

# THE IMPACT OF FINANCIAL RATIOS MONTHLY ANNOUNCED ON TRADING VOLUME OF SHARES OF JORDANIAN INDUSTRIAL JOINT STOCK COMPANIES LISTED ON THE AMMAN STOCK EXCHANGE (ASE)

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## Abstract

The study aimed to know the effect of the market financial ratios monthly announced at the Amman Stock Exchange (ASE) on the trading volume, by referring to the data published on the Jordanian stock exchange website and for the study sample of industrial companies, during the period between the years 2013-2018. For the purposes of data analysis, the study used Panel-data regression analysis, with the aim of testing the study's hypotheses and arriving at the results. Among the findings of the study, there is an effect of the (P/CF) ratio and dividends yield ratio on the trading volume. Among the recommendations of the study is the need to develop new financial ratios in addition to the current ratios that depend on fair value accounting and the adoption of contemporary accounting measurement alternatives

**Keywords:** Financial ratios, Trading volume, ASE.

## INTRODUCTION:

Through tracking the economic and social events for business institutions, accounting and its functions start to extract financial statements including information that can be used by the public decision makers to aggravate the profits of their decisions and to reduce the degree of ensuring which is companied by the process of decision-making. The present and future investors are considered the most important users of financial statements that are issued by the organization usually. So, the most significant professional and accounting councils and financial stock in the world are interested in developing and improving the quality of statements contents continuously, and to work on reaching these contents by the most easy methods and cheapest cost to the investors for reducing their investment decisions and the risks that they have met as much as possible.

On the other hand, providing an appropriate investing environment and its tools contributes in attracting and encouraging the investors for stock and to deal with them. In return for, losing one or more from the mentioned requirements will reason negative results on the reality of investment at the stock. So, investments is affected by the different international stock in the recent years that because the financial crisis in the world countries and made mass destruction in the movement of investment and number of financial stock. It reduces the volume of stock. Locally in Jordan, the statics indicated that (36000) investors have left ASE during the crisis, and the value of losing was (10.3) billion dollar.

The management of financial stock in Jordan have directed to develop and improve its tools and using the best available technological methods for providing the necessary information

about stock, its trading, the most important indicators and the financial related ratios. In addition to provide past information about the firms' shares listed in the stock of exchange on the overall years with daily details and ensure from reaching information for different public investors in the same time to encourage them, activate the competition, in addition to provide the necessary information to conduct the studies and applied researches connected with the Jordanian financial stock in the aim of providing practical patterns improving the performance of stock and reducing the investing decisions.

Due to the need of investors in the ASE to ensure the reliability of the financial indicators and ratios that are shown by its website and the published posters. This study has been conducted to identify the impact of using the financial ratios of the industrial firms listed in ASE that have monthly announced of stock volume.

### **Problem of the study:**

Amman Stock Exchange (ASE) displays in the electronic website multi information and indicators related to the financial tools that are trade in. the financial ratios are considered an example of the information that are announced monthly and annually to activate the process of stock exchange and attracting the investors. So, this study has been conducted to identify whether the financial ratio announced monthly at ASE affect on the volume of the shares or not?

### **The objectives of the study:**

1. Identifying the effect of Market to Book Ratio announced monthly in ASE on the stock trading volume in the next month of the industrial firms.
2. Identifying the effect of Dividend yield announced monthly in ASE on stock trading volume in the next month of the industrial firms.
3. Identifying the effect of Price-to-Earnings (P/E) Ratio announced monthly in ASE on the trading volume in the next month of the industrial firms.
4. Identifying the effect of price-to-cash flow (P/CF) ratio announced monthly in ASE on the trading volume in the next month of the industrial firms.

### **The importance of the study:**

This study is interested in identifying the impact of financial ratios of the industrial firms announced in ASE on the volume of trading shares to provide new information utilized by the investors in the process of making investment decisions. This study is the first on the local and Jordanian level discussing the impact of monthly financial ratios announced in the end of the present month on trading the shares of the industrial firms in the next month. The main features and characteristics of this study have been discussed as the following:

1. It provides important information for researchers and students in the fields of financing and accounting to develop forecasting patterns for evaluating the performance of the firms due to monthly information announced in stock of exchange.

2. It introduces necessary information for Jordanian securities commission (JSC) related to evaluating the quality of financial ratios announced in the stock of exchange, and the need to conduct amended, replaced, or maintained without any change.

### **Theoretical framework and previous study:**

#### **Theoretical framework:**

In general, the performance of the stock is effected by group of factors including: supply, demand, transparency, rammers, and the economic situation. Showing stock is how to provide the stock for the holders who can acquire them. Demanding stock means the desire of owning them and the ability to pay the cost, and the relation between supply and demand in the light of stability of quantity is negative relation. Therefore, when demand increases, the quantity of shares displayed will be decreased and vice versa. Whereas, transparency means the speed and sufficiency in transforming information among the holders and ensuring from availability from all equally at the stock of exchange, in order not to utilize the information from one side. Rammers mean the informal news trading among the holders in the stock of exchange that will have some destructions and may be a source of the speed profit. When rammers decrease, the performance of the stock will be better and the economic situation will be stable which makes flourishing in the stock of exchange because it offers security for the investors and reduces the risks of investment (Hindi, 2009, p:211. 351).

After ensure safety of the stock market performance for taking decision , the investors depend on conducting some special analysis process, in the aim of forecasting the results of investment decisions previously. These analysis are divided into basic analysis, technical analysis, and financial analysis. The basic analysis is presented by studying economic conditions surrounded the firm and the sectors where economic national and international conditions belong to. The technical analysis is presented by group of methods used to study the previous movement of share price and the past special data in the aim of predicting the long run directions. Whereas the financial analysis speaks about the financial statements published by the limited firms which consisted of the corrected and certified data for forecasting in the movements of their shares and their values in the long run (Ramadan, 2007, p 199).

After conducting the financial analysis relate to the data of the limited firms and published by using number of methods. One of the most important and common is vertical analysis which is based on taking a ratio for elements of financial statements to total group or the total value of the list which belong to. Whereas the horizontal analysis based on studying the development the value of every element listed in the financial statement within passing the time. However, analysis process by the financial ratios based on the changeable relation or the impact between two financial elements or more. In this way, the financial ratios are calculated and linked them with some marketing stock data announced in the stock of exchange. So, these ratios are called financial market ratios. (Lutfi, 2007, p 310).

Usually, the stock of exchange are announced on the financial market ratios through the websites or the data published periodically for achieving the principle of transparency. The financial ratios in Amman stock of exchange are announced monthly or annually. These ratios

are: Dividend yield, Market to Book Ratio (M/B), price-to-cash flow (P/CF) ratio, and price-to-earnings ratio (P/E).

**Market to book ratio (M/B):** The Market to Book Ratio (also called the Price to Book Ratio), is a financial valuation metric used to evaluate a company's current market value relative to its book value. The market value is the current stock price of all outstanding shares (i.e. the price that the market believes the company is worth). The book value is the amount that would be left if the company liquidated all of its assets and repaid all of its liabilities. The market to book ratio is calculated by dividing the current closing price of the stock by the most current quarter's book value per share.

**Dividend Yield:** Dividend yield is the financial ratio that measures the quantum of cash dividends paid out to shareholders relative to the market value per share. It is computed by dividing the dividend per share by the market price per share and multiplying the result by 100. (investopedia.com). This ratio is different from one investor to another. For example, one of the investors sees that this ratio is enough to cover his needs so he accepts possession the share. Other sees that it is not enough so he lifts it. In general, whenever the ratio of the firm increased the demand will be increased (Matter, 2009, p 268).

**Price-to-Cash Flow (P/CF) Ratio:** The price-to-cash flow (P/CF) ratio is a stock valuation indicator or multiple that measures the value of a stock's price relative to its operating cash flow per share. The ratio uses operating cash flow (OCF), which adds back non-cash expenses such as depreciation and amortization to net income. (investopedia.com). It is computed by dividing Share Price on operating cash flow per share. The P/CF ratio is said to be a better investment valuation indicator than the P/E ratio because cash flows cannot be manipulated as easily as earnings, which are affected by accounting treatment for items such as depreciation and other non-cash charges. Some companies may appear unprofitable because of large non-cash expenses, for example, even though they have positive cash flows.

**Price-to-Earnings (P/E) Ratio:** The price-to-earnings ratio is the ratio for valuing a company that measures its current share price relative to its earnings per share (EPS). The price-to-earnings ratio is also sometimes known as the price multiple or the earnings multiple. (corporatefinanceinstitute.com)

some analyzers and lecturer see that the trading in some stock of exchange can be effected by psychological factors as desire in preventing the risks, greed and fear in spite of conducting the basic analytical and financial types of analysis. This effects in trading of shares and predicts related to the results of shares analysis. This matter makes forecasting process of shares movements hard or difficult in the long run. From the other side, this matter connected with the extent and depth of the stock market efficiency. Whenever the stocks deeper and efficient, the effect of psychological factors on the performance of the stock will be subsided, and the ratio of depending on types of analysis will be increased for achieving the profits and improving earnings per share. Also, offering the information connected with shares to the investors transparently and without cost is considered a motivation for them in order to be operated correctly for achieving the returns and obtaining the profits.

As mentioned above, the information announced by the stock of exchange may be used for taking investment decisions. So, these information have effected in trading shares and sometimes aren't used. Trading shares in Amman Stock of Exchange can be expressed by applying number of methods such as trading volume in (JOD), number of shares trading, number of contracts. This study has selected connecting the financial ratios with average of trading volume in (JOD), that because the two researchers think that trading volume explains the marketing trading per share in the best way.

### **Previous study:**

#### **On the level of Jordan:**

Many studies have been interested in identifying the impact of financial ratios on the investors' decisions and the directions to improve the quality and increasing sufficiency. The basic and technical analysis that are conducted by (Khanifar, 2011) on the sample of brokerages firms in Tehran Stock of Exchange. The results of the study have shown that financial ratios have an impact on the investing decision, and one of the most impacted ratios is earning per share, EBS, profit margin and rate of returns to the market price. On the other hand, many of studies examined specific financial ratios to identify their impact on decision-making processes. At the local Jordanian level, the study of (AL-Debbie & ABU- Nsaar, 2000) the main aim of the study is to identify the value of appropriate of revenue ratio to develop the marketing returns of the shares. The study was applied on the sample of the limited company listed in ASE including the sectors of industry and services from (1988-1996). The results of the study have shown: we can use the price to earnings ratio (P/E Ratio) for improving understanding the relation between the returns and revenues. So, the decision makers can utilize this in developing the marketing revenue.

The study of (Abdu, 2001) aimed to identify the relation between the market/book value, earnings per share and market return. The sample of the study was consisted of (35) limited industrial and service firms from (1990-1999). The study has shown that there is a positive relation between earning per share with market return. Also, the relation between market/book value and market value is not statically significant.

(AL-Khdash & AL-Abadi, 2005), the study related to the accounting rate of return to stockholders' equity at market value of shares. Also, the relation between cash flows to equity market value of shares. The study was consisted of (26) Jordanian public firms from (1993-2002). The results of the study have shown that the list of cash flow provides is important in aiding the information introduced by the other accounting statements. Moreover, there is a relation between the financial statement per share and the ratio of cash flow to property rights and the relation between marketing value per share and the marketing ratio revenue to rights of stakeholders.

In the study of (AL-Mwalla, et. al., 2010) which aimed to identify the relations among the annual returns per share, earning per share, price to earnings ratio (P/E ratio) and total assets. The sample of the study was consisted of (24) companies listed in Amman Stock Exchange from (1980-2006) and (Engle and Granger) model has been applied. The most important results

in this study are: there is balance dividend yields and price ratio of return and total assets on the long run. Also, it was cleared that the Jordanian securities commission isn't efficient.

On the level of Arab and international world, many studies have been conducted to identify the main advantage of financial ratios in the field of making investment decisions. The study of (AL-Brajneh, 1987), that aimed to Identify the extent to which the book value and market value of shares are affected by dividends. The sample of the study has been applied on the firms listed in Palestine Stock of Exchange. The most important results of the study is that there are relationships between the rate of dividend distribution with the market value, and the net cash flows with the market value of the shares, and that these relationships can be used in investment decisions. (Agrawal et al, 1996), searched the theoretical thoughts and applied sides related to the M/B ratio which finds interesting in the last period of time. The study developed a model consisted of special data of the companies listed in Singapore Stock of Exchange for (14) years. The results of the study have shown that it is possible using M/B ratio for evaluation the shares. The study of (Dudney et al, 2008), searches the factors that effect on P/E Ratio to be used in forecasting of market returns in the long run. The study was applied on American firms listed in (S& P 500) from (1953-2003). The results show that the P/E Ratio may be used to achieve unusual returns and it has an important effect on the performance of financial market. Whereas, the study of (Jones, 2008) reached for the same results after conducting the study on the indicators of American stock for (135) years. The study of (Kumar & Warne, 2009), was conducted by using P/E Ratio as a measurement may be applied for forecasting the performance of the firm. The present P/E Ratio has been taken in comparison with the revenues of the past year. The sample of the study was consisted of (500) firms listed on Indian Stock of Exchange from (2001-2007). The results of the study has shown that the P/E Ratio is effected by the change of market price and the volume of the firms. Also, the ratio is effected by the ratio of debt to capital and the average of growth in market price. (Mokhtar et al, 2014) they tried to evaluate the shares for sample of Malaysian firms by group of financial indicators. The results of the study have shown that return of shareholders' equity, return of assets, net profit margin, operating profit margin, earnings per share, and debt to equity ratio are the most important ratios may be applied for evaluating the shares.

From the other side, many studies discussed the subject of trading shares and the most significant factors effected in. the study of (**AL-Bdayneh, 2000**) aimed to identify the impact of declaring the cash dividends on the trading volume. The study conducted on the sample was consisted of (55) workable limited firms in the sectors of industry and services in Jordan through (1993-1998). The study was included test about the impact of the volume of the firm and the type of the sector on the relation between trading volume and dividends. The study cleared that there is unusual trading through the date of declaration of dividends, in addition, the alternative variables do not effect on the relation with trading volume. Whereas, the study of (**AL-Fayomi, 2003**) aimed to know from the ability of trading volume through fluctuate the shares price to be applied on Palestine Stock of Exchange. The study used the method of timeline in analysis. The results of the study have shown that it is impossible to depend on it to determine trading volume and discussing it.

The study of (Yilmaz & July 2006). It has been discussed The effect of cash dividends on stock returns and trading volume, and identifying the behavior of investors with regard to dividends, distribution ratio and volume, by applying to a sample of companies listed on the Istanbul Stock Exchange (ISE) during the period (1995-2003). The study showed that prices start in It rises in a few sessions before the cash dividends, then declines due to the dividends, and the trading volume is high before the distributions and then starts to decline after the dividends are paid.. The study of (Tripathy, 2010) aimed to investigate the relation between trading volume and shares revenues through sample Indian companies from (2005-2010) by using group of financial models. The analysis finds that the good news related to the firm can develop the change in share price more than expected.

Many previous studies dealt with the issue of financial ratios and their relationship to stock returns and the possibility of using them in making investment decisions. the studies also explained the subject of trading volume and the factors effected in. this study is distinguished by discussing group of financial ratios announced monthly by the Amman Stock Exchange and the change form one month to another and connecting it with this change happened in trading volume in the next month to identify the possibility of using it for forecasting the trading volume in the long run.

### **Hypothesis of the study:**

Many of the previous studies discussed the subject of financial ratios, their relations with returns per share, and ability of using them in taking the investment decisions. The studies of (AL-Brajneh, 2009) and (AL-Debbie & ABU- Nsaar, 2000) have reached to the ability of using these financial ratios as the ratios price to return and the relation between the ratio of distributing the profits and net expenses stream with the market value of the shares for achieving investing profits and additional returns. In the lights of the previous studies, this study has been conducted for looking for the impact of financial market ratios announced in Amman Stock Exchange monthly on trading volume per share of the industrial firms through examining the following hypothesis:

- 1) There is a statically significant for M/B ratio announced in Amman Stock of Exchange in the end of every month on trading volume per share in the next month.
- 2) There is a statically significant for the dividends yield ratio announced in Amman Stock of Exchange in the end of every month on trading volume per share in the next month.
- 3) There is a statically significant for P/E ratio announced in Amman Stock of Exchange in the end of every month on trading volume per share in the next month.
- 4) There is a statically significant for the P/CF ratio announced in Amman Stock of Exchange in the end of every month on trading volume per share in the next month.

### **Community and the sample of the study:**

The community of the study is presented the industrial firms listed in Amman Stock of Exchange. The shares of these firm have been traded from (2013-2018) which means the firms

that have seen a stop in trading their share have been excluded. The industrial firms were (40) shown in the appendix. These firms formed a sample for conducting the study.

### Methodology:

The descriptive approach has been applied in this study through the following:

- A) Returning to studies, books, references, and electronic of Arabic and foreign websites related to the subject of the study to cover the theoretical sides of it.
- B) The applied study which has been conducted due to the statically data announced by Amman Stock of Exchange website according to the following steps:

- 1) Taking the monthly financial ratio and calculating change which has been occurred among the months due to the following equation:

$$dp_i = p_i - p_{(i-1)}$$

#### Where:

$dp_i$  : it means the change in financial ratio in every month  $i$

$p_i$  : it means the value of financial ration on the month  $i$

$p_{(i-1)}$  : it means the value of financial ratio in the previous month  $i$

- 2) The information announced in the end of specific period of time will be reflected on trading the shares and its returns in the next period. So, the change average of volume of trading the shares during the period preceeded the change in financial ratio has been calculated according to the following equation:

$$dt_{i+1} = (t_{(i+1)} - t_{(i)}) / t_{(i)}$$

#### Where:

$dt_{i+1}$  : the average of trading volume in the next month.

$t_{(i+1)}$  : trading volume in the next month.

$t_{(i)}$  : trading volume in the present month.

- 3) Examining the hypothesis of the study by applying (panel-data Regression) at  $\alpha = 0.05$  by using (SPSS).

### The procedural definitions:

**Financial Market Ratio:** it is the ratio using the market value of the financial tools (shares and bonds) listed in the stock of the change to be calculated.

**Trading volume:** it is one of the indicators used for measuring share action, and it is expressed by the cash coin through multiplied by the amount per share paid with the market price of the shares.



**The financial statements:** the Joint Stock Company due to the International Accounting Standard number (1) issuing four financial statements and they are: Income statement, statement of financial position, statement of changes in equity, and statement of cash flows.

**Test and discuss the hypotheses of the study:**

for the cases of examining the hypotheses of the study, (panel-data Regression) has been used at ( $\alpha= 0.05$ ), which means if the significant level more than 0.05, the hypothesis will be neglected and saying that there is no impact for the ratios of financial market announced monthly on trading volume. Testing the hypotheses will be discusses as the following:

1. Testing the first hypothesis “There is a statically significant for the M/B ratio announced in ASE in the end of every month on trading volume per share in the next month”. Table (1) shows that the significant level equals (0.267) and it is more than 0.05. So, the hypothesis was neglected and there is no impact of the M/B ratio announced in the end of every month on trading volume per share in the next month. The table also shows that (T) equals (0.786) it is significant. the ( $R^2$ ) was (0.135) .

**Table 1: The result of testing the first hypothesis of the study**

(p-value)	T	$R^2$	The result of testing the hypothesis
<b>0.267</b>	<b>0.786</b>	<b>0.135</b>	<b>Neglected and there is no impact.</b>

**Table 2: The result of testing the second hypothesis of the study**

(p-value)	T	$R^2$	The result of testing the hypothesis
<b>0.029</b>	<b>2.175</b>	<b>0.574</b>	<b>Accepted and there is impact.</b>

- 2) Testing the second hypothesis “There is a statically significant for the dividends yield ratio announced in ASE in the end of every month on trading volume per share in the next month ”. Table (2) shows that the significant level equals (0.029) and it is less than 0.05. Therefore, the hypothesis was accepted and there is impact of the dividends yield ratio in Amman Stock Exchange in the end of every month on trading volume per share in the next month. The table also shows that (T) equals (2.175) it is significant. The ( $R^2$ ) was (0.574).
- 3) Testing the third hypothesis “There is a statically significant for the P/E ratio announced in ASE in the end of every month on trading volume per share in the next month ”. Table (3) shows that the significant level equals (0.109) and it is more than 0.05. Therefore, the hypothesis was neglected and there is no impact of the P/E ratio in Amman Stock of Exchange in the end of every month on trading volume per share in the next month. The table also shows that (T) equals (1.057) it is significant, ( $R^2$ ) was (0.268).
- 4) Testing the fourth hypothesis “There is a statically significant for the P/CF ratio in Amman Stock of Exchange in ASE in the end of every month on trading volume per share in the next month ”. Table (4) shows that the significant level equals (0.003) and it is less than 0.05. So, the hypothesis was accepted and there is impact of the P/CF ratio announced in

the end of every month on trading volume per share in the next month. The table also shows that (T) equals (2.938) it is significant, ( $R^2$ ) was (0.739).

**Table 3: The result of testing the third hypothesis of the study**

(p-value)	T	$R^2$	The result of testing the hypothesis
<b>0.109</b>	<b>1.057</b>	<b>0.268</b>	<b>Neglected and there is no impact.</b>

**Table 4: The result of testing the fourth hypothesis of the study**

(p-value)	T	$R^2$	The result of testing the hypothesis
<b>0.003</b>	<b>2.938</b>	<b>0.739</b>	<b>Accepted and there is impact.</b>

### The Results and Recommendations:

Testing the hypotheses of the study statically has shown that there is an impact for the (P/CF) ratio and dividends yield ratio on trading volume. In addition, there is no impact for the (M/B) and (P/E) ratios. It has been noted that the results of the tests are confirmed with the results of previous studies. For example, the study of (AL-Brajneh, 2009) and the study of (AL-Khdash & AL-Abadi, 2005) have seen that we can utilize the relation between net cash flows with market value per share in taking investment decisions. That is confirmed with the results of fourth hypothesis of the study related that there is an impact of the P/CF ratio. Whereas the study of (AL-Bdayneh, 2000) reached that there is an impact for distributions of cash profits on trading volume, the results of the study was nearer confirmed with it, where the results of the second hypothesis have shown an impact of dividends yield on trading volume.

From the other side, the results have been reached are different to the results of studies (Dudney, 2008) and (Agrawal, 1996) related to the (M/B) ratio. The studies have shown that there is an ability to use this ratio in taking the investment decisions at the stock of exchange. The result of first hypothesis of the study has shown that there is no relation between these ratios with trading volume. Therefore, disability to use this ratio in taking the investment decisions related to the shares of industrial firms listed in ASE. This result was confirmed the result of study of (Abdu, 2001).

The nature of financial ratio effected in trading volume seemed that it is not accounting behavior but it is cash behavior. This matter can be connected with the problems of accounting measurement that suffer from the financial accounting statements and it adopts applying the principle of historical cost basically. In addition to the presence of bias and lack of objectivity in this data sometimes, as a result of the use of the accrual basis. So there was a trend towards financial indicators and ratios of cash character being more objective and less bias for use in decision-making and therefore the impact on the volume of trading.

The study has recommended in developing new financial ratios in addition to the current ratios depend on the monetary more data and for development the current financial ratios accounting based on fair value accounting and the adoption of accounting alternatives measure contemporaneous be more objectivity and impartiality in the preparation of these ratios to be

more realistic and the ability to dislike the actual reality for businesses in general and industrial companies listed on ASE in particular. This study has recommended the need of conducting further studies on other sectors of the listed firms and using accounting and other financial ratios and monthly cash.

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