the international market due to the interactions of oil supply factors with demand factors for it, and what this may cause in the ability of the government and the bank to build dollar balances as a cover to maintain the stability of the value of the dinar and thus maintain the economic balance of the country.
2. Contribute to the survival of the economy as a monolithic economy that depends only on the export of the oil commodity on the one hand, and imports almost everything on the other hand to cover the local demand for various goods and services.

And the occurrence of a decrease in the real value of cash income, expressed in the quantity and quality of goods and services that the public obtains, which reduced economic well-being and raised the poverty rate, and the change in the exchange rate of the dinar by reducing it against the dollar came at a time when its correct premises are not available in terms of the existence of a base for industry and agriculture. It is significant that it provides a commodity alternative to many imported industrial and agricultural commodities whose prices have increased, and the change that occurred in the exchange rate was sudden and not gradual (Truss & kasha, 2019:8).

The loss of the opportunity to change the exchange rate from the hands after sensing and swallowing its pain, and it is not possible to return to square one to witness again, under other compelling circumstances, a second reduction in the local exchange rate and experiencing the pain again, which may be more severe. (Hamilton, 2018:34).

As many of the prices of goods and services will not respond quickly and in the required manner if the dollar exchange rate is returned to its previous position, and this is called sticky prices because of habits and patterns that do not tend to change, which leads to prices remaining in a state of high despite the reduction in the dollar exchange rate. As the price of the dollar is reduced on imports that are used as primary or intermediate inputs for national production processes. (Granger & Engle, 2013:97)

The third topic: the applied side of the research

3-1An introductory summary of the research sample:

The Iraqi banking system suffers from many risks and challenges, as it has proven its relative decline, and has turned into a governmental administrative apparatus burdened with burdens and restricted by guardianship decisions that prevent it from flexible work and movement, and it complains of a lack of qualified cadres and competencies, and it was unable to prepare these competencies through training and rehabilitation internally, He was not able to attract it from abroad due to the lack of sufficient incentives for that, in addition to the fact that the country is besieged.

The banking system in Iraq has turned into a subsidiary to the financial and monetary policy of the state through the deficit financing policy, and the Central Bank of Iraq Law No. 64 of 1976 has been amended to allow the establishment of private commercial banks under Resolution No. 12 of 1991, in order to create the required and polite competition for banking services Attracting the foreign funds required to establish new banks, providing an important and good source for financing the large investments that the economic development process needs, and attracting additional funds from investors as a result of their confidence in these banks and the introduction of a developed system in them.

In spite of that, the government commercial banks remained the strongest and the most financially and institutionally capable, in addition to the fact that the state guarantee for them was an important element that is not available to private commercial banks, and the government commercial banks will remain accredited by the public sector and its business will remain confined to the official banks.

Allowing the establishment of private banks is considered an auxiliary step for the development of the banking system by creating competition between government commercial banks and private commercial banks to reach a better state of performance and provide banking services and contribute to the development of the banking sector in particular and the economic sector in general.

The risks arising from fluctuations in oil prices in the international market due to the interactions of oil supply factors with demand factors for it, and what this may cause in the ability of the government and the bank to build dollar balances

as a cover to maintain the stability of the value of the dinar and thus maintain the economic balance of the country. Contribute to the survival of the economy as a monolithic economy that depends only on the export of the oil commodity on the one hand, and imports almost everything on the other hand to cover the local demand for various goods and services. and the following table shows the number of private commercial banks Year of incorporation, paid-up capital, and number of branches.

Schedule (1): Private commercial banks, number, paid-up capital, year of establishment, number of branches

Bank name	Paid-up capital (million dinars)	Establishment date	Number of branches
Baghdad Bank	1750	1992	15
Iraqi Commercial Bank	1800	1992	8
Iraqi Islamic Bank	252.8	1993	9
Middle East Investment Bank	2400	1993	11
Basra Bank	1000	1993	9
Iraqi Investment Bank	1200	1994	15
United Bank for Investment	1500	1995	6
National Bank of Iraq	750	1998	4
Iraqi Credit Bank	1000	1999	11
Dar Al Salam Investment Bank	1200	1999	14
Bank of Babylon	1000	1999	7
Economy Bank for Investment	400	1999	14
Sumer Commercial Bank	800	1999	5
Warka Bank	1000	2000	3
Gulf Commercial Bank	1200	2000	8
Al Baraka Bank for Investment and Development	1222	2001	4
Mosul Bank for Development and Investment	1000	2001	3
Total	19474.8	-	146

Source: Central Bank of Iraq, Directorate General of Statistics and Research.

In addition to private commercial banks, the Iraqi banking system consists of two government commercial bankers and four specialized banks. The number of government specialized and commercial banks can be clarified in the following table:

Schedule (2): Governmental and specialized banks, their number, paid-up capital, years of establishment, number of branches

Bank name	Paid-up capital (million dinars)	Establishment date	Number of branches
Al-Rafidain Bank	4000	1941	162
Rasheed Bank	2000	1988	154
Industrial Bank	400	1947	5
Cooperative Agricultural Bank	6	1936	38
real estate Bank	1100	1948	16
Socialist Bank	1000	1991	4
Total	8506	-	379

Source: Central Bank of Iraq, Directorate General of Statistics and Research.

3-2 Measuring the impact of extreme risks on exchange rates:

In order to measure the impact of extreme risks on exchange rates, it is possible to rely on standard analysis in order to estimate the relationship between the various research variables, and the statistical program (SPSS-24) will be used for this purpose after using the published data from the Central Bank of Iraq for the period (2011-2020).

The factors affecting the exchange rates represented by the trade balance, the rate of change in the gross domestic product and the rate of inflation will be determined through the following model:

$$ER_{it} = a + B1Ex_{it} + B2GDP_{it} + B3CPI_{it} + eit$$

Where:

- *ER*: The exchange rate of the Iraqi dinar against the US dollar.
- *Ex*: The trade balance, which represents the difference between the value of exports and imports in Iraq during the year.
- *GDP*: the rate of change in the gross domestic product at current prices (growth rate).
- *CPI*: The rate of inflation, which is calculated through the rate of change in consumer price indices.

The parameters of the model can be estimated by calculating the value of exports and imports in Iraq, the percentage change in the gross domestic product, and the rate of inflation for the years from 2011 to 2020, as shown in the following table:

Schedule (3): Estimating model parameters for the period (2011-2020)

Years	ER	Ex	GDP	CPI
2011	1170.00	37832000000	43.10	0.11
2012	1166.00	42316000000	17.38	0.12
2013	1166.00	56357000000	7.62	0.12
2014	1166.00	47272000000	-2.65	0.13
2015	1166.00	67864000000	-26.90	0.13
2016	1170.00	-4821000000	0.81	0.01
2017	1182.00	28449000000	8.45	0.01
2018	1182.00	48229000000	18.15	0.01
2019	1182.00	62198000000	3.14	0.01
2020	1190.00	48400000000	-19.93	0.10
lowest value	1166.00	-4821000000	-26.90	0.01
highest value	1190.00	67864000000	43.10	0.13
overall average	1174.00	43409600000	4.917	0.075

Source: prepared by the researcher based on the data published by the Central Bank of Iraq, Directorate General of Statistics and Research.

It can be seen from the above table that the lowest value of the variable of the exchange rate of the Iraqi dinar against the US dollar, the variable of the value of exports and imports in Iraq, the variable of the percentage change in the gross domestic product, and the variable of the inflation rate during the period from 2011 to the year 2020 was (1166.00), (-4821000000), (-26.90), (0.01) respectively, and the highest value for these variables was (1190.00), (67864000000), (43.10), (0.13) respectively.

After estimating the parameters of the model for Khaleeji Commercial Bank, a correlation matrix (Pearson) will be clarified between the model variables for this bank, as shown in the following table:

Schedule (4): Pearson correlation matrix between the model variables for the period (2011-2020)

Details	ER	Ex	GDP	CPI
ER	1			
Ex	*0.537	1		
GDP	*0.718	*0.639	1	
CPI	-0.442	0.156	0.551	1
* The correlation between the two variables is significant at level of 0.05.				

Source: prepared by the researcher based on the statistical program (SPSS-24).

It is clear from the above table that the correlation between the exchange rate and the value of exports and imports is a direct relationship, as the correlation coefficient reached (0.537), as the relationship is significant between the two variables. Correlation coefficient (0.718), as the relationship is significant between the two variables, while the correlation between the exchange rate and the rate of inflation is an inverse relationship, as the correlation coefficient reached (0.442), but this relationship is not significant between the two variables during the research years, and the effect of the model variables can be tested to show The effect relationship between the research variables for the period (2011-2020) through the following table:

Schedule (5): Testing the relationship of the influence of model variables for the period (2011-2020)

independent variables and other controlling variables	Model Summary		ANOVA			Coefficients		
	R	R ²	F	Sig.F	dependent variable	β_i	T	Sig.T
Ex	0.537	0.288	7.438	0.029	ER	2.116	8.205	0.018
GDP	0.718	0.516	6.671	0.036		3.403	9.417	0.013
CPI	0.442-	0.195	4.334	0.018		1.561-	2.266-	0.004

Source: prepared by the researcher based on the statistical program (SPSS-24).

It is noted from the above table that there is an effect relationship between the exchange rate and the value of exports and imports, as the correlation coefficient was (0.537) and the coefficient of determination was (0.288). And the percentage of change in the gross domestic product, as the correlation coefficient was (0.718) and the coefficient of determination was (0.516), and the value of F was (6.671) and the value of T was (9.417). As for the relationship

between the exchange rate and the inflation rate, it is not statistically significant during the period (2011-2020). , Accordingly, the factors affecting the local exchange rate are related to the decrease in the number of foreign monetary units needed to purchase it, and thus the diversification between the purposes of commercial exchange, import and export, and interest rate arbitrage through the movement of financial capital from countries with low interest to countries with high interest during the period, that is, the stability of both The value of exports and imports in the balance of payments, as well as the stability of the rate of change in the gross domestic product as a result of government intervention and the decrease in the severity of extreme risks will lead to the stability of the exchange rate.

The fourth topic: conclusions and recommendations

4-1 CONCLUSIONS:

1. Banking risks are the possibility of losing and losing money as a result of an investment decision, meaning that the actual and real investment returns will differ from the expected return.
2. Extreme risks arise due to the change in the governing body of a country, and thus constitute a danger to investors. These risks are related to the policies of a country that may arise due to the change in the political scenario of the country.
3. The exchange rate is the number of monetary units with which one unit of the local currency is exchanged for a foreign one. Thus, it embodies the linking tool between the local economy and the rest of the economies, and it is an important means of influencing the allocation of resources between economic sectors and their profitability.
4. The occurrence of a decrease in the real value of monetary income, expressed in the quantity and quality of goods and services that the public receives, which reduced economic well-being and raised the poverty rate, and the change in the exchange rate of the dinar by reducing it against the dollar came at a time when its correct and reliable introductions were not available. A commodity substitute for many imported industrial and agricultural commodities whose prices have increased.
5. There are a number of factors and reasons that affect the exchange rates, as the position of the balance of payments is the important factor in determining the exchange rate of the Iraqi dinar, and the exchange rate is determined by economic factors that reflect the economic gaps, as the extreme risks affected the exchange rates during the period under study.

4-2 Recommendations:

1. Raising the efficiency of economic management with regard to drawing up and managing macroeconomic policies or designing and managing development plans, as they are the only tools by which structural imbalances can be addressed, and the Yemeni economy ready for the stage of sustainable growth.
2. Preserving the stability of the exchange rate, supporting the value of the national currency, and raising the effectiveness of the float policy as a tool to achieve the external balance of the economy by applying structural policies and programs that lead to improving its productive capabilities, and providing a safe investment climate by correcting and reforming the conditions of the judiciary and strengthening its role, in a way that guarantees the protection of rights, properties, the enforcement of commercial contracts, the correction of the financial and administrative conditions of the state apparatus, and the elimination of financial and administrative corruption.
3. The need to diversify the sources of national income creates great economic risks and relying on the production and export of oil as a basis for economic activity, entails risks of fluctuations in global prices, which threaten the external balance.
4. Developing plans and mechanisms for the periodic evaluation of the current exchange rate policy, especially the efficiency of foreign currency reserves and predicting the future of the exchange rate.
5. Preserving the stability of the floating exchange rate, and its role as a nominal anchor, as any change in the nominal exchange rate, under the pretext of maintaining or supporting the competitive position of the national economy, will lead to a setback in the policy of floating the dinar exchange rate.

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