

The Impact of Earnings Management Practices on the Market Value of Industrial Companies Listed on the Amman Stock Exchange: Evidence from Jordan

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Abstract: Reported earnings and their prediction is one of the most important factors that are relied upon in determining the value of various investments, given that the higher the earnings, the greater the possibility of distributing profits, and accordingly, stock prices are determined in the financial markets. This study aims to examine the impact of earnings management on the firm value of Jordanian industrial companies listed on the Amman Stock Exchange for 2015-2019. This study used discretionary accruals according to the modified Jones model to measure earnings management. Tobin's Q as well is used as a proxy to firm value. Furthermore, this study used firm size, firm age, and leverage as control variables. In analyzing data, STATA is used. The results showed that earnings management has a negative but insignificant impact on firm value. On the other hand, leverage has a significant and negative effect on firm value. Firm age has a positive but insignificant effect on firm value. Firm size has a negative and significant effect on firm value.

Key-Words: - Earnings Management, Market Value, Industrial Companies, Amman Stock Exchange, Financial markets.

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1 Introduction

Reported Profit in financial reports is a critical point in the business environment that represents the

performance and success of a company and its ability to use its resources to earn returns. However, in recent years, the failure of many companies has

proven that reported earnings do not always help stakeholders to anticipate future earnings. From here, controversy emerged about the concept of earnings management and its link to the market value of companies [1].

Managers are free to choose among different accounting methods and alternatives. They can expedite or defer recognition of income and expenses by adjusting inventory valuation methods, changing depreciation methods, and estimating bad debts [2]. Managers can exercise diligence in preparing financial reports, which leads to reducing the desired benefit of accounting standards as an important indicator that helps disclose the company's performance level. Perhaps the most vulnerable criterion for miscalculation and presentation by management is the profits that users of financial statements rely on to make their financial decisions. The net profit is the most important individual item that is exposed to profit management as it is a signal that helps guide the allocation of resources, net profit also is an indicator of the extent to which the company is engaged in value-added activities in capital markets [3, 36].

Stock markets constitute a cornerstone of the structure of the financial sector in any free economy, and realize the importance of accumulating the savings of individuals and institutions through various forms of financial instruments that issue a necessary and important element for projects, which is money [4]. Although international cooperation and its growing importance seem to be vital to the value creation process of all companies, it is not easy to recognize and capture international cooperation in financial statements. This results in a growing gap between the financial value of companies as shown in company reports and the stock market value [5].

Given the increasing challenges and problems facing Jordanian public shareholding industrial companies, it has become imperative for these companies to seek ways to improve the efficiency of working capital management by maximizing the market value, as market value is a good measure to indicate the efficiency of financial performance in organizations in general and companies Contribution in particular Profitability is an important tool for measuring the efficiency of management in its ability to use the company's available resources [35]. Therefore, maximizing the market value of the stock has become a central and strategic goal for banks, business companies, and financial managers that have given great support for theories and studies in the field of financial management in order to show the mechanism for

maximizing the market value of the stock and maximizing the wealth of owners. Hence, the study problem consisted in identifying the impact of profit management on the Jordanian industrial public shareholding companies' Market value [35].

2 Literature Review

2.1 Earnings Management

Earnings management is one of the important aspects of financial reporting and the main topic of discussion among all the shareholders of the company because the level of profit is one of the important evaluation measures of performance. Thus, any interference that violates the accuracy of the reports can affect how users of financial reports make their decisions. Profit management is a consequence of agency theory, according to which the interests of managers and owners conflict. Information asymmetry between the manager and the shareholders is the most important consequence of the separation of ownership and management in companies [6].

Earnings management is practicing that the company's management may follow in order to influence the profits included in the financial statements, it is carried out to match the specific objective and is different from the basic business management of the company. Profit management strategy uses accounting methods to provide an overly positive view of the company's financial positions, which inflate profits [7]. Earnings management can be defined as approved methods practiced by the management when preparing the company's financial reports, taking advantage of the accounting flexibility and discretion granted to it to affect the company's profits, either by increasing or decreasing. It can also be said that they express the manipulation of financial numbers in a way that affects the profit and its distribution, and the methods of institutions differ in changing financial reports with different objectives, and these methods are acceptable when they are within flexibility in the accepted accounting principles, and when they move away from fraud and prove fictitious operations [8, 4]. In this context, the standard of profit quality was established in order to express the financial position of the institutions as an indicator of the dividends distribution and to enable investment fleeing to be taken. Several indicators can be adopted to evaluate the quality of profits, which are: profit continuity, profits being free from profit management practices, and matching revenues with expenses [9].

[10] Murniati Argues that the collapse of global companies was due to the imbalance of financing structures, the inability to pay the outstanding obligations, the weakness of corporate governance systems in addition to the financial and administrative corruption of audit firms. Therefore, extensive researches highlight the impact of corporate governance on earnings management [11-13]. Indeed, corporate governance is a critical issue to decrease or even eliminate earnings management practices. In other words, governance mechanisms aim to refute the opportunistic behaviour of managers and preserve the behaviour of shareholders and other stakeholders. On the other hand, Almarayeh and Yasser focused on audit quality as an important mechanism in reducing earnings management practices [14-15].

2.2 Firm Value

The firm value is based on shares and their value and is affected by a number of factors such as supply and demand for shares and the circumstances surrounding the organization, internal or external. Therefore, market value is a good measure of the efficiency of financial performance of organizations in general and joint-stock companies in particular [16-17, 35]. Al-Mahlawi defined the market value as the value determined by the market for the stock as the result of the interaction of the forces of demand and supply, which is highly volatile and changeable and is affected by several factors, including future distributions and expectations of the company's growth, and the market value is the currently listed price through which securities are bought and sold in the market, or it is the value that the stock market places on the entire company to measure its estimates in light of its prospects and circumstances [18].

The value of companies has received great attention in many financial fields, as it is one of the most important values that help measure the value of the company in the open markets, as well as determine the mental perception of the future prospects of the company [19], as maximizing the value of assets through maximizing the value of The company is considered an important and basic matter for increasing the wealth of the shareholders in the company [20], and most of the company management's attention has become focused on improving and increasing the company's market value, represented by stock prices in the financial markets because this will lead to an increase in market returns to shareholders and maintain its growth rates, and the impact on the expectations of analysts and financial investors in the financial

markets about the company's trends, profits and future returns [21].

The market value is one of the most important indicators of measuring the efficiency of the market and the development of its activity. Many observers, analysts, and financial investors depend on this indicator. The rise in the stock market value index indicates the efficiency and an increase in the volume of transactions in the financial markets [22]. The market value of the shares reflects the status and characteristics of the companies from the volume of trading in them, and the rise in the market value is a positive indicator of the company's success in the future, and it is considered to direct the investors' attitudes towards the shares of that company due to their confidence in the strong financial performance of the company [21]. Therefore, the main objective of the company is to increase its value by taking measures and identifying decisions that contribute to increasing its value. As for poor decision-making by the management, it leads to a decrease in profits and then is reflected in the share price in the market. Therefore, the importance of the market value is manifested through any financial decision that affects the company. And it is reflected in its value [23]. The market value is of great importance to companies, the greater the market value, the higher the value of the company, and indicative of the company's success and superiority, which leads to attracting investors to buy shares [18].

2.3 Earnings Management and Firm Value

The power of generating earnings is used to evaluate the performance of a company. As a result, a company will work hard to improve its performance in order to make a large sum of money. Investors are more interested in a company with a large quantity of earnings than one with a low number of earnings. The financial statement's earnings can have an impact on a company's decision-making [27]. Market analysts, on the other hand, utilize these figures to evaluate a company's investment potential and calculate its profitability [28]. However, when the market is unable to detect opportunistic behaviour on the part of managers, as the market assumes that the earnings numbers reported by managers are the product of strong performance. In the literature, mixed results regarding the impact of earnings management on firm value. [24]. Indrawan found that earnings management practices have a positive effect on firm value [29]. Sahrawi argues that when the market is less sophisticated and does not assess information to determine if it is valid or not in advance could be a

significant reason for the positive relationship between earnings management and market valuation [30].

However, Hartono argues that before responding to information published by management, a market will assess the information's authenticity. If the market detects information about published earnings obtained through earnings management, the market will respond negatively by lowering the firm's value [25]. For example, Darmawan found real earnings management had a negative effect on firm value in a study conducted in Indonesia. On the other hand, they found that by using discretionary accruals to measure accrual earnings management there is no effect on the value of the firm [26].

In line with the literature, more earnings management will be associated with lower business valuations if investors experience information risk coming from imprecise accounting earnings [32]. Therefore, this study expects that earnings management has a negative effect on market valuation. The researcher states the following hypothesis:

H₁: Earnings management has a significant negative effect on the firm value of Jordanian industrial companies listed on the Amman Stock Exchange.

3 Methodology

3.1 Sample Selection

The study sample consists of all industrial companies listed on the Amman Stock Exchange (ASE) from 2015-2019. As a result, the number of sample companies reached 34 companies. However, companies that did not have data available over the study period were excluded. Thus, the number of companies that have data available for all years of study reached 32 companies.

3.2 Study Variables

3.2.1 Dependent Variable

In this study, firm value is the dependent variable. Tobin's Q is a wide proxy used in the literature to measure firm value [32]. The following equation represents the measure of Tobin's Q:

$$TQ = \frac{MC + D}{TA}$$

Where:

TQ: is the Tobin's Q

MC: is the market capitalization

D: is the book value of debt

TA: is the total assets

3.2.2 Independent Variable

Earnings management (EM) is the independent variable. To define earnings management practices, there is a common use of benefits management as an agent; Either by discretionary accruals or the use of total accruals [33] or in fact, the most widely used discretionary model is the standard Jones model (1991); It allows for the division of receivables into non-discretionary and discretionary categories, Islam proposed a modified Jones model for this, the inaccuracy of measuring estimated accruals will be reduced by emphasizing that sales are adjusted to account for changes in accruals. Moreover, Dechow found that MJM was more influential in discovering earnings management practices than the standard Jones model. Therefore, this study uses a modified Jones model to measure earnings management.

The measurement of discretionary accruals according to the modified Jones model is carried out according to the following steps of Dechow.

Step 1: calculation the total accruals depending on the following equation:

$$\text{Total accruals} = \text{earnings} - \text{cash flow (from operations)}$$

Step 2: calculating the non-discretionary accruals by estimating the parameters of the model, through the following regression equation for all sample companies and each year separately:

$$TAC_{it}/AS_{it-1} = \beta_1 (1/AS_{it-1}) + \beta_2 (\Delta REV_{it} - \Delta REC_{it}) / AS_{it-1} + \beta_3 (FA_{it}/AS_{it-1}) + \varepsilon_{it}$$

Where: AS: total assets at the end of the previous year. TAC: total accruals. ΔREC : change in receivables. FA: fixed assets. ΔREV : change in revenue. Step 3: calculating the non-discretionary accruals for each of the sample companies by using the model parameters estimated from the previous equation:

$$NDA = \beta_1 (1/AS_{it}) + \beta_2 (\Delta REV_{it} - \Delta REC_{it}) / AS_{it} + \beta_3 (FA_{it}/AS_{it}) + \varepsilon_{it}$$

Where: NDA: Non-discretionary accruals. To measure the extent of creative accounting, discretionary accruals will employ as a proxy. Non-discretionary accruals are subtracted from total accruals to get discretionary accruals. Step 4: calculation discretionary accruals depending on the following equation:

Discretionary accruals = Total accruals- Non-discretionary accruals.

3.2.3 Control Variables

In line with the literature, this study uses firm size, firm age, and leverage as control variables. Table 1

shows the summarization of study variables and their measurement.

Table 1. Summary of study variables

Description	Variable name	Measurement
Dependent Variable	Firm Value	Tobin's Q
Independent Variable	Earnings Management	The absolute value of discretionary accruals measured by Modified Jones Model
	Firm Size	Log of company's total assets
Control Variables	Firm Age	The time length of a firm establishment.
	Leverage	Total debt divided by total equity

3.3 Study Model

$$FV = \alpha_0 + \beta_1 EM_{it} + \beta_2 SIZE_{it} + \beta_3 AGE_{it} + \beta_4 LEV_{it} + \varepsilon$$

Where:

FV: is the firm value

EM: is the earnings management

SIZE: is the firm size

AGE: is the firm age

LEV: is the leverage

4 Analysis

4.1 Descriptive Statistics

Table 2 presents the descriptive statistics for the study variables, including the dependent variable, independent variable, and control variables. As shown in table 2, the mean of Tonin's Q of the study sample is 0.68 that indicate industrial sector in Jordan is evaluated in less actual value. On the other hand, the minimum value of Tobin's Q is .13 and the maximum value of it is 2.26, this indicates a wide variation in the valuation market to study sample. Regarding to discretionary accruals, the company is deemed engaged with earnings management if its discretionary accruals of it are greater than zero. As shown the table 2 the mean of discretionary accruals is 0.23, which indicates there is an earnings management practices in the Jordanian industrial sector in general.

Table 2. Descriptive statistics of study variables.

Variable	Mean	Std. Dev.	Min	Max
Tonin's Q	0.68	0.46	0.13	2.26
Discretionary Accruals	0.23	0.11	0.00	0.66
Age	33.09	15.20	8.00	70.00
Leverage	32.19	18.60	3.20	76.79
Log (Total Assets)	7.48	0.54	6.56	9.07

4.2 Normality

One of the most crucial regression assumptions is that the sample distribution is normal. Skewness and Kurtosis test is conducted in this study to examine the normality assumption. The table shows that all study variables are not subject to a normal distribution. Since the null hypothesis states that, the data is subject to a normal distribution if the probability is greater than 5%. As shown in table 3 all probability of study variables is less than 5%.

To reduce the problem of normality, this study used the Ladder of powers test to find the best method to be used in transformation variables to reach the normal distribution. The result indicated that Tobin's Q, Discretionary Accruals, age, and leverage have a high probability when it is transformed into the square root. Regarding the log of total assets, it has a high probability when it transomed into 1/cubic. Therefore, all variables have transformed according to the results of the Ladder of powers test.

Table 3. Skewness and Kurtosis test

Variable	Pr(Skewness)	Pr(Kurtosis)	Adj chi2(2)	Prob> chi2
Tonin's Q	0.00	0.00	28.03	0.00
Discretionary Accruals	0.00	0.12	20.50	0.00
Age	0.00	0.42	8.21	0.02
Leverage	0.00	0.11	9.67	0.01
Log (Total Assets)	0.00	0.01	13.99	0.00

4.3 Multicollinearity

An important assumption in regression analysis is to ascertain the problem of multicollinearity among the

independent variables of the study. Anderson defined a strong overall correlation coefficient between any two independent variables as one that exceeds 70%. In accordance with the existing regression model, a detailed correlation matrix containing all variables was undertaken to determine the size of this problem. The matrix of correlation coefficients is shown in table 34 there are no strong correlations between the independent variables, indicating the absence of a multicollinearity problem in the study model.

Table 4. Correlation Matrix

	1	2	3	4	5
Tobin's Q (1)	1				
Discretionary Accruals (2)	-0.2347	1			
Leverage (3)	-0.4005	0.1166	1		
Age (4)	0.2007	-0.099	-0.1557	1	
Size (5)	0.0984	-0.0381	0.0628	0.2084	1

4.4 Results of model

This study uses a fixed effect model to examine the impact of earnings management on firm value. As shown in Table 5, the value of F was 7.64, and R Square is .1977 which indicates the independent variables of the study led to 19.77% changes in the firm value of the study sample.

Table 5. Results of fixed model

TQ	Coef.	Std. Err.	t	P>t
DA	-0.2239424	0.19528	-1.15	0.254
LEV	-0.007518	0.002261	-3.33	0.001
AGE	0.0134199	0.010743	1.25	0.214
logTA	-1.233167	0.41836	-2.95	0.004
cons	9.755255	3.178845	3.07	0.003

R-sq.: = 0.1977

Prob > F = 0.0000

F = 7.64

The results indicate that there is a negative but insignificant effect of earnings management on firm

value ($t = -1.15$, $p = 0.254$). Therefore, H1 is rejected. In terms of control variables, leverage has significant and negative effect on firm value ($t = -3.33$, $p = 0.001$). Age has positive but insignificant effect on firm value ($t = 1.25$, $p = 0.214$). Size has negative and significant effect on firm value ($t = -2.95$, $p = .004$).

5 Discussion

This paper aimed to demonstrate the impact of earnings management practices on the market value of industrial companies listed on the Amman Stock Exchange. Industrial companies play an important and vital role with their various businesses in developing the local economy in which they operate. In recent years, interest in them has increased dramatically and has become one of the basic ingredients for building and developing the Jordanian national economy. This study focused on discretionary accruals as an indicator of earnings management, as it depends largely on the assessment and judgments of management. The phenomenon of earnings management has become one of the most important methods of managing accounting data with the aim of positively affecting the company's market value. The prevalent use of accounting information by financial analysts and investors to help evaluate stock prices can generate a motive or incentive for managers to manipulate profits, in an attempt to influence the stock price performance in the short term. In general, investors and analysts base the reported profits, and therefore it is expected that earnings management practices reduce the value of the company in the financial market. In this study, a negative relationship was found between earnings management and firm value; however, this relationship is not statistically significant.

6 Conclusion

The importance of this paper appears by focusing on the concept of profit management efficiency in Jordanian public shareholding industrial companies and its impact on the market value; Because this has an impact on the industrial sector at present, and to benefit from the application of the results in industrial companies to add scientific value and to make recommendations based on these results, as it is expected that the results that were included in the study of companies will help. Therefore, we hope that this study will be of great importance to

researchers and financial analysts who are interested in the efficiency of profit management.

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- Waleed ALzoubi; Data curation,
- Eyad Hyasat; was responsible for the Statistics,
- Mashhour Maharmah; resources,
- Shireen AlAli; methodology.

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