



**ECONOMIC ANNALS-XXI**

ISSN 1728-6239 (Online)  
ISSN 1728-6220 (Print)  
<https://doi.org/10.21003/ea>  
<http://ea21journal.world>

Volume 194 Issue (11-12) 2021

**Citation information:**

Alyaseri, N. H. A. (2021). Optimization of the challenges facing the Iraqi economy based on the values of returns in 2000-2020. *Economic Annals-XXI*, 194(11-12), 4-12. doi: <https://doi.org/10.21003/ea.V194-01>



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## Optimization of the challenges facing the Iraqi economy based on the values of returns in 2000-2020

**Abstract.** In this paper, the situation in the Iraqi economy for the period of 2000-2020 has been analyzed using three hybrid models. The research hypothesis was launched from the necessity of interaction between the activity of the Iraqi market for securities and the local financial and economic institutions. The hypothesis has been verified accordingly using Kolmogorov-Smirnov Test, normality test and Multicollinearity Test. The statistical analysis was based on the three mathematical models to expect return and risk values of Iraqi money market. Three basic models (optimization (BO), Optimized Return Value (ORV), General Optimization Risk (GOR)) have been conducted to optimize and analyze the given data accordingly. The research reached several conclusions, the most prominent of which is the limited economic role of the Iraqi market for securities; the potential exposure to negative effects that could be produced by international crises because of the expected openness, due to the possibility of illegal capital movements resulting in irrational speculation; the difficulty of implementing monetary and financial policies, due to vulnerability to international challenges.

**Keywords:** Iraq; Monetary Policy; International Crisis; Vulnerability; Linear Optimization; GDP Optimization; Statistical Analysis; Hybrid Models; Normality Tests

**JEL Classification:** E24; G21

**Acknowledgements and Funding:** The author received no direct funding for this research.

**Contribution:** The author contributed personally to this work.

**Data Availability Statement:** The dataset is available from the authors upon request.

**DOI:** <https://doi.org/10.21003/ea.V194-01>

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**Оптимізація завдань, що стоять перед іракською економікою, на основі значень прибутковості у 2000-2020 роках**

**Анотація.** У цій роботі ситуація в економіці Іраку за період 2000–2020 років проаналізована з використанням трьох гібридних моделей. Гіпотеза дослідження сформульована, виходячи з необхідності взаємодії діяльності іракського ринку цінних паперів із місцевими фінансово-економічними інститутами. Гіпотезу було перевірено відповідним чином за допомогою тесту Колмогорова-Смирнова, тесту нормальності та тесту мультиколінеарності. Статистичний аналіз був заснований на трьох математичних моделях очікуваної прибутковості та ризику ринку Іраку. Було використано три основні моделі (оптимізація (BO), оптимізована прибутковість (ORV), загальний ризик оптимізації (GOR) для оптимізації та відповідного аналізу даних. У ході дослідження було зроблено кілька висновків, найбільш важливими з яких є обмежена економічна роль іракського ринку цінних паперів; потенційна схильність до негативних наслідків, які можуть бути викликані міжнародними кризами, через очікувану відкритість; а також можливість незаконного руху капіталу, що призводить до ірраціональних спекуляцій; складність реалізації грошово-кредитної та фінансової політики внаслідок вразливості перед міжнародними викликами.

**Ключові слова:** Ірак; грошово-кредитна політика; міжнародну кризу; вразливість; лінійна оптимізація; оптимізація ВВП; статистичний аналіз; гібридні моделі; тести на нормальність.

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**Оптимизация задач, стоящих перед иракской экономикой, на основе значений доходности в 2000–2020 гг.**

**Аннотация.** В данной работе ситуация в экономике Ирака за период 2000–2020 гг. проанализирована с использованием трех гибридных моделей. Гипотеза исследования сформулирована исходя из необходимости взаимодействия деятельности иракского рынка ценных бумаг с местными финансово-экономическими институтами. Гипотеза была проверена соответствующим образом с помощью теста Колмогорова-Смирнова, теста нормальности и теста мультиколлинеарности. Статистический анализ был основан на трех математических моделях ожидаемой доходности и риска денежного рынка Ирака. Были использованы три основные модели (оптимизация (BO), оптимизированная доходность (ORV), общий риск оптимизации (GOR) для оптимизации и соответствующего анализа данных. В ходе исследования было сделано несколько выводов, наиболее важными из которых являются ограниченная экономическая роль иракского рынка ценных бумаг; потенциальная подверженность негативным последствиям, которые могут быть вызваны международными кризисами, из-за ожидаемой открытости; а также возможности незаконного движения капитала, приводящего к иррациональным спекуляциям; сложность реализации денежно-кредитной и финансовой политики в следствие уязвимости перед международными вызовами.

**Ключевые слова:** Ирак; денежно-кредитная политика; международный кризис; уязвимость; линейная оптимизация; оптимизация ВВП; статистический анализ; гибридные модели; тесты на нормальность.

**1. Introduction**

The stock market is one of the prominent financial institutions in free economies, as it is a mediator in which savings are mobilized and directed towards various investments to produce goods and services, and contribute to the formation and increase of GDP. It also represents the link between individuals, banks and other savings institutions, which have accumulated savings. As well as it represents one of the links in the development of the financial and banking system in any economy. In order to continue the effectiveness of the stock market and its activity in the Iraqi economy. It is necessary to study the reality of this market to assess its economic role, and stand on the level of international challenges that face the development of its activity, and the problems and obstacles that lead to a low level of economic performance in it. A financial institution is a commercial organization that helps its customers save money, then helps them get loans and credit (Bansal et al., 2019). Companies use these services to help facilitate international commerce, such as resource mobilization and allocation, financial intermediation, and facilitation of foreign exchange transactions (Prasetiyani, 2020). In the broadest sense, you can classify a financial institution as a bank or a nonbanking financial institution. However, the examination conducted in this research specifically focused on the banking industry. According to Elim (2019), implementing efficient governance procedures may boost firm value.

In contrast to Kisman et al. (2019), well-governed corporations fence in their surplus capital reserves and companies with poor corporate governance are quicker to invest in low-profitability ventures. In simple terms, poorly administered enterprises lose company value by wasting financial resources. In an extensive study of American companies by Pojanavatee (2020), strong shareholder rights are shown to result in more shareholder value, better earnings, and fewer capital expenditures. Incorporating 51 different principles of corporate governance recommended by the services division of institutional investor advisory firm Institutional Shareholder Services, Hanif (2020) developed a corporate governance index (CGI). Better-governed enterprises are also shown to be related to increased financial value.

Some categories of data show that cash holdings are negatively correlated with corporate value. Cash holdings are inversely associated to the firm's worth, as indicated by Wanjawa and Muchemi (2014). Cash-rich organizations are more prone to conduct value-decreasing purchases and mergers than cash-constrained ones, according to Lee et al. (2016). Furthermore, Kisman and Restiyanita (2015) claim that liquid assets are more lucrative to the managers, as they can be converted into private benefits at a lower price than other assets.

Many research projects have been completed regarding the correlation between corporate governance and business value, which have produced highly mixed results. Many of these

researches discovered a favorable correlation between corporate governance and business value; others have revealed a negative association. Once again, this line of reasoning emerges in the literature and may be paraphrased as «Corporate governance has no discernible effect on business value.» Using inaccurate proxies for board independence, research found that inconsistent results occurred. It appears that board composition has no link to business value. Many studies have found that corporate governance practices favorably enhance the value of firms. Mehrara et al. (2014) argue that enterprises that utilize country-specific capital markets have a higher value and the accompanying valuation premiums are inversely proportional to the firm's country's investor protection (Ariyo et al., 2014). Firm value is adversely connected to proxies for investor protection according to Meeampol et al. (2014). This research also suggests that investors in countries with inadequate investor protection devalue company assets because they think they would not benefit from these assets to their full extent

It has not been noticed the effectiveness of the economic role of the Iraqi market for securities. On the other hand, there are international challenges and risks that may limit future market activity and cause problems and crises, which requires standing on the reality of this market to determine the negatives, and quickly overcome the obstacles and problems faced by it to remain effective in the economy. Thus, A study and analysis of the economic performance of the Iraqi market for securities in the period of 2005-2019 to determine the level of its economic performance on the one hand, and to clarify the international challenges and risks that may result from it as a result of financial openness to the world, on the other hand.

## 2. Research Methodology

### 2.1. Research hypothesis

The development of the performance of the Iraqi market for securities is an imperative necessity required by the process of interaction between market activity and local financial and economic institutions and changes to highlight its economic role and its activation on the one hand, and between international variables and adaptation to meet the challenges and expected risks that may result from them on the other hand.

The research has taken from the descriptive approach an analytical method to reach the goal, this method analyzes the financial statements of the Iraq Stock Exchange, and indicators of its financial performance, to determine its role in the economy, and the extent of its willingness to face the risks of financial openness expected in the future.

### 2.2. Research modeling

#### 2.2.1. Optimization of Capital Assets

This strategy is predicated on the belief that every asset can be categorized according to two statistical characteristics: a position statistical characteristic, which provides a metric of the average return of an asset over some period of time; and a dispersion statistical characteristic, which quantifies the asset risk. The arithmetic average of the stock returns - or *Basic optimization BO* or  $R_i$  which is the average return of stock are used to compute the average return of each stock:

$$\text{Basic optimization } (BO) = \frac{\sum_{j=1}^m r_{ij}}{W}, \quad (1)$$

where:

$R_i$  is the average return of stock  $i$ ; or *Basic optimization BO*;

$r_{ij}$  is the return of stock  $i$  in period  $j$ ;

$W$  is the number of periods considered.

The optimizing risk value ( $\lambda$ ) associated to an individual stock is determined through the standard deviation of its returns, hose formula is shown as equation 2:

$$\lambda = \sqrt{\frac{\sum_{j=1}^m (r_i - R_i)^2}{W-1}}. \quad (2)$$

$$\text{General Optimization Risk (GOR)} = \sqrt{2 \sum_{i=1}^m (x_i^2 + \delta_i^2) + 2 \sum_{i=1}^m x_i x_j \epsilon_i \epsilon_j \rho_{ij}} \quad (3)$$

where:

$x_i$  is the percentage of that is used for investment in stock  $i$ ;

$R_i$  is the average Risk of stock  $i$ ;

$\epsilon$  is the risk, or standard deviation of stock  $i$ ;

$\rho_{ij}$  is the correlation between stocks  $i$  and  $j$ ;

$n$  is the number of stocks.

Although these methods may be applied, there are too many stocks and percentages to assess that they are tough to use.

Optimization of risk assessment can be formulated as:

$$\text{Risk} = \sum_{i=1}^m x_i (R_i - R_{max}) < \delta (R_{min} - R_{max}), \quad (4)$$

where:

$x_i$  is the percentage (expressed in tenths) of stock  $i$  that must be bought and it is a real variable;

$0 \leq x_i \leq 1$ ,  $x_i = 0$  when stock  $i$  is not included in portfolio;

$\delta_i$  is the selling price of stock  $i$ .

Optimization based on Return assessment is considered as:

$$\text{Optimized Return Value (ORV)} = \sum_{i=1}^m x_i (\partial_i - \partial_{max}) < \delta (\partial_{min} - \partial_{max}), \quad (5)$$

where:

$x_i$  is the percentage (expressed in tenths) of stock  $i$  that must be bought and it is a real variable as follows: 1,  $\delta_2$  are variables that are used for covering; all of the solution space and their values are limited by:  $0 \leq \delta_2 \leq 1$ ;

$\partial_i$  is the selling price of stock  $i$ .

### 3. Results And Discussion

#### 3.1. Hypothesis based on normality testes

##### 3.1.1. Normality Based F test

In this research, International variables and adaptation to meet the challenges and expected risks that may result from them on the other hand. Based on the output presented in Table 1, we see that F test is 21.262 with  $p$ -value (sig) 0.000, we get F table 2.1142. Because F test > F table (21.262 > 2.1142), it led to accept the proposed assumption period 2003-2020.

Table 1:  
Details of the tested assumption

Function	Sum of R <sup>2</sup>	Df	Mean of Squares	F value	SIG
Regression	33.2	5	12.454	19.2.	000
Residual	31.2	18			
Total	29.4	19			

Source: Calculated by the author

##### 3.1.2. Normality based on the Kolmogorov-Smirnov Test

Normality Test is examined to find whether the residual data is normally distributed or not. This test has been implemented on employed models: Optimized Return Value (ORV), Basic optimization (BO) and General Optimization Risk (GOR). R squares, standard errors and Values of Durbin Watson have been considered to investigate whether assumption is suitable for current analysis or not (Table 2).

Table 2:  
**Normality Test Kolmogorov-Smirnov**

Model	R	R <sup>2</sup>	Preferable R <sup>2</sup>	Err. Std	Durbin Watson
Basic optimization (BO)	0.344	0.4277	0.423	0.14	1.23
Optimized Return Value (ORV)	0.229	0.3469	0.350	0.23	1.09
General Optimization Risk (GOR)	0.198	0.374	0.381	0.19	1.12

Source: Calculated by the author

### 3.1.3. Multicollinearity Test

Multicollinearity Test is intended to examine whether in the regression model we can find a correlation between its independent variables. A good regression model should not contain correlation between its independent variables as shown in Table 3.

The results in Table 3 indicate that the VIF value for each independent variables are far below 10, which is Capital assets - X1 = 1.345, Risk assessment - X2 = 2.356, and Return assessment - X3 = 4.46. Therefore, we could conclude that there is no multicollinearity between its independent variables on the regression models.

Table 3:  
**Results of multicollinearity test**

Model	Unstandardized coefficients		Std Coef.	T Values	sig	Collinearity statistics	
	B	Std. Error	Beta			Tolerance	VIF
Constant	.03	0.12	.000	0.12	.000	.00	.00
Basic optimization (BO)	.435	0.34	0.54	0.135	.000	0.65	1.345
Optimized Return Value (ORV)	0.23	0.44	-0.45	0.02	.000	0.54	2.356
General Optimization Risk (GOR)	0.34	0.13	0.14	0.05	.000	0.41	4.46

Source: Calculated by the author

## 3.2. Optimize the Gross Domestic Product Based Proposed Model

The results from the risk assessment and the return are very similar, being the difference slightly smaller for those from the minimization problem. It is important to notice that the portfolio composition resulting from each problem is different, which was anticipated since the variables are really valued and the problems admit an infinite number of solutions. This fact allows the possibility for selecting percentages for each stock and obtaining similar returns and risks.

### 3.2.1. Linear Optimizing of the Capital Ratio of the GDP Based Models

One of the indicators of the market size is the value of securities listed on the stock market divided by gross domestic product. It is a measure of the depth of the market value in the national economy. From an economic point of view, its use is based on the assumption that the size of the stock market correlates positively or negatively with its ability to mobilize savings and direct them towards diversified investments at the macroeconomic level. The ratio of the market value to the gross domestic product in the year 2005 reached about 4.42%, and decreased to reach 2.05% in 2006 then to 1.48% in 2008, and the increase came again to reach 6.85% in 2016 despite its decrease in 2014 to 3.57%, due to the decline in the security situation, then the decline has returned again to reach 4.90% in 2019 as shown in Figure 1. Although this percentage has



Figure 1:  
**Optimized fluctuation in GDP of Iraq in 2000-2020**

Source: Compiled by the author

decreased, this means that the market value has grown at a rate greater than the rate of growth of GDP in this period.

### 3.3. Investigation Ratio of the Market Value to the Liquidity of Gross Domestic Product

This ratio has taken the same approach to the ratio of the market value to the gross domestic product. It decreased from 9.30% in 2005 to 7.06% in 2012, to rise in the year 2013 and to reach 16.59% in 2017, then to decrease to 12.44% in 2019, and the reason for the increases is due to the growth in the market value at a rate greater than the rate of domestic liquidity growth as shown Table 4.

Figure 2 represents that percentage of liquidity to GDP through the period of 2005-2019. The maximum percentage of GDP through these years is 6.8% through 2016 with a liquidity 15.3%. while the maximum liquidity happened at 2017 with GDP value changing to 6.6%.

Table 4:

Performance indicators of the Iraqi monetary sector for the period of 2005-2019

Years	Companies listed	Trading volume	Total trading value	Market value	Turnover
2005	85	55639	366.81	3246.86	11.30
2006	93	57975	146.89	1960.21	7.49
2007	94	152991	427.37	2108.22	20.27
2008	96	150853.1	301.35	2319.46	12.99
2009	91	211290.6	411.93	3581.20	11.50
2010	87	255659.5	400.36	3462.28	11.56
2011	87	492371.6	941.20	4931.19	19.09
2012	84	625639.9	893.83	5327.35	16.78
2013	83	875568.6	2845.42	11451.37	24.85
2014	83	746212.4	901.17	9520.63	9.47
2015	98	618726.5	495.11	12364.79	4.00
2016	97	1038229.8	515.96	13490.01	3.82
2017	101	1215082	900.15	14838.13	6.07
2018	104	832631	466.48	14735.45	3.17
2019	106	460097.1	284.91	12872.21	2.21
2020	109	345675.35	335.3	23453.35	2.13

Source: Compiled by the author based on available public data

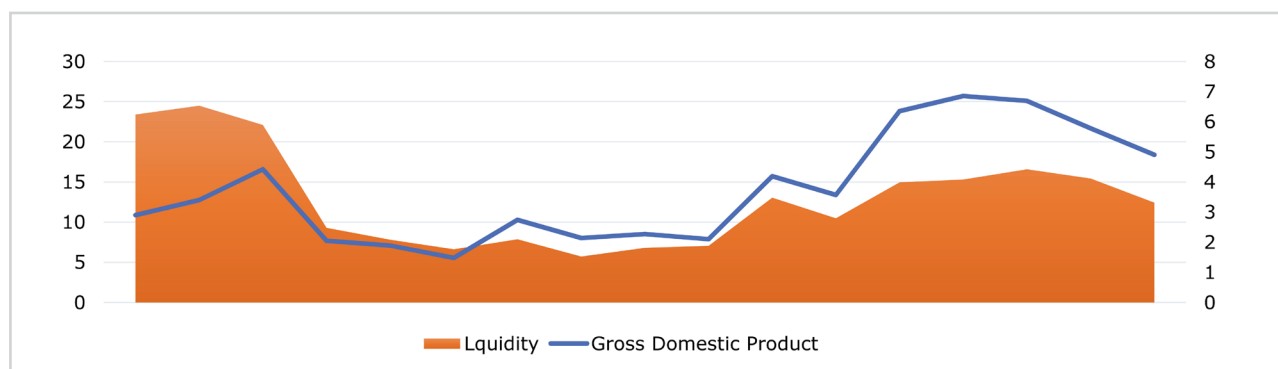


Figure 2:

Optimization of the Iraqi market value to the liquidity of Gross Domestic Product

Source: Compiled by the authors based on available public data

### 3.4. Investigation of the primary financial stock market of Iraq for the period of 2000-2020

The primary market can be evaluated through the following indicators and based on Table 3:

**1 - The ratio of new issuances to GDP:** The ratio of new issuances from stocks to GDP during the period 2005-2019 was modest, as Table 3 indicates that the average of this ratio reached up to 0.11%, while the highest ratio up to 1.36% in 2015, and this percentage has taken a descending trend during the following years until it reached 0.06% in 2019. This means that the size of the primary market is weak and that the tools offered there are low, i.e. the low ratio of savings directed to the primary market for investment in securities, and the low ability of financial instruments offered in this market to attract the available savings.

**2 - The ratio of new issues to gross domestic savings:** This indicator indicates the extent to which the primary market contributes to attracting domestic savings. It is noted from Table 2 that the ratio of new issues of shares to gross domestic savings increased from 0.57% in 2006 until it reached its highest level in 2015 with limits of 14.24%, despite its decline in the years 2007, 2008, 2010, 2011. This percentage fluctuated and increased during the following years to reach 0.32% in 2019.

From the foregoing, the ratio of new issues of shares to gross domestic savings during the period 2005-2015 was high, due to the increased market activity that prompted savers to subscribe to shares and bonds issued in the market. While the percentage during the period 2016-2019 was weak and unstable, which means the trend of savers towards other safer savings areas for them, and this requires a rapid response to revitalize the issuance market and diversify the tools and institutions that increase their effectiveness in playing their role in mobilizing savings and directing them towards Real investment.

**3 - Ratio of new issues to total fixed investment:** Table 4 indicates that the ratio of the primary market contribution to financing investments during the period 2005-2019 was average, as it averaged 3.50%. It decreased from 12.12% in 2006 to its lowest level 2.71% in 2013. However, it increased to 15.79% in 2015 and then took a descending trend to reach 0.99% in 2019, despite the improvement of this percentage during 2017 and 2018 and reaching 8.46% and 4.04%, respectively. This is an indication of the continued weakness of the primary market in contributing to financing new investments.

**4 - The ratio of new issues to long-term deposits in the banking system:** This indicator represents one of the measures of the efficiency of the stock market, and indicates the ability of the market to mobilize savings and reorient them towards long-term investments. Results indicates that the ratio of total new issuances to total noncurrent savings deposits (long-term) ranged between 0.56% in 2006 to 5.15% in 2015. Then, this percentage began to fluctuate up and down until it reached 0.23% in 2019.

This ratio reflects the ability of the trading market to attract domestic savings. Table 5 indicates that the percentage has taken an upward trend, reaching 4.46% in 2005 and rising to 17.50% in 2009, due to the growth of the trading value at a rate higher than the growth of the gross domestic savings. However, it began to decline, reaching its lowest level of 0.45% in 2019, despite its rise in 2013 to 5.44%. The high ratio means an increase in the ability of the trading market to attract savings, and its decrease means savers prefer to invest their money in deposits in banks or in other investments without investing in the secondary market, which means a shift from investing in the market towards other areas of investment, and this is evident when comparing the ratio of the value of trading in the market to the total annual deposits in the banking system.

Table 5:  
The primary money market indicators for the period of 2003-2020

Years	The value of new issuances	The value of new issuances / GDP	The value of new issuances / Total domestic savings	The value of new issuances / Total fixed investment	The value of new issuances / Total non-current deposits
2003	177.4	0.56	0.66	11.6	0.88
2004	199.3	0.36	0.82	12.6	0.76
2005	193	0.65	0.76	13.46	0.67
2006	108.84	0.11	0.57	12.12	0.56
2007	39	0.03	0.21	5.83	0.16
2008	56	0.04	0.13	7.13	0.15
2009	25	0.02	1.06	1.80	0.08
2010	50	0.03	0.32	2.40	0.17
2011	100	0.05	0.24	3.98	0.27
2012	-	-	-	-	-
2013	270.01	0.10	0.52	2.71	0.54
2014	-	-	-	-	-
2015	2654.78	1.36	14.24	15.79	5.15
2016	100	0.05	0.53	0.88	0.22
2017	1255.01	0.57	3.62	8.46	2.67
2018	615	0.24	1.29	4.04	0.90
2019	168	0.06	0.32	0.99	0.23
2020	434	0.45	0.45	0.43	0.43
Average	362.77	0.11	1.18	3.50	0.48

Source: Calculated by the author

#### 4. Gross Domestic Product Based on Total Value of Circulation

This ratio indicates the volume of transactions (the actual exchange of shares) in the secondary market in relation to the size of the national economy, and it largely reflects the level of liquidity in the economy, as well as it complements the market capital ratio, the market capital ratio may be high, but the circulation move is weak (liquidity) in the market. Table 6 indicates a small percentage of the circulation value throughout the study period, reaching a maximum of 1.04% in 2013. The increase in the value of the trading value means that there is an increasing preference for investment in the trading market and its ability to attract savings over the period, while this ability decreases when this percentage decreases.

This percentage reflects the extent to which investors (individuals and companies) are investing money in securities (stocks and bonds), compared to deposits in the banking system. The average turnover value to total annual deposits in the banking system was 1.24%, which is a very small percentage. Table 6 shows that this percentage ranged between the lowest level in the year 2018 as it reached 0.44%, and the highest increase for this percentage was 3.20% in 2013, which means the limited volume of funds destined for investment in securities through trading in the secondary market, compared to the volume of funds used as deposits in the banking system, that is, the transformation of individuals and companies towards depositing money in the institutions of the banking system.

Table 6:  
Secondary money market indicators for the period of 2003-2019

Years	Total turnover / GDP	Total turnover / Total local savings	Total turnover / Total annual deposits
2003	0.61	3.44	1.98
2004	0.48	4.48	2.67
2005	0.50	4.46	2.73
2006	0.15	0.77	0.61
2007	0.38	2.31	1.33
2008	0.19	0.72	0.65
2009	0.32	17.50	0.88
2010	0.25	2.54	0.70
2011	0.43	2.22	1.32
2012	0.35	2.21	1.08
2013	1.04	5.44	3.20
2014	0.34	2.32	0.98
2015	0.25	2.66	0.60
2016	0.26	2.76	0.70
2017	0.41	2.60	2.92
2018	0.18	0.98	0.44
2019	0.11	0.54	0.48
2020	0.10	0.66	0.64
Average	0.34	3.34	1.24

Source: Calculated by the author

Private foreign capital has increased rapidly towards developing countries since the 1990s, reaching in the period 1990-1997 about USD 280 billion, while the flow of loans from private international commercial banks was no more than 10% of the total private foreign capital flows to these countries.

Upon analyzing the movement of this flow, it becomes clear that investment in the financial portfolio (indirect foreign investment) is characterized by high growth and rapid movement and movement from one market to another suddenly. It enters and exits a specific market in short periods of time and with huge volumes, and the degree of volatility in the movement of the financial portfolio is much higher than the degree of volatility in the movement of foreign direct investment, as it was stated in the World Investment Report for the year 1998 that the degree of volatility in the investment of the financial portfolio measured on the basis of the coefficient of difference is 0.43, while for foreign direct investment it reaches 0.35. This is due to the fact that conservative investment is governed by short-term factors as well as its continuous pursuit of quick profits, as it can be easily eliminated by selling in financial markets, as it is greatly affected by expectations and information available to dealers and their psychological states that are often overshadowed by the herd behavior.

As for the sudden exit of investments in large volumes, it will result in a decrease in the exchange rate of the local currency leading to a deterioration in the prices of real assets (lands and real estate) and financial assets, a decrease in profit rates, an increase in the balance of payments deficit, a loss of foreign investor confidence in the local market, and the depletion of international



reserves of foreign exchange, especially when intervention of the central bank to protect the local currency exchange rate.

## 5. Conclusions

1. Despite the reform measures witnessed by the Iraqi market for securities, they are still far from fulfilling the economic role assigned to them, because of the characteristics that are still characterized by them and, which represent obstacles that prevent this.
2. The weak liquidity of the Iraqi market for securities, as the stock turnover decreased during the research period to 2.21%.
3. Weakness of the size of the primary market due to the limited types of securities that you deal in. The average ratio of initial issuances of securities to gross domestic product was 0.11%.
4. Weakness of the primary market contribution rate for financing investments. The average ratio of the value of initial issuances to the value of fixed capital has reached 3.50%, due to the investors' shift to the cash and banking market to provide the necessary financing for them instead of offering shares for public subscription. As well as favoring the private sector to establish family joint stock companies.
5. The potential for the market, as well as other financial institutions, to be exposed to several crises, to enter illegal funds and high speculation, and to escape national funds abroad, and the weakness of national sovereignty in the use of monetary and financial policy because of the vulnerability to the challenges of financial openness and its challenges.
6. The financial openness and its challenges push towards the potential exposure of the market to many negative effects and risks, and its reflection in the macroeconomic variables and financial and economic stability, especially in the case of sudden movements of short-term capitals.

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Received 16.09.2021

Received in revised form 14. 10.2021

Accepted 20. 10.2021

Available online 27. 12.2021