A new decade for social changes
Iraq Stock Exchange Performance Determinants: A literature review

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Abstract. Financial markets have a significant role in economic development; Iraq's stock exchange trades and mobilize financial resources as the only stock market operating in Iraq. All statistics indicate the progress of the Iraq stock exchange compared to the previous period, especially before the lockdown due to covid in (2019). However, the Iraqi stock exchange capitalization still did not get to one percent of the total capitalization of the entire Arab financial markets. Furthermore, past studies' results concluded that there is still no consistent or inconclusive relationship between the macroeconomics variables and the Iraq stock exchange performance. Therefore, Iraq is still a solid context to explore the linkage between these variables, mainly due to Iraq's economy as one of the economies having substantial oil reserves in the MENA region. Also, the Iraq stock exchange needs to activate all ways to make the information available or access information by all investors to make the Iraqi stock exchange efficient to prevent the possibility of achieving abnormal profits by some investors.

Keywords. Iraq, macroeconomics, market efficiency, stock price index

1. Introduction

In general, financial stability is necessary for economic development, as most monetary transactions are stabilized in the real economy through the financial system. However, many steps and conditions should meet to achieve financial stability. Otherwise, inflation or the stock market collapse will lead to economic instability (Odeh, Jearah, Mosachet, & Mohammed, 2020).

The financial market importance increased with considerable technological progress in the new era of transportation, communications, and information technology which led to linking the international economy to each other in a kind of international relations and making open policy became the prevailing trend in national and regional economies within the framework of the new world (Alwan, Moslem & Saeed, 2013). Usually, financial markets play a vital action in the economic development process due to their role in directing the savings of households and companies to invest in stocks and bonds, also providing liquidity needed to achieve economic development (Mohammed & Habib, 2015). In the last century, the contemporary world has witnessed increasing attention on stock markets, whether in developed or developing countries, due to the role these markets play in economic life (Hashem, Said, & Salem, 2020).
Besides that, the financial markets have received attention from policymakers in various world contexts due to their essential role in applying monetary policies. Also, the occurring crises on the financial level make users of monetary policy pending case to controlling inflation and the rise of financial assets prices, which in turn, the economic sectors and activities will be affected, including financial markets, by various economic and monetary factors depending on the country conditions (Alsaor & Al-Jwejatee, 2021). Many countries, including Iraq, realized the significance of stock markets from their primary intermediation functions, mobilizing financial resources and utilizing them in investment to maintain economic sustainability. They are the association between financial and economic units, or even the household sector has savings and investment projects. Hence the Iraq stock exchange trades and mobilizes financial resources as the only stock market operating in Iraq (AL-Shakurji & Chaqmaqchi, 2019).

The study will organize section two to review the Iraq stock exchange development. Section three provides a literature review linkage between macroeconomics variables and the stock market in Iraq. While section 4 describes Iraqi stock exchange efficiency. Section five focuses on the Iraq stock exchange with other various variables. Finally, section six provides a conclusion and the direction of further studies.

2. Iraq Stock Exchange Development

Iraq started to establish a stock market during the national government (1921). Trade Exchange Law was released in (1936). Trade Law was issued In the year (1943), which did not see the light until the issuance of Law No. (24) for the year (1991) as known as the Baghdad Stock Exchange, which continued until the year (2003). The temporary authority of the coalition decided by order (74) for the year (2004) to cancel the previous law and establish the Iraqi Securities Commission, which has the authority to supervise and control the movement of companies' establishment, trading of their securities, and control over the activity of the regular stock market and over the counter market Trading (Bash and Al Qureshi, 2017, 197).

The Iraq stock market shows high volatility and lack of liquidity because it is a very young and relatively immature market like many other stock markets in this stage of development. Approximately (76%) of the (105) stocks listed, only (80) stocks were traded during (226) trading sessions (2021) (ISX annual report, 2021), using electronic trading since 19 April (2009) provided by NASDAQ technologies per five days a week, meaning that still there is quite a gap between the number of stocks listed and the number of stocks traded. Also, (22) company's stocks listed were stopped. While the ISX share traded about (930) billion shares, the traded value was about (560) million US dollars with several trades around (114467) transactions, the traded stock price index of the market index closed at (569) points. All statistics indicate the progress of the Iraq stock exchange compared to the previous period, especially before the lockdown due to covid in (2019) due to an increase in traded shares number by (102%), the value of traded shares by (186%), and the increase in the market price index (15%).

In addition, the market became a member of the Federation of Euro-Asian stock exchanges (FEAS) in (2005). Also, allowing non-Iraqis to trade in shares by buying and selling (2007). However, according to the Arab Federation of Capital Markets (AFCM) annual report (2021), the Iraqi stock exchange constitutes only the equivalent of (0.064%) of the total traded value of the sixteen Arab financial markets, even though there is a development in the general index of the Iraqi market, equivalent to (12%) compared to the year (2020), while the market capitalization of the Iraqi stock exchange did not exceed (0.28%) of the total market capitalization of the entire Arab markets capitalization combined, while only Saudi Arabia percentage exceeded (70%) of total Arab market capitalization. Figure (1) shows the changes
in the market's trading indicators. In contrast, table (1) shows the ISX60 general index with a minimum value in (2014) and only registers (92) points, which may be due to terrorist activities and the volatile security situation. The ascent stage began to set records (2015-2020).

Shahab (2016) identified the importance of GDP and the Iraq stock exchange indicators such as (market capitalization, trading volume, the rate of the total value, the rate of turnover per share, and compared to the growth rate) for the period (2004-2012), which is one of the crucial sources and vital in moving the various economic sectors of industry, agriculture, hotels, services, investment, insurance, and banking. The results showed low performance of the industrial and agricultural sector's productivity compared to the dominance of both trading volume and market value in service sectors, furthermore the weakness of the insurance part, which is the primary motorist for the other sectors in the economy, also appearing a fluctuation in all sectors performance during the study.

Al-Ghalbi (2017) measured the impact of the industry environment and financial market using market capitalization, market depth, the volume traded, and market shares turnover on the stock market value. The results found a positive effect of the share market, the market depth, and stocks turnover on the stock market value.

Hashem, Said & Salem (2020) analyzed the Iraq stock exchange performance development for the period (2009 to 2018). It is a linkage between financial and economic entities or even the saver and investor in the household sector. The results illustrated that most of Iraq's stock exchange indicators declined, especially after the security deterioration (2014). Also, the study suggested providing the investors with an apparent overall picture of market trends.

Abdel-Hakim & Dalloul (2016) identified the role of the electronic trading system and distinguished between two equal periods pre-post of using the electronic system in the Iraq stock market to promote trading activity for the listed companies' stocks for the period (2005 to 2013). The results found that utilizing the electronic trading system in the Iraq stock exchange has made a substantial and drive improvement in indicators in general and a make a big difference in the market trades and suggested encouraging dual stocks listings process between Iraq stock exchange with Arab or adjacent markets to increase the liquidity and diversification traded tools.

Table (1) Iraq Stock Exchange Main Trading Indicators for Period (2009-2020)

<table>
<thead>
<tr>
<th>Year</th>
<th>Trading Volume</th>
<th>Trading Share</th>
<th>ISX60</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>411,928,166,561</td>
<td>211,290,601,162</td>
<td>100.86</td>
</tr>
<tr>
<td>2010</td>
<td>400,359,889,406</td>
<td>255,659,508,500</td>
<td>100.98</td>
</tr>
<tr>
<td>2011</td>
<td>941,198,207,505</td>
<td>492,371,557,351</td>
<td>136.3</td>
</tr>
<tr>
<td>2012</td>
<td>893,825,279,307</td>
<td>625,639,963,322</td>
<td>124.14</td>
</tr>
<tr>
<td>2013</td>
<td>2,840,220,313,948</td>
<td>871,182,103,309</td>
<td>113.15</td>
</tr>
<tr>
<td>2014</td>
<td>898,315,988,958</td>
<td>743,852,399,937</td>
<td>92</td>
</tr>
<tr>
<td>2015</td>
<td>456,179,755,871</td>
<td>579,640,287,333</td>
<td>730.56</td>
</tr>
<tr>
<td>2016</td>
<td>515,956,944,318</td>
<td>1,038,229,751,662</td>
<td>649.48</td>
</tr>
<tr>
<td>2017</td>
<td>900,154,220,191</td>
<td>1,215,082,161,610</td>
<td>580.54</td>
</tr>
<tr>
<td>2018</td>
<td>466,476,989,349</td>
<td>832,630,977,024</td>
<td>510.12</td>
</tr>
<tr>
<td>2019</td>
<td>284,914,117,424</td>
<td>460,097,146,400</td>
<td>493.76</td>
</tr>
<tr>
<td>2020</td>
<td>330,385,118,079</td>
<td>403,315,836,085</td>
<td>508.03</td>
</tr>
</tbody>
</table>

Source: Iraq stock exchange annual reports for the period (2009–2020).
3. **Iraq Stock Exchange and Macroeconomics Variables**

Abuoliem, Nor, Lola., & Matar (2019) found that the industrial sector acts as a hedge against some macroeconomics variables in Jordan during the period of global crisis (2007-2008), the Arab spring of 2010, and the security problems in Syria and Iraq during (2012-2014) using ARDL bound test and Granger causality test. While Abuoliem, Nor, Matar, & Hallahan (2019) mentioned that most of the studies focused on the relationship between economic factors and stock price movements in developed markets from (1990 to 2000). While after that, the studies turned their attention to developing markets, and their results on the linkage between the stock market and macroeconomics can provide implications for the government, policymakers, and investors. Therefore, the current study reviewing these types of study results which were done in the Iraq context, as follows:

Kaehler, Weber & Aref (2014) have shown that some progress was achieved in Iraqi stock exchange performance but still very small, with less than a hundred listed companies. Moreover, the results found that the market index is mainly driven by exchange rates, interest rates, the index of civilian deaths from violence, economic activity represented by electricity, and the price index. Also, the market is still inefficient due to the short period of market opening and even after electronic trading and an increase in liquidity.

Hassan & Sabah (2019) studied the long-term relationships between stock return on the one hand and consumer price index, money supply, Interest-Rate-Current Account (Over Draft), and exchange rate on the other in Iraq for the monthly (121) observations during the period (2006-2015) using the ARDL model. The results indicated that the interest rate current account had a positive effect while the consumer price index and money supply had a negative impact on the stock prices index. Furthermore, the exchange rate did not show a significant impact on the Iraq stock prices index.
Mustafa (2020) argued the influences of the five macroeconomic variables of oil price, economic growth, the exchange rate, foreign direct investment, and interest rate on the Iraq stock exchange general index for annual data for the period (2005-2018). The tested results showed that the oil prices and the exchange rate had a significant adverse effect on the market, while the foreign direct investment and the interest rate showed an insignificant negative impact, whilst the economic growth showed positive insignificance on the stock market. The study suggested that the Iraqi government needs to activate the role of fiscal and monetary policy to achieve market efficiency and attract foreign investors to participate in Iraq’s economic development.

Bash & AL Qureshi (2017) studied the effect of fiscal policy variables of public expenditures and taxes on the Iraq Stock Exchange indicators such as General share price index, Trading Volume, Market value, Turnover rate, Number of companies for the period (4002-4002), and found the trading volume indicator is the most affected by the fiscal policy while the number of companies index is the least affected, besides the fiscal policy affects a weak influence on stock market performance indicators. The study concluded that current expenditures are the most significant part of Iraq’s public expenditure with the feeble contribution of tax in general revenues due to enormously depending on the oil, hence need to reduce the gap between current and capital expenditures in Iraq, and reform the Iraqi tax system to developing the economy including the stock market.

Asaad & Marane (2021) identified the interactions among oil price, gold price, exchange rate, and Iraq stock exchange pre-during the global pandemic of COVID-19 using ARDL model daily data within three periods: pre-during pandemic from 24 December 2018 to 3 September 2020, the pre-pandemic period from 31 December 2018 to 30 December 2019, as well as during-pandemic from 27 December 2019 to 3 September 2020. They found there is no cointegration exists between the variables respectively for the pre-during pandemic and pre-pandemic period, and no decision could be made about the long-run relationship amongst the variables for the during-pandemic period. Furthermore, the results of the causal short-run illustrated that the effect of oil price, gold price, and exchange rate are insignificant with the Iraq stock exchange.

Marane (2015) examined the relationship between the stock prices changes and the Iraq stock exchange using daily observations of (2211) for the period (2010-2014). The results concluded that there is no existence of a long-run relationship and no causal short-run exist between the oil price and Iraq stock exchange due to the lack of nonoil exports structure in the economy and due to total values of exports from Iraqi controlled by oil during the study period.

Al-Mamouri & Al-Zubaidi (2014) clarified the type of relationship between the exchange rate fluctuations and the Iraq stock exchange general index using cointegration and Granger causality for the period (2005-2011). The findings found the existence of a bidirectional causal relationship between the exchange rate to the stock exchange general index and vice versa, and these results are consistent with the analytical side of the study that the primacy moves in the stock exchange general index change compared to the exchange rates fluctuations, hence considering the possibility of the stock exchange index as an indicator on the direction of future economic activity. Also, the possibility of using the exchange rate policy to influence economic activity through the influence of the stock exchange general index, then directing the exchange rate policy correctly.

Al-Musawi, Kazem, & Aljanabi (2018) investigated the role of the government budget deficit on the Iraq stock exchange performance for the period (2005 to 2016) using regression methods for analysis. The study results showed that the stability of the stock exchange is a
measure of the success of the country’s economic policy. Hence, the influence of the government budget deficit on Iraqi stock exchange performance contributes to the achievement of Iraqi financial stability and economic development.

Brihi & Fadil (2018) mentioned that the stock market plays an essential role in all economic activities through the transferred capital from savers to investors, including the private industrial sector. Also, it mentioned that Iraq is one of the oil-dependent countries, hence owner the weak and lacking industrial production due to many wars, the deterioration of infrastructure, the low funding resources, and heavy dependence on good imports, in spite of considering the industrial sector as the pillar for economic recovery and increases the gross domestic product. The results found a significant positive correlation and long-term relationship between the variables of the Iraq stock exchange and private industrial production using the ARDL model for quarterly data for the period (2005-2010). The development of the Iraq stock exchange and increasing the listed industrial companies led to an increase in industrial production, then an improved economic activity level, also an increase in the (market value, the contracts number, and the number of industrial shares in the market) leads to an increase private industrial production. On the contrary, the increase in trading volume leads to lower industrial production.

Yarah (2018) focused on the influence of fluctuations of the Iraqi exchange rate on the Iraq stock exchange general index by testing the central hypothesis that there is a significant influence of a statistically substantial US dollar exchange rate against the Iraqi dinar on the Iraq stock exchange general index, and the study concluded the there is a negative correlation between the Iraqi dinar exchange rate to US dollar against on the value of the Iraqi stock exchange index for the daily observations.

Murshed (2017) measured the extent of the influence of the indicators of the Iraq stock exchange on foreign direct investment for the period (2004 to 2015), testing the hypothesis that there is a significant positive correlation and influence between the indicators of the Iraq stock exchange and foreign direct investment. The results found a significant positive relationship between foreign Investment and some indicators of the Iraq stock exchange like the number of shares traded, the volume traded, market value, price index, and the number of traded companies. On the contrary, the rest models showed insignificantly.

Mohamed & Ahmed (2013) tested the influence of foreign indirect Investment on stock returns and the volume traded for the thirteen banks listed under the banks’ sector in the Iraq stock exchange using monthly data from the (2006-2008) period. The results showed a presence significant statistically between the average stock returns before and after the foreign indirect Investment started, hence finding the influence of foreign indirect Investment on the stocks returns for banks under study also showed there is no statistically significant between the average number of traded shares before and after the foreign indirect Investment stared due to the lack of effect of foreign indirect Investment on the number of traded stocks for banks under study.

Alsaor & Al-Jwejatee (2021) found that the general variable of stock prices in Iraq was stable at the first difference I(1) and to the lack of joint integration between some monetary policy variables and the Iraqi stock market index using (ARCH) models for the period (1990-2019), and results indicated that there is a statistically significant direct effect from money supply to the financial indicator, while for the inflation rate and exchange rate variables was insignificant, besides that the interest rate has a significant mark on the general index of stock prices which comes in line with the economic concepts.
Past studies results found there is no consistency in the influence of macroeconomics variables on the Iraq stock exchange performance and development; therefore, there is still solid context to explore the linkage between these variables, especially in oil-exporting countries due to oil consider a leading source of revenue to the Iraq economy as one of the top economies having oil reserves in the MENA region.

4. **Iraq Stock Exchange Efficiency**

The stock market efficiency refers to the speed of prices in response to the information provided to the market; it is moving upward and downward with good and wrong information which reaches the market at random and independent of each other hence it will not be able to anticipate the results of its movement to achieve unusual profits, (Ghalibi & Abod, 2016). There are three categories of stock market efficiency weak-form, semi-strong-form, and strong-form (Fama, 1970).

A study by Asaad (2014) aimed to examine the efficiency of the weak-form of the Iraq stock exchange (ISX) using the monthly closing price for ten years (2004-2014) with (2457) observations for the bank sector population including all listed individual banks in the stock market. The study hypothesis investigated employing parametric and nonparametric tests. The findings revealed that all respective banks, in the same manner, are inefficient at the weak-form. As a result, it concluded that all bank listed in the Iraq stock market does not reflect historical information, meaning that the existence of an opportunity to get abnormal profits depends on the historical prices to predict the prices in the future.

Asaad, Marane & Omer (2015) tested the existence of weak-form efficiency of the Iraq stock exchange using (923) observation of daily closing prices during the period (2010-2014), the normality and random walk hypothesis applied by a different test such as Kolmogorov-Smirnov test, Shapiro-Wilk test, Cramer-Von Mises, Watson test, Anderson-Darling test, Augmented Dickey-Fuller test, Phillips-Perron test, Run test, and Autocorrelation test. The study outputs found that the Iraq stock exchange is still none efficient in the weak form. Hence, the study suggested the necessity for the Iraqi market to work to ensure that all people have access to information at the same time and of the same quality to avoid giving the possibility of an opportunity to realize unusual profits as a result of the market’s inefficiency.

Mohammed & Habib (2015) in their study accepted the hypothesis of the study, which states that stock prices in the Iraqi stock exchange do not reflect the information available to investors about stocks; this means the inefficiency of the Iraqi stock market at a semi-strong about inflation and exchange rates level due to publishing data and corporate information after a long period.

Ghalibi & Abod (2016) determined the Iraq stock exchange efficiency at a weak level for the daily data period (2014-2005) with (1751) observations. All study results found that the Iraq stock exchange is inefficient at a weak level using the unit root test of the Dickey-Fuller test, Phillips-Perron test, and variance test.

The results of AL-Hisnawi & AL–Ebadi (2019) are similar to other studies in the Iraqi context, which showed that the Iraq stock exchange does not follow the random walking and it is inefficient within the weak level through using various statistical tests like the serial correlation test, runs test, variance ratio test, and rescaled range test for the period (1/1/2015 - 31/12/2017) with (650) observations of (60) companies listed in the Iraq stock exchange.

Also, Hamed & Mohammed (2021) employed the daily closing price of (31) industrial listed companies on the Iraq stock exchange to test the efficiency at the weak level with (2851) observations using the normal distribution and random walking for the period (1/1/2019 -
31/12/2020), through several statistical tests such as Kolmogorov-Smirnov test, Shapiro-Wilk test and augmented Dickey-Fuller unit root test. The results of all tests showed that the Iraqi stock exchange is inefficient at a weak level.

AL-Shakurji & Chaqmaqchi (2019) found that the weekly closing price of the Iraq stock exchange is absent of normal distribution using statistics Jarque-Bera and does not follow the random walk using the Augmented Dickey-Fuller test and Phillips-Perron test for the period (1/5/2016 - 1/5/2019) with (154) observations, therefore the market is inefficient at a weak level.

5. Iraq Stock Exchange and Other Variables

Several studies have received enormous attention to investigate the influence of some other variables such as terrorism, corruption, and financial crisis on stock markets (Missaoui et al., 2018). Iraq is facing many challenges such as high corruption, no transparency, a weak banking and financial system (Marane & Asaad, 2014), and political instability and violent activities since ISIS’s emergence in (2014) (Asaad & Marane, 2020). Hence, these factors negatively affect stock market performance in Iraq.

Asaad & Marane (2020) contends that corruption, terrorism, political stability, and the oil price are some keys that determine the success of the Iraq stock exchange. Lower corruption levels, fewer terrorism activities, political stability, and oil price promote the Iraq stock exchange and business sector in economic development using data from the period (2005-2019). The results show that all variables’ coefficient is significantly positive with the market, except the oil price coefficient is significantly negative. Therefore, the study suggested that developing the stock market be possible by implementing policies and strategies to overcome the high corruption using transparency, reducing terrorism actions through creating a stable political environment, and good governance practices to attract more foreign investment and promote economic development due to factors such as corruption and terrorism make economic and political systems unstable and have an adverse effect on Iraq’s stock exchange development.

Alwan, Moslem & Saeed (2013) conducted the influence of financial crisis as a dummy variable on some of the Iraq stock exchange indicators such as trading volume, trading shares, market capitalization using ordinary least square (OLS) for the period (2006-2008), the results find out a significant positive feeble influence of the financial crisis on stock market trading volume, trading shares, and market capitalization, meaning all estimated models the weak impact of the financial crisis on the indicators of measuring the efficiency of the Iraqi Stock Exchange, despite that still the market and Iraqi economy is not away from getting impacted by this crisis.

6. Conclusion

Iraq is one of the countries that realized the importance of these markets, and their importance stems from their functions, as they are the link between financial and economic institutions and even individuals who have savings and investment projects. However, the Iraq stock market shows high volatility and lack of liquidity because it is a very young and quite immature market like many other stock markets in this stage of development since its establishment in (2004).

All statistics indicate the progress of the Iraq stock exchange compared to the previous period, especially before the lockdown due to covid in (2019). Still, the Iraqi stock exchange constitutes only the equivalent of (0.064%) of the total traded value of the total Arab financial
markets, even though there is a development in the general index of the Iraqi market, equivalent to (12%) in (2021) compared to the year (2020), while the market capitalization of the Iraqi stock exchange did not get to one percent of the total market capitalization of the total Arab markets capitalization combined.

Past studies results found is still no consistency and inconclusive in the influence of macroeconomics variables on the Iraq stock exchange performance and development; therefore, Iraq is still a solid context to explore the linkage between these variables, especially in oil-exporting countries oil consider a main source of revenue to the Iraq economy as one of the top economies having oil reserves in the MENA region.

Most of the previous studies testing the Iraq stock exchange efficiency at a weak level revealed that the market allows obtaining extraordinary profits by depending on historical prices to predict future prices. Hence the Iraq stock exchange needs to activate all ways to make the information available or access information by all investors to make the Iraqi stock exchange efficient to prevent the possibility of achieving abnormal profits by some investors.

The pace of stock exchange reforms and rapid integration using new technologies to connect with the region’s economy is still not at the desired level to improve the stock market in Iraq, although many changes have been undergone to connect with a regional and international financial market structure such as the Arab Federation of Capital Markets (AFCM) and Federation of Euro-Asian stock exchanges (FEAS). Therefore, Iraq’s economy needs extensions of incoming studies to investigate the stock exchange progress by using observation for longer periods, especially after the covid-19 period, to understand the level of market efficiency or to identify the stock market determinants of macroeconomics variables.

References


[23] Iraq stock exchange annual reports for the period (2009-2020).


