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Economic and Financial Indicators for the Arab Finance Stability

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Abstract

Due to successive international financial crises, finance stability became increasingly important amid high inflation during the current decade along with different economic and financial fluctuations and reductions in rate of growth coincided with the absence of economic stability as a result of political instability. This research aims to highlight the instability of the financial and economic indicators in the Arab finance as well as analyzing related data using the Minitab statistical program to measure the trend of these indicators.

Keywords

Macroeconomics, credit facilities, structure of liabilities, financial soundness, inflations rates, return of ownership rights, return on equity, return on equity of assets.

Introduction

Accelerated development took place in the international financial and banking systems, meanwhile the banking authorities took necessary steps to secure the financial organizations which have the obligation to meet their liabilities and to pursue struggle in order to attract banking and offer necessary facilities as well as handling reluctance by customers. These steps strengthened the policy of finance stability and provided clear signals for the sources of financial risks and disturbances at the right time since the financial and banking sector is well related to other sectors and the main source of their funds. Financial stability is considered a complement to the essence of macroeconomic. Arab states sought, via their central banks, to develop, organize, and evaluate their financial activities in order to achieve financial stability. Arab economies have different characteristic features according to their nature of sources which in turn resulted in many common challenges faced the Arab states and led to high unemployment and poverty rates. This situation convinced Arab states to seek developments for their financial institutions using experiences of the developed countries in order to achieve financial stability, knowing that many Arab states depend on the Petro dollars, which in turn is subject to economic variations and well affected by the endemic. This situation led the Arab states to free their markets and attempt to activate other non oil economic sectors as well as apply programs of economic reforms and revitalizing the domestic and other investments in different sectors including tourism by paying extra care on its infrastructure and environments. These procedures made opportunities of economic diversifications to Arab states possible, and enabled them to achieve sustainable development. This research aims to highlight one of the most important issues namely “the financial stability” by analyzing the economic and financial indicators depending on the publications of the Arab league (the Arab monetary fund).

Research Methodology:

This research work aims to highlight the importance of the Arab economic and financial stability and its role in the development of the economic and banking system. The research

used the statistical analysis methods to realize the size of the fluctuation in the financial system and its influence on the economic activities.

Global financial and economic indicators

Arabic economic and financial stability is well related to global economic and financial stability especially the advanced and neighboring countries which are known for their commercial and financial mutual relations. Since economic and financial sectors around the world are unstable, especially in the developed countries, the growth rate has been affected precisely, in addition to the raising of interest rates in order to suppress the inflation rate. However, this act resulted in other problems elsewhere. Table (1) represents the global actual growth rate (2017 – 2023) which refers to the fluctuations of annual rates, as a reflection of instability in global economic and financial system. However, in 2020 negative rates due to the effect of endemic on the entire sectors took place. Asian and African developing countries were in better situation, while growth rates in Iraq were higher than other countries except the year 2020. Table (2) shows the statistical indicators for the actual international growth by using the (Minitab) statistical program. The values for the slope of the trend line were negative globally including the Asian and non-Asian developing countries which in turn refers to the annual declines in growth rates equals to the value of the slope of the trend line, and the best slope was for Iraq (0.96), which refers to annual increase in the country equals to the value of the slope of the trend. (F) statistic test for all regions was weak which in turn implies that the trend of the time series is not significant. This is also true with the (t) statistical test. The values of the coefficient of determination were very weak and not significant. Table (2) refers to the absence of multicollinearity and autocorrelations. Figure (1) shows the graph of the actual growth rate by region.

2023 – 2017 (Table (1): actual global growth rates

Region	2017	2018	2019	2020	2021	2022	2023
World	3.7	3.6	2.8	-2.8	3.3	3.4	2.8
Advanced countries	2.5	2.3	1.7	-4.2	5.4	2.7	1.3
Euro countries	2.6	1.8	1.6	-6.1	5.4	3.5	0.8
Developing countries	4.7	4.7	3.6	-1.8	1.9	4	3.9
Asian developing countries	6.6	6.4	5.2	-0.5	7.5	4.4	4.9
Africa	3	3.2	3.3	-1.7	4.8	3.9	3.6
Latin America	1.4	1.2	0.2	-6.8	7	4	1.6
Arab States	1.4	1.4	1.9	-5.2	4.6	5.6	3.4
Iraq	-3.3	4.7	5.8	-11.3	2.8	8.7	4

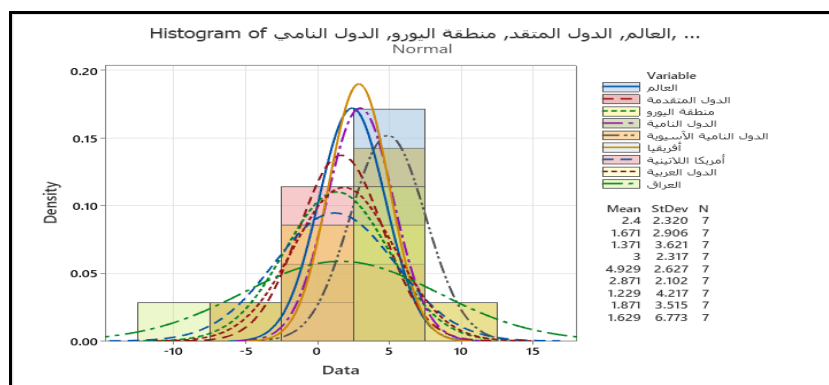
Source: international monetary fund 2023

Table (2): statistical measures for the actual global growth rate according to geographical zones

Region	Autocorrelation Durbin- Watson	Multicollinearity VIF	Coefficient of Determination R^2	Test t	F test	Slope of trend β_1
World	2.17	1.00	0.08	-0.19	0.04	-0.093
Advanced countries	2.70	1.00	0.06	0.05	0.01	0.032

Euro zone	2.59	1.00	0.02	0.09	0.01	0.064
Developing countries	1.56	1.00	0.04	-0.42	0.17	-0.196
Asian developing countries	2.70	1.00	0.04	-0.46	0.21	-0.243
Africa	2.65	1.00	0.03	0.39	0.15	0.168
Latin America	2.54	1.00	0.06	0.55	0.30	0.464
Arab States	2.39	1.00	0.01	0.91	0.82	0.611
Iraq	2.42	1.00	0.09	0.22	0.52	0.960

Source: the outputs of (Minitab) statistical program



Source: based on the outputs of (Minitab) statistical program.

Figure (1) Histogram of the world, advanced countries, euro zone, and developing countries Table (3) shows global inflation rates in different geographical zones. The rates were exclusively high in the African continent followed by Latin American countries, developing countries, Asian developing countries, and the least were the advanced countries and countries of the Eurozone. These data govern the economic situations in these regions. The slope of the trend line was positive for all regions except for the African countries. (F) statistical test and (t) statistical test were not significant for the all regions. The coefficient of determination was weak for the all regions except developing countries and Asian developing countries, there were only half of the variables for the development explained. Problems of multicollinearity and autocorrelations for the data of the series were absents - table (4). figure (2) explains the graphical form of the global inflation rates.

Table (3): development of the inflation rates according to geographical zones

Area	2017	2018	2019	2020	2021	2022	2023
Advanced countries	1.5	2	1.4	0.7	3.1	7.3	3.3
Euro zone	1.1	1.8	1.2	0.3	2.6	8.4	1.4
Developing countries	4.4	4.9	5.1	5.2	5.9	9.8	6.2
Africa	10.6	8.3	8.1	10.1	11	14.5	2.7
Europe	5.6	6.4	6.7	5.4	9.6	7	6
Asian developing countries	2.4	2.6	3.3	3.2	2.2	3.8	7.1

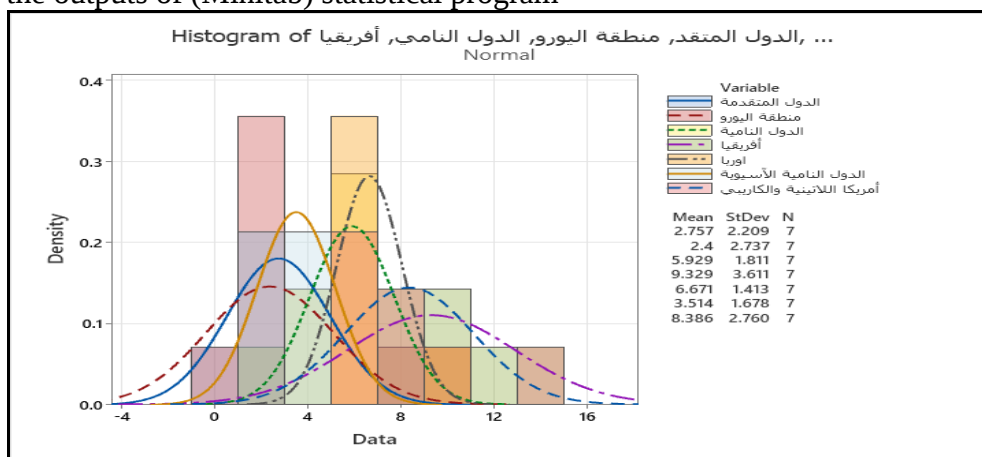
Latin America and the Caribe	6.3	6.6	7.7	6.4	9.8	14	7.9
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Source: International monetary fund – international economy horizon data base.

Table (4) the statistical measures of the global inflation rates in different geographical zones

Area	Autocorrelation Durbin-Watson	Multicollinearity VIF	Coefficient of Determition R^2	test t	F test	Slope of trend β_1
Advanced countries	2.24	1.00	0.38	1.76	3.09	0.632
Euro zone	2.51	1.00	0.19	1.09	1.18	0.554
Developing countries	2.74	1.00	0.46	2.08	4.34	0.571
Africa	2.08	1.00	0.03	-0.41	0.17	-0.301
Europe	2.54	1.00	0.08	0.68	0.46	0.189
Asian developing countries	1.38	1.00	0.51	2.24	5.03	0.551
Latin America	2.44	1.00	0.37	1.71	2.91	0.775

Source: the outputs of (Minitab) statistical program



Source: the outputs of (Minitab) statistical program

Figure (2)

Arab Financial and Economic Indicators:

Following the global financial crises in 2008, and since the banking activities supply liquid currencies necessary for the sustainable economic development, Arab states began to pay more attentions to financial stability, and set systematic evaluation programs of the banking and financial activities. Table (5) shows the assets development of the Arabic banking sector (2002 – 2013), which reflects an obvious increase in the time series, as well as the ratio of the assets of the Arab banks relative to the gross domestic product (GDP), and the percentage financial facilities offered relative to the GDP. Although a fluctuation in the series existed, the trend was positive for the three indicators and the best was the marginal slope of the trend for the

development of assets (151.6). the (F) statistical test and the (t) statistical test were highly significant for the development of assets and significant for the ratio of Arab banks assets relative to gross domestic product (GDP), and they were not significant for the ratio of financial facilities relative to the GDP. The coefficient of Determination was very high and explains (98%) of the explanatory variables, and the remaining (2%) is attributed to external variables for the development of assets. However, the coefficient of determination explains about (50%) of the assets relative to GDP. The coefficient of determination for the ratio of financial facilities relative to the GDP was very weak. Problems of multicollinearity and autocorrelation for the data of the series were absent. Table (6), figures (3,4).

Indicators of Arab banking sector assets:

Table (5): Development of indicators of Arab banking sector assets (2013 – 2022)

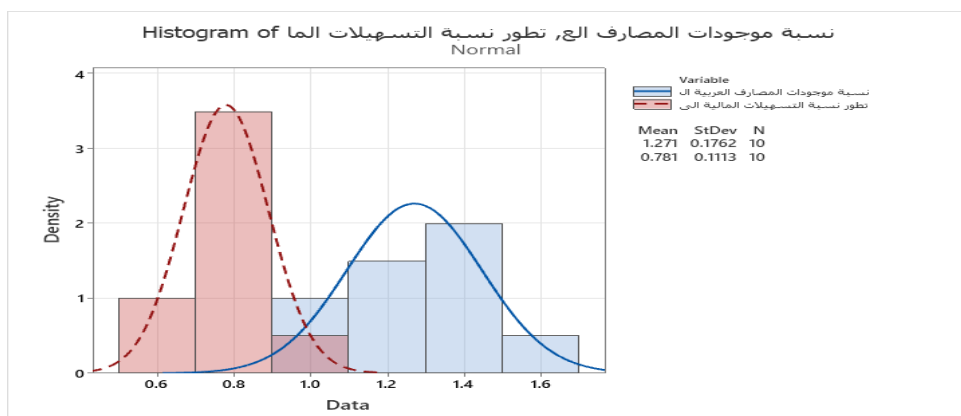
Indicator Year	Development of the ratio of the financial facilities to the GDP	Ratio of Arab banking assets to the GDP	Development of assets (billion dollars)
2013	0.61	0.96	2788
2014	0.67	1.04	2946
2015	0.8	1.24	3079
2016	0.86	1.35	3224
2017	0.77	1.3	3222
2018	0.79	1.24	3408
2019	0.81	1.39	3584
2020	1.02	1.58	3852
2021	0.77	1.37	4043
2022	0.71	1.24	4144

Source: Arab monetary fund – financial stability report 2023

Table (6): Financial measures for the Arab banking sector assets

indicator	Autocorrelation Durbin-Watson	Multicollinearity VIF	Coefficient of Determination R^2	t Test	F Test	Slope of trend β_1
Development of assets	0.92	1.00	0.98	17.95**	322.1**	151.6
Ratio of Arab banking assets to the GDP	1.19	1.00	0.47	2.67*	7.12*	0.0399
Development of financial facilities relative to GDP	1.56	1.00	0.18	1.32	1.75	0.0156

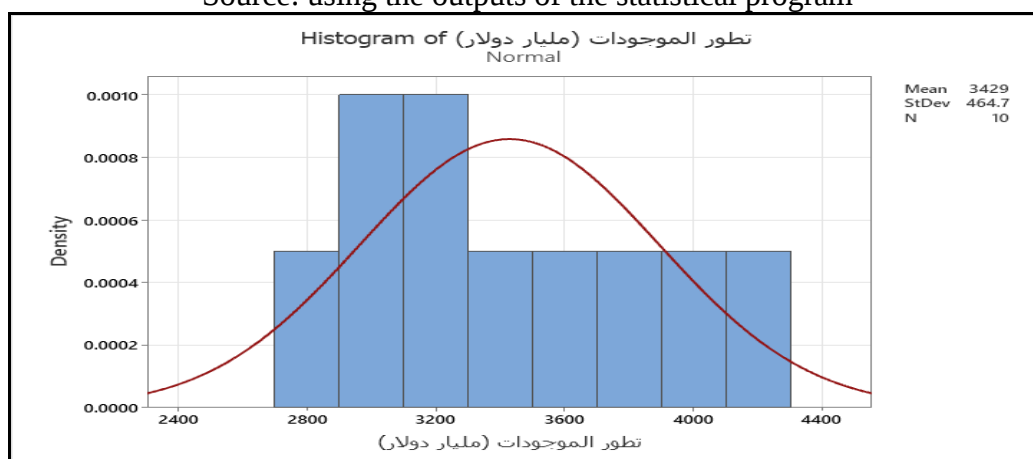
Source: outputs of (Minitab) statistical program



الشكل

(3)

Source: using the outputs of the statistical program



الشكل

(4)

Source: outputs of (Minitab) statistical program

Indicators of liabilities structure at the Arab banking sector:

The credit facilities portfolio is considered one of the essential components of the Arab banking assets. Table (7) shows three main indicators for the liabilities structure at the Arab banking sector, and these indicators were unstable and weak. This conclusion was indicated by the statistical analysis of the relative data which were negative in the ratio of the deposits relative to aggregate liabilities, and the ratio of private sector deposits relative to aggregate deposits. Other statistical measures were also weak, with the absence of multicollinearity and auto correlation. See tables (7, 8) and figures (5, 6).

Table (7): Development of the indicators of liabilities structure at the Arab banking sector.

Indicator year	Development of the private sector deposits relative to the aggregate deposits	Development of deposits (Billion Dollars) relative to the aggregate liabilities	Development of deposits relative to the aggregate liabilities
2013	0.911	1728	0.642
2014	0.907	1878	0.634
2015	0.862	1926	0.632
2016	0.857	1967	0.608
2017	0.823	2096	0.656

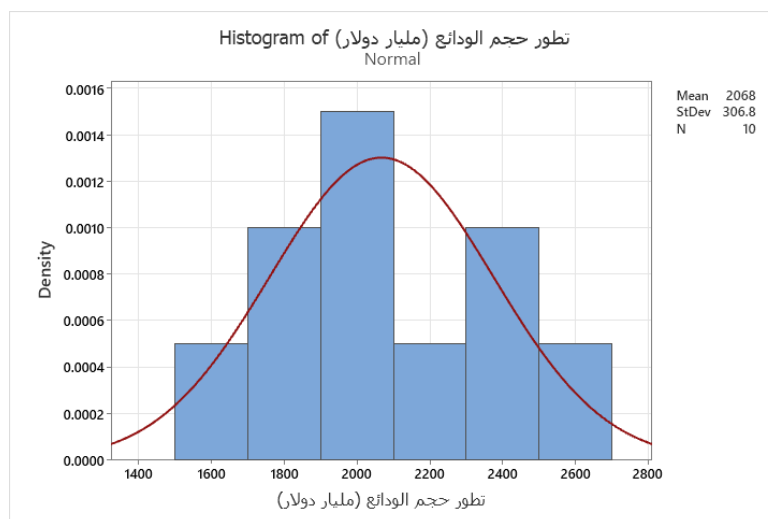
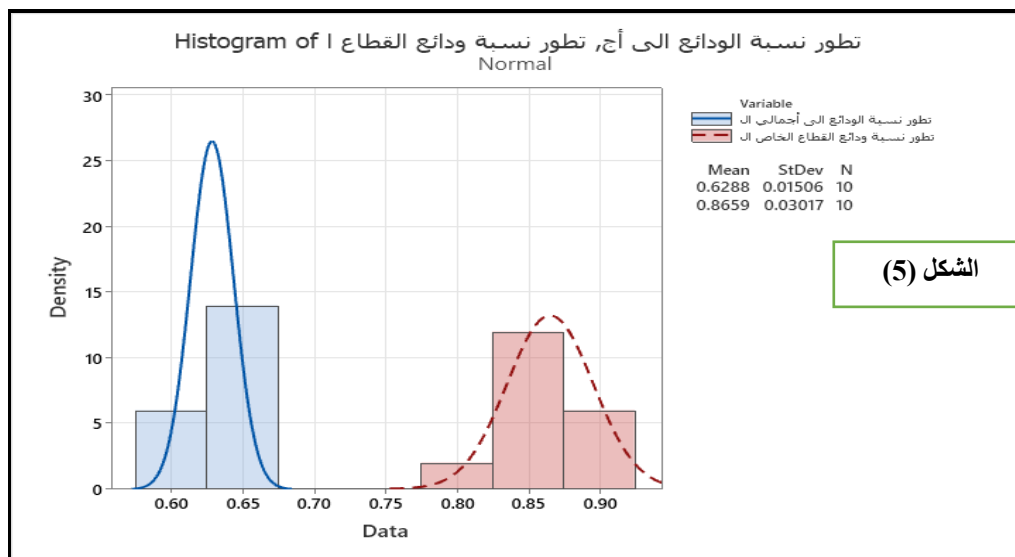
2018	0.893	2168	0.628
2019	0.838	2309	0.606
2020	0.834	2427	0.632
2021	0.866	2571	0.632
2022	0.868	1605	0.618

Source: Arab monetary funds – report of financial stability 2023

Table (8): statistical measures of liability structure at the Arab banking sector

Indicator	Autocorrelation Durbin-Watson	Multicollinearity VIF	Coefficient of Determination R^2	t Test	F Test	Slope of trend β_1
Development of deposits relative to the aggregate deposits	2.75	1.00	0.10	- 0.96	0.92	-0.002
Development of deposits (Billion Dollars) relative to the aggregate liabilities	1.56	1.00	0.19	1.38	1.91	44.5
Development of private sector deposits relative to the aggregate deposits	1.92	1.00	0.24	- 1.58	2.49	-0.005

Source: the outputs of (Minitab) statistical program



Source: the outputs of (Minitab) statistical program

Indicators of financial soundness in the Arab banking sector:

Soundness indicator is considered one of the early warning systems for the financial situation of any bank, which reflects the bank's capacity and efficiency, as well as its role in the financial intermediation and ability to meet the availability of liquid currency, and preparedness for financial crises and difficulties, knowing that capital is the main tool to enhance the bank financial capacity. Financial soundness indicators are divided into four different types: first is the indicator of the rate of the capital adequacy, second is the indicator of the quality of assets which in turn is divided into the development of the ratio of covering the costs of the loans relative to the aggregate irregular loans and the development of the average ratio of the non-performing credit facilities relative to the aggregate financial facilities in addition to the two indicators of the liquidity and operational efficiency. Table (9) explains that the three first indicators were positive except liquidity and operational efficiency where the slope of the trend was positive for all indicators. (F) and (t) tests were significant for the first three indicators and insignificant for the indicators of the relative development of liquid assets to aggregate assets

and the development of net margin of interest to the aggregate income. This reflected the value of determinant coefficient where priority was for the average of relative nonoperational credit facilities to the aggregate financial facilities, knowing the absence of multicollinearity and autocorrelation, table (10) and figures (7 & 8)

Table (9): the development of Arab banking sector liabilities structure.

Indicators	Indicator of operational efficiency	Indicator of liquidity	Asset quality indicator		Indicator of average of capital adequacy
	Development of net interest margin to the aggregate income	Development of the relative liquid assets to the aggregate assets	Development of average relative nonoperational credit facilities to the aggregate financial facilities	Development of relative coverage of loans costs to aggregate irregular loans.	Development of the ratio of capital adequacy
Year					
2013	-	32	78.8	7	16.1
2014	64.3	27.6	83.5	6.7	16
2015	65.9	27.3	83.5	6.5	17.3
2016	66	28.3	85.5	6.6	17.6
2017	67.3	28.5	83.5	6.5	17.2
2018	71	33.7	91.7	7.2	16.9
2019	70.8	30.6	87.8	7.5	17.7
2020	68.3	23.9	87.3	8.4	17.8
2021	67.7	34.9	95.7	8.2	17.9
2022	68	35.3	90.2	8	17.4

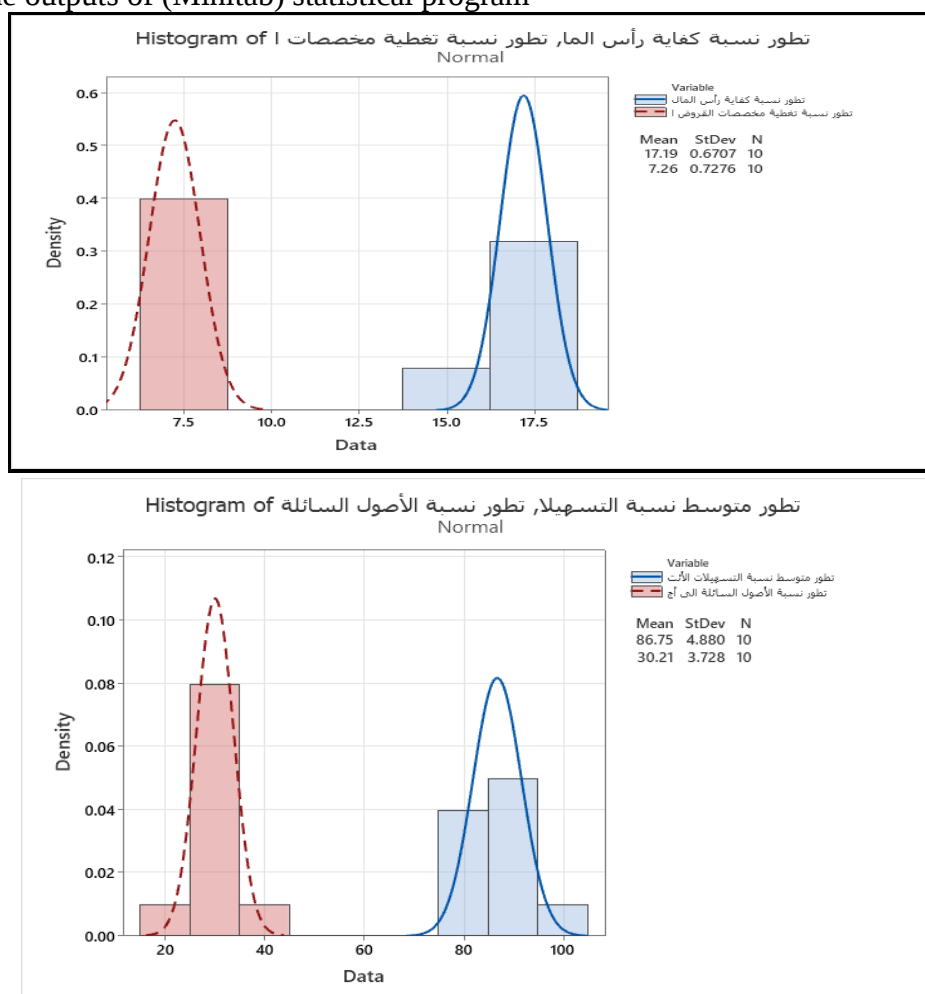
source: Arab monetary fund, report of financial stability 2023

Table (10): statistical measures of the liabilities structure at the Arab banking sector

Indicator	Autocorrelation Durbin-Watson	Multicollinearity VIF	Coefficient of Determination R^2	t test	F test	Slope of trend β_1
Development of capital adequacy	1.57	1.00	0.57	3.23*	10.43*	0.167
Development of relative coverage of loan costs to the aggregate irregular loans	0.99	1.00	0.67	4.01*	16.08*	0.196

Development of average relative nonoperational credit facilities to the aggregate financial facilities	3.07	1.00	0.70	4.29*	18.43*	1.346
Development of relative liquid assets to the aggregate assets	2.06	1.00	0.14	1.14	1.31	0.461
Development of net margin of interest relative to aggregate income	0.91	1.00	0.34	1.97	3.67	0.472

Source: the outputs of (Minitab) statistical program



Source: results of (Minitab) statistical program

Profitability indicators of the Arab banking sector:

The Profitability indicators are considered the actual financial measurements to evaluate the organization's functions, explain its financial return, and assisting future financial decision making. There are two indicators of profitability in the banking sector, the first is the average of return on assets and the second indicator is the rate of return on equity. Table (11) shows that the two indicators were weak and didn't improve during the time series, as the marginal slope of the trend was negative for both of them and was reflected in other statistical indicators included in table (12) with insignificant results.

(2022 – 2013) Table (11): development of indicators of profitability of Arab banking sector

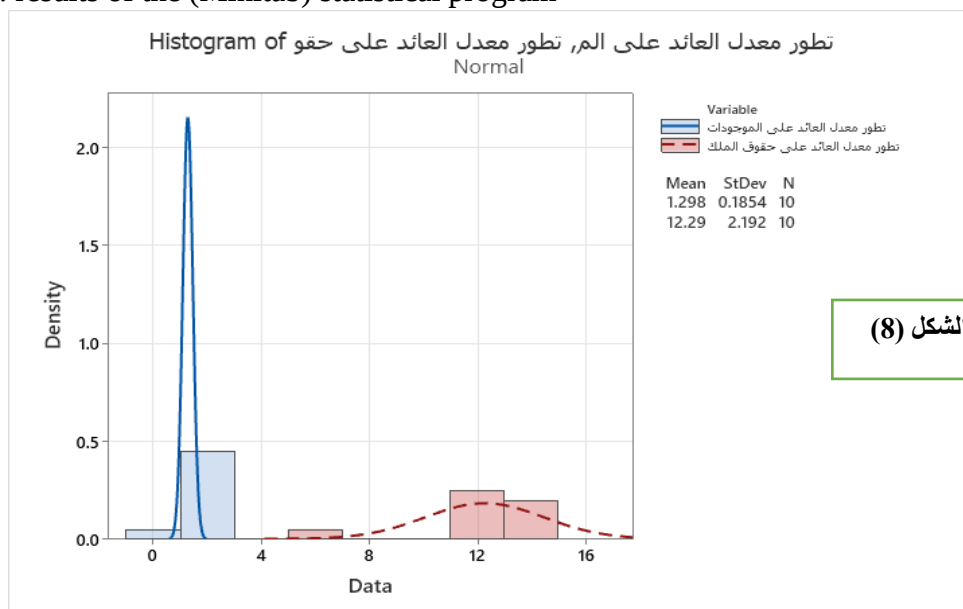
Indicator Year	Development of average return on property rights	Development of average return on assets
2013	13.25	1.37
2014	13.11	1.47
2015	12.47	1.34
2016	13.24	1.4
2017	12.71	1.45
2018	12.63	1.31
2019	11.33	1.23
2020	6.55	0.82
2021	14.79	1.24
2022	12.84	1.35

Source: Arab monetary fund – report of financial stability 2023.

Table (12): statistical measures of the profitability indicators of the Arab banking sector

Indicators	Autocorrelations Durbin-Watson	Multicollinearity VIF	Coefficient of Determination R^2	t Test	F Test	Slope of the trend β_1
Development of the average return of the assets	1.82	1.00	0.25	- 1.63	2.65	-0.03
Development of the average return of the property rights	2.38	1.00	0.05	- 0.66	0.44	-0.17

Source: results of the (Minitab) statistical program



الشكل (8)

Source: the outputs of (Minitab) statistical program

Sub – indicator in the Arab banking sector:

There are five sub-indicators for the banking sector. The first is the aggregate indicator of financial stability which shows a slight development within the time series (2015 – 2022) while the marginal slope was positive and weak (0.028), with simple significant for (F) and (t) statistical tests interpreting about (60%) of the explanatory variables. Indicators of the banking sector and macroeconomics fluctuated during the time period which resulted in weak statistical measures. The indicator of capital market was the best among the five indicators and its statistical measures were highly significant explained nearly (80%) of the explanatory variables. The financial cycle indicator was the worst with the negative marginal slope for the trend and a negligible statistical measure, tables (13 & 14), figure (9).

Table (13): development of results of sub-indicators values of Arab financial stability (2015-2022)

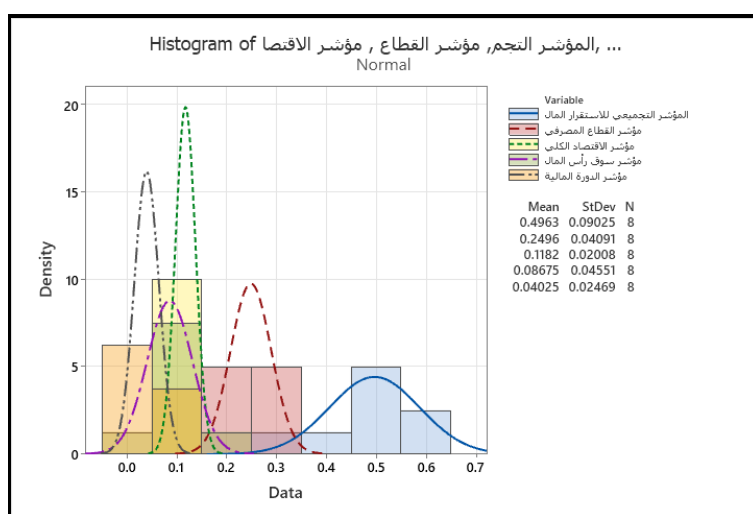
Indicator Year	Accumulative indicator of the financial stability	Indicator of the banking sector	Indicator of the Macroeconomics	Indicator of the capital market	Indicator of the financial cycle
2015	0.321	0.192	0.081	0.018	0.03
2016	0.406	0.211	0.101	0.059	0.035
2017	0.527	0.29	0.133	0.059	0.035
2018	0.548	0.26	0.12	0.087	0.08
2019	0.564	0.294	0.138	0.071	0.061
2020	0.487	0.214	0.116	0.15	0.007
2021	0.526	0.293	0.116	0.102	0.015
2022	0.591	0.243	0.141	0.148	0.059

Source: international monetary funds 2023

Table (14): sub-indicator statistical measure of the Arab financial sector

Indicator	Autocorrelation Durbin-Watson	Multicollinearity VIF	Coefficient of Determination R^2	t Test	F Test	β_1 Slope of trend
Accumulative indicator of the financial stability	1.06	1.00	0.59	2.96*	8.79*	0.028
Indicator of the banking sector	2.41	1.00	0.17	1.11	1.2	0.007
Indicator of the macroeconomics	1.66	1.00	0.45	2.22	4.91	0.006
Indicator of the capital market	3.51	1.00	0.79	4.67**	21.79**	0.016
Indicator of the financial cycle	1.71	1.00	0.00	0.00	0.00	- 0.0001

Source: the outputs of (Minitab) statistical program



الشكل (9)

Conclusion:

- 1- Analysis data on financial stability indicators for Arab financial activities revealed a lack of stability in economic and financial sectors during the studied time period despite the extra care of the Arab governments to this important financial issue and the adoption of precautionary and precise policies in order to enhance the financial stability and set plans to achieve such goal.
- 2- Arab states are not taking the issue of financial stability seriously and couldn't develop alternatives to achieve sustainable development away from oil prices fluctuation.
- 3- In order to improve efficiency of the banking sector, and achieve growth rates that reflects on the well-being of the society, the economic sector must be stable and prepared to challenge the crisis.



Research recommendations:

- 1- Arab states are required to pay more attention to the issue of the economic and financial stability in order to meet the required conditions for the economic development.
- 2- Banking sector in the Arab countries, especially the oil producing countries, must play a greater role in the stability of the financial sector in order to supply other economic sectors with the necessary liquidity for the development.
- 3- Iraq banking sector needs to be more efficient in dealing with the financial stability and handling the huge amount of the liquid currency available in the economic sector.

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