Are Investors in Amman Stock Exchange Able to Detect Earnings' Manipulation?

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Abstract

The purpose of this study is to examine investors' awareness in Amman Stock Exchange of the effects of earnings manipulation incentives on the earnings manipulation practices of managements through the usage of the available level of flexibility in the accounting standards, and to examine whether those investors are able to detect these practices. A self-administered questionnaire of three sections was developed and used to achieve the purposes of this study. A sample of 144 respondents from four industries was selected using a stratified sampling method. The study found that investors in Amman Stock Exchange have enough awareness to the effects of earnings manipulation incentives on the practices of managements toward the manipulation of earnings. Moreover, this study concluded that investors in Amman Stock Exchange have the ability to detect those practices.

Introduction

Nowadays, financial statements are considered the key source of information for all users of accounting information, whatever they are: external or internal. There is no other available source of information to external users but the financial statements which the firm announces by the end of each accounting period to keep users informed about its financial performance. To a large degree, external users depend on information available in the financial statements to make good, accurate, and rational decisions. Financial statements importance to decision makers increases because those statements are prepared according to the generally accepted accounting principles (GAAP). When accounting information is prepared according to GAAP, it will be more beneficial to users.

To be more beneficial to the users for the purposes of decision making, the available accounting information in the financial statements should be relevant and reliable. Moreover, accounting information should be understandable, comparable, and consistent, to be helpful to decision makers (Kieso and Weygandt, 2006). Many continuous developments occurred in accounting literature during the twentieth century. Next to the period of the great depression and the collapse of stock markets that occurred during the late twentieths and early thirties of the prior century, large efforts had been made to develop the methods of measurement and disclosure of the different items of financial statements. Moreover, corporations are required to prepare additional financial statements in order to protect users from declaring inaccurate or incorrect financial information.

Some managers try to affect the numbers and values included in the financial statements of their firms, especially the item of earnings, in order to achieve different purposes. In most cases, managers prefer earnings to be appeared at its highest possible value in the income statement. When the total announced amount of earnings is high, managers will receive several rewards. Moreover, stockholders and the board of directors of the corporation will be more encouraged to renew the contract with those managers for additional future periods. As a result to the announcement of the firm earnings at higher amounts than their actual, the stock market value will increase or at least it will not decline for a reasonable period during the future. Increasing earnings is the common case of earnings manipulation, but this does not prevent some managers from revealing lower earnings than it's actual if they have the desire to reduce the amount of income taxes.

More incentives are available to managers and encourage them to manipulate earnings. When the declared amount of earning is high, the firm can receive more loans with lower interest rates from banks and financing firms. Suppliers will have more desire to deal with firms of high announced amounts of earnings, and investors will also try to purchase more number of the firms' stocks. Stockholders will maintain their stocks and they will try to purchase more and more of their firm's stocks, when the earnings of those firms are high. The most important thing that management can achieve, as a result of increasing the amount of announced income, is that the board of directors will evaluate the performance of that management at higher degree, as a result, that management will receive more of rewards and remunerations, and it will renew the contract for new future periods.

Many firms collapsed and many stockholders lost large amounts of money, because of manipulation. For example, we can not forget what occurred to World Com Inc. and to Enron Inc. few years ago. Those two, in addition to other firms, closed because of manipulation that their managements practiced since few years ago before there collapse. Whatever the reason, and whatever the objectives that managers are looking to achieve through their practice of manipulation, the results of practicing this phenomenon, especially on earnings, are very harmful to many parties inside and outside the firm. Because, later on, the practice of manipulation phenomena may lead to bankruptcy, investors will loose most of their invested amounts of money, and lenders will also loose their loans to those firms. Moreover, employees will loose their jobs, and suppliers will loose high amounts of money. The most important result of the practice of earnings manipulation is that the country as a whole will loose an important units of production, and this will lead to negative results to the country.

Because of the bad results to the practice of manipulation to investors, stockholders, creditors, suppliers, and to the country as a whole, manipulation is the new enemy to the economies of today. Understanding earnings manipulation, and how this manipulation can be practiced by managements, and how we can be able to protect ourselves from this phenomenon is considered too much important issue. The problem of this study can be presented through the following question: Are investors aware of the effects of the incentives of earnings manipulation on management usage to the wide level of flexibility that is available in the accounting standards in order to manipulate the amounts of earnings? And, are investors and other users of financial statements able to detect earnings manipulation which the management practices in order to smooth the amount of earnings?

The objectives of this study can be summarized as the following:

1. To increase the available knowledge and literature about earnings manipulation, investors' awareness of the incentives of practicing manipulation, and the effect of that awareness on management's practice of manipulation.
2. To measure investors' ability to detecting the practices of manipulation by the managements of firms.
3. To learn about the procedures available to investors in order to detect any manipulation practices.

Related Literature

The declared financial statements and reports are considered the main source of information to investors and to other users of those statements and reports. To a large degree, investors depend on information available in the body of financial statements to make good decisions. To be beneficial for the decision making process, accounting information should be characterized with several qualitative characteristics. Those characteristics are relevance, reliability, understandability, comparability, and consistency. Because the management of the firm is responsible for the declared financial statements, that management may manipulate the earnings and other items of the financial statements.

Investors are the main group of users to the financial statements. In most cases, the firm manipulates earnings in order to affect the decisions of investors. Investors have extra money over their consumption needs, so they have the desire to increase their return and they need their wealth to grow along the time. Investors can invest their extra money in stock markets, real states, enterprises and other options, but most of them prefer to invest these extra amounts of money in stock markets because of the high degree of liquidity characterized the investment in equity and debt securities, so they can sell those securities when they feel that they need money, and they can purchase more securities when they feel that they have extra amounts of money.

The practice of manipulation by managements of firms is not new phenomena. This phenomenon appeared for the first time, after the industrial revolution and continued up to these days. After the appearance of the large organizations that followed directly the industrial revolution, each firm was selecting the accounting principles which the management of that firm prefers. During that time, accountants were choosing the accounting methods which may achieve the objectives of the firm's management. After the great depression and the stock markets collapse which occurred during the latest twenties and early thirties of the previous century, the development of the accounting principles became an essential requirement. Because of that, the accounting literature began to develop quickly since that time.

Many terms appeared to present the effect of management on the values of the items that were included in the financial statements. Those terms are: account manipulation, fraudulent reporting, income smoothing, earnings management, and creative accounting.

Rosner (2003) mentioned that account manipulation and fraudulent are two similar terms that represent the management intent to interfere in measuring and disclosing processes, even though the accounting standards do not permit those practices. Rosner also mentioned that earnings manipulation is a studied selection to the operating, financing, and investing operations and to the methods and policies but according to what accounting standards permit, so this selection are disclosed to users. Income smoothing is an intended smoothing of the declared income by management in order to decrease the variations in income from period to period, therefore, income appears at its normal amount (Bolkaoui, 2994). Bolkaoui also mentioned that the creative accounting is the process of converting an accounting numbers from its actual values toward the values that the management desires.

The most important question which requires clear answer at this location is: How does management manipulates the items of the financial statements? Financial statements are considered a summary to all events that occurred in the firm during the accounting period. Those statements are prepared according to the GAAP. The GAAP determined the contents, items, order, form, methods of measurement, and the time of recognition to all amounts that can be included in the financial statements. The management of the firm is responsible for the preparation and for the contents of those statements through its determination to the accounting methods and procedures that accountants of the firm can follow to prepare these statements. Managements of some firms try to practice some types of manipulation on selected items of financial statements, especially on the item of earnings.

Al-Jahmani (2001) mentioned that the manipulation may be natural or intentional. According to the natural manipulation, management does not try to affect the financial statements of its firm. Under the intentional manipulation or smoothing, the management tries to affect the financial statements in order to achieve its objectives. Intentional smoothing may be actual or artificial. Under actual smoothing, the management affects the statements in order to structure the economical events to achieve its own purposes about the appearance of income at the desired value of the management. Artificial smoothing differs from actual. According to the artificial smoothing, the management takes many decisions and actions to manipulate the amounts of items included in the financial statements in a form that these amounts are unlinked with the economical transactions occurred during the accounting period.

The practices of management that are related to financial statements are different. The management negatively uses the wide level of flexibility which available in the accounting standards, such as the selection among the available methods in determining the annual depreciation, the selection among the available methods of inventory valuation, and other practices. Copeland (1968) mentioned that income smoothing is a repetitive selection of accounting measures or estimation rules in a considerable manner in order to make low deviation in income from its actual amount. Copland mentioned that managements affect accounting numbers under the following conditions:

1. No obligations will occur to the firm during the future.
2. Management effect should not conflict with the GAAP.
3. The effect of management should make a physical deviation in income from period to period.
4. The effect of management should not require actual transactions with external parties, but just reclassifying the accounts balances inside the firm.
5. The methods and the tools of effect should be used separately or through connection with other practices along the accounting periods.

The above mentioned terms by Copeland, focused on the artificial smoothing of income, because they do not include any financial transaction with outsiders. Instead, the focus of those terms was on the reclassification of the items of expenses, and no effect on cash flows occurs.

Barnea, et al., (1976) mentioned three methods that management can use to affect the accounting numbers:

1. Through events occurrence and/or recognition. According to this method of manipulation, the management affects or changes the time of the financial transaction in order to reduce the deviation of income. In most cases, the change occurs to times is previously predetermined, such as the changes in the research and development (R & D) expenses, training, maintenance, and announcement.
2. Through allocation over time. According to this method, the management allocates the items among different accounting periods, such as capitalization or noncapitalization of expenses, selection among the available methods of depreciation, and the amortization of some types of intangible assets.
3. Through Classification. Management classifies discontinued items of revenues and expenses as ordinary items in measuring income.

Most interested researches with the phenomenon of manipulation or earnings management mentioned three common ways to practice manipulation: Accounting changes, classification of extraordinary items, and provisions restructuring.

Accounting changes includes a change in an accounting principle without a violation to the GAAP, such as the change in the methods that used in valuing inventories, the change in the methods used in assets depreciation, and the change in the methods used in preparing the financial statements according to other monetary unit. The change in accounting estimates is also classified under the accounting changes. Accounting estimates include many items such as predicting the useful life and the salvage value of fixed tangible assets, the amount of bad debts provision, the percentage of completion, and the estimation of inventory quantity of natural resources. The change in accounting entity which occurs as a result of consolidation among firms is also classified under the accounting changes. Moreover, the change in the subsidiaries to a mother firm is also classified as one among the accounting changes.

Extraordinary items can be used by managers to manipulate earnings and other accounting numbers. Schrand and Franco (2003) mentioned that the Accounting Principles Board (APB) defined in his statement number (7), the extraordinary items as events and transactions that have a material effect, so those items should be expected to be nonrecurring. To be considered as extraordinary item, two terms should be available in the item. The item should be material and it should be unusual and nonrecurring item. When the firm classifies one or more extraordinary item under the operating transactions, the firm in this case can be considered as a manipulator to its accounting numbers. Barena et al., (1976) demonstrated that many firms use the classification approach to affect the amount of income.

The subject of earnings smoothing was among the interests of Godfrey and Jones, (1999). They studied this subject in Australia and found that the Australian firms manipulate their accounting numbers. This study concluded that the managers of Australian firms used the extent of flexibility available in the accounting principles in order to affect the amounts of income in their firms by using the classification approach to avoid the pressure of labor unions and to avoid any increase in the salaries of its employees.

Structuring provisions is also one important available approach to managements which can be used in the manipulation processes of accounting numbers. Statement number (7) of International Accounting Standards (IAS) defined provisions as those obligations which their times and values are uncertain, and which they are recognized when the following items are available in those obligations:

1. When those provisions arrange future obligations on the entity as a result of unusual events.
2. When they include a resources maximization to pay obligations.
3. The estimation can be dependable.

Examples of provisions include bad debts provisions, restructuring provision, insurance provision, maintenance and spare parts provision, and others. Those provisions appear in the financial statements, and their values are determined according to the personal estimation. Because of the level of flexibility available in estimating provisions, managers use this flexibility to affect the numbers of these items in the financial statements. Under the management usage to provisions in order to affect accounting numbers, the management reduces the values of provisions during the periods of low performance, and increases their values during the periods of high performance.

Many researchers are interested nowadays in management practices to affect the accounting numbers that appear in the financial statements of business organizations. Many studies about the manipulation of financial statements were carried out within the Arab Land. (Howaidi (1998) studied the determinants of income smoothing in the corporations of Kuwait under the title of "An optional study to some determinants of income smoothing in

Al-Kuwait corporations". The main objective of this study was to examine the effect of four factors on the direction of the companies listed in Kuwait stock markets and practice income smoothing. The four factors which this study examined were: the size of the corporation, corporation's profitability, nature of work, and the structure of equity. The sample of this study encompassed 41 firms among the corporations listed in Al-Kuwait stock market. Those 41 corporations belong to three industries: Financial, industrial, and commercial. The study concluded that the phenomenon of income smoothing is available among Kuwait corporations, whatever the measures used to represent the case of that income smoothing. This study also concluded that profitability is the most important factor that can be used to distinguish between those companies which smooth their income and those that do not. Moreover, this study found the corporations which the government owns less than 50% in their capital tend to practice the income smoothing phenomena more than others in Kuwait.

Al-Jahmani (2001) carried out a study titled "The behavior of income smoothing in Jordan". The objective of this study was to examine whether the phenomenon of income smoothing is available or unavailable among the listed Jordanian Companies in Amman Stock Exchange. The sample of this study included 60 firms along the period from 1993 to 1996. The main conclusion of this study was that income smoothing phenomenon is practiced by the Jordanian companies listed in Amman Stock Exchange, but at different levels among industries. The study also concluded that there are no significant differences between small and large corporation with relative to their practice of the income smoothing phenomenon.

A study deserves to be mentioned and titled "Cash from Operations and Earnings Management" and carried out by Yoon and Miller (2002). The main purpose of this study was to examine the relationship between the operating performance and the behavior of the discretionary accruals of the Korean firms. This study found that there is a negative relationship between the total accruals and the cash flows from operating activities when cash flows are positive, whereas, this relationship declines when those cash flows are negative. Other conclusion to this study was that the management of bad performance firm directs itself toward the strategy of increasing income through using discretionary accruals. The last conclusion to this study was that the firm which achieved high levels of performance or very bad performance follows the strategy of income reduction.

Barton and Simko (2002) carried out a study about earnings management and titled "The Balance Sheets as an Earnings Management Constraint". The study aimed to examine the application of GAAP as a factor restricts management in its managing to its earnings whenever that management treats its unexpected profits. The balance sheet is considered as an accumulation to prior accounting policies that had been selected by the managers of firms. The flexibility that management uses as a result of its implementing to the accrual basis in recording the economical events is reflected in the balance sheet. This study focused on the net operating assets because it declares the prior practices of the firm's management in managing earnings. This study found that managers can decrease the unexpected profits or increase these profits to the required level when net assets are maximized in the balance sheet.

Kallunki and Martikainen (2003) carried out a study titled "Earnings Management as a Predictor of Future Profitability of Finnish Firms". The purpose of this study was to use the level of earnings management in the current period as indicator for the future earnings. Managements of firms in Finland use the discretionary accruals in managing earnings in order to affect the level of earnings through increasing or reducing those earnings in a way that achieves the objectives of the management. The sample of this study included all those firms listed in Helsinki Stock Market. The study concluded that the recent earnings management of a year has a negative relationship with the future profits of that firm. The study also revealed that the recent earnings management has an additional informational content for the prior year profitability and stock prices when a need to forecast future profits appears.

Friebe and Guriev (2004) analyzed the effect of earnings manipulation on the agency relationship inside firms. In their study titled "Earnings Manipulation and Incentives in Firms", they developed a model of a corporate hierarchy that highlights the potential role of corporate insiders as gatekeepers; it shows how distortions propagate throughout the hierarchy and how earnings manipulation obstructs value creation by undermining internal incentives. They showed that it is easier for a division manager to prove top management's manipulations when the performance of his or her own divisions is low. The main conclusion to their study was that earnings manipulation is more likely to occur in flatter hierarchies.

Among the studies of earnings manipulation is a study prepared by Park and Shin (2004) and titled as "Board Composition and Earnings Management in Canada". The purpose of this study was to examine the effect of outside directors on restricting management in its usage of discretionary accruals. Those accruals are managed through increasing and reducing them in order to achieve the targeted profits. In Canada, the ownership of the firm is concentrated on block holders who have a control over the firm as a whole. The sample of this study included 539 listed corporations in Toronto Stock Exchange. Many conclusions were reached as a result of this study. One of these is that there is no correlation between the ratio of outside directors and the degree of accruals manipulation. The study also revealed that there is no available evidence support the idea that outsiders and representatives of financial institutions have the ability to restrict the practices of management in manipulating the earnings. This study also revealed that the middle financial managers, who at the same time are outside directors, have the ability to restrict the practices of management. Moreover, the study found that are no available evidences to support that the regulations of Toronto Stock Exchange support the ability of outside directors to be able to restrict the practices of management.

Kao and Chen (2004) prepared a study relates to earnings management and titled "The Effects of Board Characteristics on Earnings Management". The main purpose of this study was to examine the relationship between the characteristics of the firm's board of directors and the earnings practices of management. The sample of this study included all listed corporations in Taiwan Financial Market. The study reached to several conclusions. The most important conclusion to this study is that the relationship between the ownership ratio of the board members and earnings management is negative. This conclusion means that the members of the board of directors can restrict the practices of management and this ability increases as the ratio of their ownership increases. Moreover, this study found that as the number of membership of the board of directors increases, the efficiency of controlling declines.

A study titled as "Equity incentives and Earnings Management", and prepared by Cheng and Warfield (2005), investigated the manipulation phenomenon in the companies that adopt a motivational plans. The objective of this study was to examine the relationship between income smoothing and equity incentives for managers in companies which adopt motivational plans for managers. The study based on a hypothesis that those managers who own high equity incentives and have a desire to own more stocks in the firm, practice the income smoothing phenomenon more than those who do not. Additional conclusion to this study is that the firms which their managers have the incentives to own more stocks tend to declare higher amount of sales. The study found that the declared profits of those companies reconcile the prior expectations of financial analysts, and in general, declare its income at higher values than the actual.

A study titled as "Compensation under Manipulation" and carried out by Camara and Henderson (2005) included a theory of the effect of stock price and earnings manipulation on the value to managers and the cost to firms of compensation grants whose vesting conditions are tied to both stock prices and earnings. This study investigated six manipulation strategies. One finding to this study was that while some of the most obvious manipulation strategies might increase the value of compensation to the manager and its cost to the firm, not all manipulation strategies are good for managers, nor all hurt the firm.

The Research Hypotheses

The current research examines the following two research hypotheses in their null form:

Ho_1: Investors in Amman Stock Exchange are not aware of the effects of incentives of manipulation on the management practices of earnings manipulation through their usage to the flexibility level which is available in the accounting standards.

Ho_2: Investors in Amman Stock Exchange do not have the ability to detect earnings manipulation that managements of firms practice through revealing different accounting amounts from their actual in the financial statements.

The Research Methodology

A survey using a three-page self administered questionnaire was conducted to investigate whether investors in Amman Stock Exchange are aware to the management's incentives to manipulate earnings, and to measure their abilities to detect the practices of earnings management and manipulation. Respondents in this study were asked to select one among five available choices: strongly agree, agree, neutral, disagree, and strongly disagree. The questionnaire was written and administered in Arabic. The translation process of the questionnaire was tested by independent back-translation from the Arabic to English and back again to Arabic, showing close correspondence of the terminology and meanings of items. Reliability tests using Cronbach's Alpha, showed that the questionnaire is highly reliable regarding the respondent's ability to detect earnings management (alpha = 0.79).

The total number of questionnaires administered to respondents was 176, of which 158 were received and 144 were usable, so the response rate was 82%. The sample was selected using the stratified sampling method, taking with consideration that each strata (industry) of investors should be enough represented in the sample. Before the selection process of respondents, the total number of investors in each stratum was collected directly from

Amman Stock Exchange itself, thereafter, the required number of respondents in each stratum was predetermined. A list of respondents' names was unavailable, so we targeted the predetermined number in the building of stock exchange through asking each one of them before we ask him to respond to our questionnaire, so we continue this process until the stratified sample was satisfied. Those respondents are investors in four industries in Amman Stock Exchange. The four industries are: manufacturing, banking, services, and insurance. Table 1 reveals more information about this issue.

Table 1: Sample Distribution

Industry	**No. of respondents**	**No. of Received Questionnaires**
Manufacturing	64	60
Service	56	48
Banking	32	26
Insurance	24	24
Total	**176**	**158**

Three sections are included in the questionnaire of this study. The first section includes items designed to gather demographical information about respondents. The items included in this section were developed to collect information about: sex, age, qualifications, major, and number of year-experience. The second section includes 14 items prepared to measure investors' awareness of the effect of manipulation incentives on the management practice of manipulation phenomenon. The third section includes 32 items prepared to measure investors' abilities to detect the manipulation practices of earnings manipulation in the items of financial statements.

Furthermore, the researchers carried out unstructured interviews to explore the respondents' opinions regarding their perceptions of the methods used by managements to manage earnings, and to know more about their abilities to detect earnings management through their considerations of the financial statements. The information collected through these unstructured interviews was not used in the analysis of this study or in hypothesis testing, because the purpose of these interviews was just to increase our information about Amman Stock Exchange, and to increase our understanding of its investment environment.

Descriptive Statistics

The majority of the respondents were male investors (87.5%) and just few of them were female investors (12.5%). This low ratio of female investors reflects the nature of investing activities in Jordan. Although females now are working in most industries together with males, the profession of investment is still practiced more by males.

About 35% of respondents were 30 years old or younger. The percentages of respondents within the age intervals 31-40, 41-50, 51-60 and older than 60 years, were 29%, 24%, 8% and 4%, respectively.

Most respondents (57%) have a bachelor degree, whereas 36% have higher degrees (high diploma 3%, master 29%, Ph. D. 4%). The remaining 7% have other qualifications. These percentages reveal that most respondents are well qualified, and are able to understand and answer well the items of the questionnaire.

Respondents with a degree in accounting represent 43% of the sample, while those who hold a degree in finance and banking are 32%. Few respondents have either a degree in business administration (8%) or a degree in economics (4%). Only 13% have other degrees. These percentages indicate the ability of most respondents to understand the items of the questionnaire, and to respond well to its items. Those who hold an accounting or finance and banking degree have a higher ability to consider, understand, and analyze the numbers of the financial statements better than others, because they have the knowledge about how, when, and why those statements are prepared and published to outside users.

About 29% of respondents have short experience (less than 6 years), 15% have 6 to 10 years of experience, while 56% have long experience (more than 10 years). These results support the credibility of this study, as most of the respondents have an enough experience to answer to the items of the questionnaire with high accuracy.

The statistical tests showed no significant relationship between investors' abilities in detecting manager's manipulation and their sex, age and majors. In contrast, such abilities were strongly related to qualification and experience.

Testing the First Hypothesis

The first hypothesis is that “Investors in Amman Stock Exchange are not aware of the effects of incentives of manipulation on the management practices of earnings manipulation through their usage to the flexibility level which is available in the accounting standards”.

As previously mentioned, the questionnaire included 14 items to measure the investors' awareness to those incentives. To determine the level of investors' awareness to the incentives of management to manipulate earnings, the arithmetic means and the standards deviations were computed to each item within this group of items and reported in Table 2.

Table 2: Investors' Awareness of Earnings' Manipulation

No.	Incentive	Arithmetic Mean	Standard Deviation
1	I know that the managers will receive rewards when the amount of declared net income is high.	4.20	0.76
2	I know that management has the desire to reduce the amount of income tax through reducing the amount of net income.	4.05	0.85
3	I know that management tries to declare less net income in order to avoid any increase in the salaries of employees.	3.51	1.14
4	I know that the management reduces its actual amount of income in order to avoid the improvements of work environment.	3.89	0.92
5	I know that management increases the income amount in order to increase the stock market value.	4.13	0.80
6	I know that the income amount is used by the board of directors to evaluate the performance of management.	3.98	0.93
7	I Know that management increases the amount of income in order to improve the reputation of the firm.	4.29	0.92
8	I know that sometimes, the firm increase or decrease the amount of income in order to make the amount of income close to the expectations of financial analysts.	3.96	0.88
9	I know that the firm may increase its amount of income in order to be more competitive.	4.20	0.89
10	I know that the firm changes its actual amount of income because the contracts with managers and employees are negotiable.	3.35	1.28
11	I know that the firm increases its amount of income in order to increase its accounting rate of return.	3.71	1.21
12	I know that the firm may increase or decrease the amount of its actual income to reduce its level of risk.	3.65	1.02
13	I know that the firm may change the amount of its actual income to affect the degree of its financial leverage.	3.69	1.07
14	The management may increase the amount of income to avoid its change	3.82	0.86

The results reveal that the investors' awareness level is somewhat high. Item number 7 “management increases income in order to enhance reputation of the firm" has the highest arithmetic mean, whereas item number 10 "management changes actual income due to negotiable contracts" has the least arithmetic mean. The arithmetic mean of all items included in this section is 3.88, while the standard deviation of the group as a whole is 0.97. These values are considered clear indicators for the awareness of investors to the incentives of management practice to manipulate earnings.

The t-test was used to examine the investors' awareness of the effect of earnings manipulation incentives on the practices of the management to manipulate the earnings. According to the 5-point Likert scale, the test value was $\mu \leq 3$, where μ is the average value of the five options available to respondents. Using the overall arithmetic mean of 3.88 with the standard deviation of 0.97, we have $t=10.89$, with an associated p-value < 0.0001. Based on these results, we reject the null hypothesis, and accept its alternative $\mu > 3$**.** This result means that investors in Amman Stock Exchange are aware of earnings manipulation that managements of firms practice to reveal different accounting numbers than their actual in the financial statements.

Testing the Second Hypothesis

The first hypothesis is that "Investors in Amman Stock Exchange do not have the ability to detect earnings manipulation that managements of firms practice through revealing different accounting amounts from their actual in the financial statements".

Table 3 reveals the investors' responses to the items used to measure there ability to detect manipulation. The arithmetic mean of most items included within this group is somewhat high. Just one item among these 32 has an arithmetic mean of less than 3. The arithmetic means of the other items within the group are higher than 3. Three items have an arithmetic means of more than 4. The highest mean belongs to item number 22 "comparison between sales and administrative expenses of the most recent period with those of the prior period". The arithmetic mean for the answers to this item is about 4.11 with a standard deviation of 0.97. The lowest arithmetic mean belongs to item number 11 "making certain that the management discloses the effects of the change in accounting principles on the numbers appearing in the financial statements". The arithmetic mean for item number 11 is 2.76 at a standard deviation of 1.16. The arithmetic mean of this group of items as a whole equals 3.65 with a standard deviation of 1.28. These values are good indicators for investors' abilities in detecting the practices of managements to the phenomenon of earnings manipulation.

Table 3: Investors' Ability to Detect Earnings' Manipulation

No.	The Procedures of Individual Investors	Arithmetic Mean	Standard Deviation
1	I consider and analyze the income statements and the financial reports of the firm.	3.43	1.16
2	I use the financial ratios in the analysis of the firm's financial statements.	3.67	1.29
3	I compare the financial statements of the firm and the financial statements of other firms.	3.08	1.24
4	I compare the recent financial statements of the firm with the prior financial statements of the same firm.	3.79	1.10
5	I compare the actual revenues of the most recent period with what was expected previously of revenues by the management.	3.26	1.23
6	I trace the implementation of the declared future plans in the periodic reports of the firm.	3.24	1.31
7	I compare the assets growth average of the recent period with the prior averages of assets growth.	3.72	1.17
8	I compare the accounting methods and policies used in the firm with accounting methods and policies used in other firms.	3.68	1.09
9	I trace the accounting methods and policies from period to period.	3.63	1.17
10	I make sure that the firm's management discloses the justifications of the change in the accounting policies and methods when that occurred.	3.42	1.02
11	I make every thing possible to be sure that the management of the firm discloses the effects of the change in accounting principles on the numbers of financial statements.	2.76	1.16
12	I compare the discretionary expenses of the firm among the periods.	3.76	1.18
13	I try to compare if some types of the firm's expenses are not a versed.	3.33	1.17
14	I revise the footnotes that disclosed with the financial statements of the firm.	3.99	1.00
15	I make what is possible to be sure that the average growth of sales is higher than the average growth of receivables in the firm.	3.97	1.10
16	I make sure that the growth of accounts receivables is higher than the growth of bad debt provision.	4.04	1.03
17	I yearly revise the internal auditor's report of the firm to be sure that the accounting numbers are correct and well represent the economic	3.57	1.09

	events of the firm.		
18	I revise the external auditors report to make good idea about the future of the firm.	3.88	1.07
19	I compare between the actual profits of the firm and the prior expectation of financial analysts about the firm's profits.	3.76	1.05
20	I make what is possible to be sure that the credit policy of the firm is stable from period to period by using The Days Sales in Receivables Ratio as a receivables indicator.	3.60	1.11
21	I analyze the financial information of the firm when the auditor's report is clear.	3.57	1.07
22	I compare between the sales and administrative expenses of the firm for the most recent periods with the same expenses of the prior period.	4.11	0.97
23	I make sure that the average growth ratio of the sales and administrative expenses to sales are relevant with the growth average during the prior periods.	3.57	1.09
24	I compare the total profit ratio of the most recent year with the prior periods.	3.79	1.06
25	I make sure that there is a correlation between the provisions and the related items in the balance sheet.	3.54	1.07
26	I make sure that the average growth of inventory is relevant to the average growth of sales.	3.74	1.05
27	I depend on the footnotes to be sure that the management did not change its used method in depreciating assets and in estimating the economic life and salvage value of those assets.	3.63	1.05
28	I compare the debt ratio of the most recent period with the same ratio of the prior periods.	3.99	0.90
29	I make sure that the debt average ratio for the most recent period to the average of the prior period is not higher than one or 100%.	3.85	0.96
30	I make sure that there are no significant differences between the income from operating transactions and the net cash flows from the financial transactions.	3.89	0.92
31	I make sure that the classifications of gains and losses from nonrecurring items that occurred during the accounting period are appropriate.	3.96	0.81
32	I make sure that the firm is adhering to the disclosure requirements of the financial statements.	4.07	0.74

The t-test was used to examine the effect of the procedures that investors practice to detect the phenomenon of manipulation in the items of financial statements. According to the 5-point Likert scale, the test value was $\mu \leq 3$, where μ is the average value of the five options available to respondents. Using the overall arithmetic mean of 3.65 with the standard deviation of 1.28, we have $t=6.09$, with an associated p-value < 0.0001. Based on these results, we reject the null hypothesis, and accept its alternative $\mu > 3$**.** This result means that investors in Amman Stock Exchange have a good ability to detect earnings manipulation that managements of firms practice to reveal different accounting numbers than their actual in the financial statements.

Conclusions

It should be noted that this study targeted only the individual investors in Amman Stock Exchange, and did not include any institutional investors. Because of that, the findings of this study can be generalized to individual investors, but not to institutional investors, in Amman Stock Exchange.

The research showed that individual investors in Amman Stock Exchange are aware of the effect of manipulation incentives on the practices of manipulation by management, so management uses the flexibility that is available in the accounting standards to affect the actual numbers of earnings. This result doesn't mean that managers always increase the actual number of earnings, since other managers may reduce the actual numbers. Increasing or decreasing the actual number of earnings depends on the nature of incentives. For example, if management looks for more rewards and remunerations, it will increase the actual number of earnings, but if management looks toward decreasing the amount of its income tax burden, it will go toward reducing the amount of earnings.

Another conclusion of this research is that investors in Amman Stock Exchange have the ability to detect most forms of manipulation. This ability is considered important to investors, because managers will avoid or at least reduce their practices of manipulation, when they know that investors may detect them. This conclusion doesn't mean that investors lacking this type of ability can't invest in the stock market, because nowadays, an investor can depend on the abilities of financial analysts to detect the manipulation when it is present in the financial statements.

Detecting manipulation is not a simple issue to investors, because manager will develop their methods of manipulation when they know that investors become familiar with these methods. Because of that, investors, from time to time, should try to develop there abilities of detecting manipulation. Such development of abilities can be achieved through training programs on financial analysis, which are available nowadays in most countries.

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هل المستثمرون في سوق عمان المالي قادرون على كشف التلاعب بالإيرادات؟

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ملخص البحث

تهدف هذه الدراسة إلى معرفة مدى وعي المستثمرين في سوق عمان المالية لتأثير دوافع تلاعب الإدارة بالأرباح على ممارسات تلك الإدارة في مجال التلاعب بإيرادات المنشأة, ومن أجل التعرف على قدرة أولئك المستثمرين على كشف التلاعب بالإيرادات الذي تمارسه الإدارة. ولقد تم تطوير استبانه تكونت من ثلاثة أجزاء, خصص الجزء الأول منها لجمع البيانات الديموغرافية, فيما كان الهدف من الجزء الثاني اختبار مدى وعي المستثمرين في سوق عمان المالية لتأثير دوافع التلاعب بالإيرادات على ممارسات التلاعب من جانب الإدارة، والهدف من الجزء الثالث قياس مدى قدرة تلك المجموعة من المستثمرين على كشف التلاعب الذي تمارسه إدارة المنشأة من خلال استغلال مستوى المرونة الذي يتوافر في المعايير المحاسبية. ولقد تم اختيار عينة الدراسة بطريقة العينة الطبقية وضمت 144 مستثمرا. وكشفت نتائج الدراسة عن توفر درجة من الوعي لدى المستثمرين لأثر دوافع التلاعب بالأرباح على ممارسات التلاعب من جانب الإدارة, وأن المستثمرين يمتلكون مقدرة معقولة على كشف ما تمارسه الإدارة من تلاعب في الإيرادات.