

THE MONITORING ROLE OF THE EXTERNAL OWNERSHIP AND DISCRETIONARY ACCRUALS

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Abstract

Prior studies have focused on the role that the institutional investors play to control managerial behaviours as one of the factors of the external ownership in the developed countries specifically. Nevertheless, scant attention has given to the external ownership role whether the institutional or the foreign investors to maintain the minority shareholder interest especially with the presence of the central agency problem in the emerging markets such as Jordan. Thus, this study argued the monitoring role of the external ownership factors can minimize the managerial opportunistic behaviours through examining the relationship between external ownership factors and earnings management. Earnings management proxies using the performance-adjusted discretionary accruals model (Kothari et al. 2005 model) by applying the cross-sectional method to determine model parameters for each industry in each year. In order to achieve objectives of this research a sample of 798 firm-observation of the Jordanian non-financial firms listed in ASE during the period 2009-2015 were collected. The random-effect GLS regression model is used after following the correct procedures of the panel data analysis to determine the appropriate model as stated by the results of Hausman and LM tests. Hence, the correcting robust standard errors estimates method was used since the data was suffered from the heteroscedasticity problem. The results show that the institutional ownership in Jordan plays a vital role in mitigating the opportunistic behaviours of managers. Likewise, the existence of foreign ownership in firms minimizes the level of earnings management practices. These support the hypotheses that the institutional and foreign investors are able to control the managers of the firm. Also, provide evidence about the similarities between the role of the foreign investors and the role of institutional investors since there is a shortage of the evidence about foreign investors role especially with earnings management.

Keywords: Earnings management (discretionary accruals), Institutional Ownership, Foreign Ownership, Amman stock exchange (ASE)

JEL Classification:G32, G34,M41

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1. INTRODUCTION

Under the ethical situations on the accounting, earnings management considered as one of the most critical issued that reduces the credibility of financial statements (Ronen & Yaari, 2008). However, firms in most of situations managed earnings through exploiting the accounting treatment in attempts to effect the vision of the financial statement users. Accounting principles contain different alternative treatments for the same situations that may exploit to be aggressive in order to provide faked financial information did not reflect reality (Goel, 2012; Muchoki, 2013). According to Healy and Wahlen (1999, p. 368) "Earnings management occurs when managers use judgment in financial reporting and in structuring transactions to alter financial reports to either mislead some stakeholders about the underlying economic performance of the company or to influence contractual outcomes that depend on reported accounting numbers". Earnings

management practises may attributed to different motivations such as affecting the contractual arrangement either compensations, incentives or lending contracts (Watts & Zimmerman, 1986; Watts & Zimmerman, 1990; Kuang, 2008; Rahman et al., 2013). Since, earnings could be managed in attempt to follow the market expectations, regulatory and/or tax motivations (Healy & Wahlen, 1999; Phillips et al., 2003; Fischer & Louis, 2008; Gong et al., 2008; Goel, 2012). Overall, the tincture of accounting accruals provide a discretion power to managers that inherent in the accounting treatment and choices. Thus, managers can exploit these powers to achieve their goals aggressively (Krishnan et al., 2011).

Meanwhile, determine the accounting choices and treatments is affected by the ownership structure to mitigate and monitored the managerial opportunistic behaviours such as earnings management practices (Njah & Jarbou, 2013). External ownership structure described as a convenient instrument minimize the opportunistic managerial behaviours then reduced the agency

costs (Henry, 2010). From the agency theory perspectives, managers could be more interesting to maximize their wealth through managed earnings opportunistically to exploit the interest of shareholders. Therefore, constrain managerial opportunistic behaviours can exist through the monitoring role of external ownership since its considered as alternates mechanisms to reduce the agency problem (McKnight & Weir, 2009; Henry, 2010). Agency problem could arise in the traditional way between managers and owners or in a central way between minority and majority shareholders (Shleifer & Vishny, 1997).

Furthermore, The external sources are considered as one of the most important financial providers for the companies, in the most cases, in exchange for a portion of the company's shares. Thus, external owners could be venture capitalists or other institutional investment forms, such as pension funds and investment banks (Fernández & Nieto, 2006; Henry, 2010; Johansson et al., 2013) or as foreign ownership, which its role is similar to the institutional investors (Dahlquist & Robertsson, 2001). frankly, prior studies distinguish institutional investors as on the type of shareholders from non-institutional shareholders such as individuals, families and other firms. This can be attributed fact that institutional investors need more than 50% to control activities of the company which makes them more attentive to empower the minority shareholders by using the available legal measures (Manzaneque et al., 2016). However, institutional or foreign investors take into consideration different indicators before making the investment decision such as the company growth, dividend pay-out policy, assets tangibility and good governance structure (Aggarwal et al., 2005; Al-Najjar, 2010). Therefore, institutional and foreign investors classified as one of the most vital external factors in firm's corporate governance where they act as responsible owner. Nevertheless, attracting investors either institutional, foreigners or individuals could be one of the earnings management motivations since such these practices are not easy to detection (HAW et al., 2005; Hsu & Koh, 2005).

In regards to the agency problem between minority and majority shareholders, companies in Arabian countries are affected by many internal influences such as family involvements, political ties and are mostly controlled by the majority shareholders (Chahine & Tohmé, 2009). Thus, in regards to protecting the interests of the minority shareholders, the question arise for the role that the external ownership factors play in mitigating and monitoring earnings management practices in the developing countries to protect these interests. Especially, with a weakness in regulations, accounting discloser, governance practice, and investors' protection. Herein, this study examines the effectiveness level of alternative monitoring mechanisms, i.e. institutional investor ownership and foreign investor ownership. These alternative monitoring mechanisms are referred to as external ownership patterns (Rajgopal et al., 1999; Johansson et al., 2013). Institutional investors are classified as one of the most important external monitoring mechanisms to protect the interests of the shareholder especially when agency problem shifted from traditional to central agency problem (Kumar &

Zattoni, 2014). Whilst the function of foreign ownership is to facilitate a strong monitoring role for the managers' behaviours (Randøy & Goel, 2003). In truth, there is a fluctuation in the results of previous studies in the role provided by the institutional investor ownership that are attributable either to the measurement method, the nature of the study sample or the characteristics of these types of shareholders (Bushee, 2001; Hsu & Koh, 2005; Charitou et al., 2007; Greco, 2012). On the other hand, the role that the foreign ownership plays did not gain enough attention in prior studies, especially in terms of its relationship with earnings management. Consequently, this study contributes to the literature by presenting empirical evidence about the effectiveness level of external ownership structure in Jordan. In attempt to determine the situation in Jordan such as one of the developing countries regarding the role of the institutional investors and/ or foreign investors is it mitigate or motivate earnings management practices, after determining the level of these practices in the non-financial listed firms in ASE for the industrial and services sectors.

The rest of the paper is organized as follow. Section two comprise an explanation for a literature and hypotheses development within the outline of the theoretical background; section 3 describes the sample and data collection process. Also, discusses the models and the variables measurement approach. Section 4, present the descriptive analysis, multivariate analysis and the main empirical findings. Finally, section 5 concludes the paper.

2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

The following sections provide relevant literature and construction of hypotheses.

2.1. The Institutional Ownership Role

Prior literature have shed-light on the institutional ownership concept and its role as a monitoring mechanism in reducing pressures for opportunistic behaviour. Gillan and Starks (2000) debated that it can be described the institutional investors as a professional shareholders whose having the capability to gather and mend information which is reflected positively on the company's performance. They play a pivotal role in limiting and monitoring the opportunistic managers' behaviours as a responsible owner, this type of investors looking for long term profit (Rock, 2015). Bushee (1998) investigated the role of the institutional investors in creating or reducing the corporate manager incentives to minimize the investment levels in research and development "R&D" to achieve earning goals on the short run. The results referred that when institutional ownership is high the managers become less susceptible to cut research and development "R&D" to invert an earnings decline. Moreover, Bos and Donker (2004) also referred to the ability of the institutional investors in detecting the management's opportunistic behaviours because they have the financial know-how and the ability to construe the information disclosed in the annual reports. Therefore, it is proposed that institutional

investors represent one of the most important factors that reduce the agency problem.

Actually, institutional investors are more able to effect management activities and performance directly through their ownership or indirectly through the ability to trade their share, as well as they can use various legal measures to empower minority shareholder. One of these measures is subjecting self-dealing transaction to so-called majority-of-minority vote (Hamdani & Yafeh, 2012). The potential benefits from the monitoring role by the institutional investors are more likely to exceed the cost incurred for these activities (Bhattacharya & Graham, 2009).

Consequently, it is prospective that the large institutional investors could constitute a significant pivotal role in the monitoring process as one of the firm's corporate governance mechanisms. Besides that, it is more active in influencing the firm's strategic policies (Cremers & Nair, 2005). In addition, through using a large comprehensive data in regards to the equity holding that collected from 27 countries. Ferreira and Matos (2008) examined the role of institutional investor throughout the world. He found that when the firms have higher proportions of foreigner ownership and independent institutions, the value of the firm become in high level.

In accordance with Ruiz-Mallorquí and Santana-Martín (2009), the effectiveness of corporate control can be enhanced through the institutional investors in two ways. Firstly, they look for information on the effectiveness of corporate governance inside the firms that they plan to invest in where they are stay away from firms whose managers are unshakable in their ways of management. Secondly, institutional investors often have significant stake in the company's shares, which necessitates them to have stronger motivation to monitor management. Likewise, Chahine and Tohmé (2009) referred that the institutional investors offer monitoring mechanisms for the protection of the minority shareholders' interests compared to other mechanisms of corporate governance. For instance, the percentage of outside directors and board size that may not have any effectiveness for the protection of the minority shareholders' interests when a company controlled by the largest shareholders.

Using a sample of 10,380 firm-year observation during 1980 to 1992 for data collected from the value line, COMPUSTAT, Spectrum and Centre for Research In Security prices (CRSP), Bushee (2001) examined the differential effects of active institutional investors on earnings management behaviour. He suggested that institutional investors with concentrated ownership are more interested in long-term performance, while, the institutional investors with low ownership who are more interested in short-term returns where this interest may lead to a high pressure on the management to achieve higher earnings. A study undertaken by Charitou et al. (2007) aimed to investigate the manager's behaviour with regards to earnings management during the distressed period. For the purposes of the study, data was collected from 859 U.S firms that declared bankruptcy over the last nineteen years started from 1986 to 2004. They found that the distressed firms with low level of

existence institutional investor in their ownership structure will have greater predisposition to manage earnings by decreasing income and vice versa.

Koh (2003) concluded that the level of institutional ownership is associated with earning management in the Australian firms, where the higher levels are negatively associated and vice versa. Moreover, in attempt to improve Koh (2003) study, Hsu and Koh (2005) examined the effectiveness of the institutional investors on the earnings management depending on the investment period. They found through testing both income increasing and decreasing earnings management that the institutional investors have dissimilar impacts on the level of earnings management according to the investment period. Institutional investors with short investment period are correlated with income increasing. This mean a positive association between the institutional investors with short investment period and earnings management, while the institutional investors with long investment period monitor this activity where it is negatively associated with earnings management. In Spanish, Osma and Noguera (2007) pointed out that the institutional directors have a vital role in monitoring the managerial opportunistic behaviours. In addition, Al-Fayoumi et al. (2010) noted that no correlation between institutional ownership and earning management in Jordan. Hence, it has an insignificant monitoring role.

Furthermore, In the European Economic area, Greco (2012) used a sample of 820 firm-quarter's observation over the period of 2006-2010 in European oil industry. For the purposes of this study two model of earning management were used where the first one is the Jones model (1991), and the second one is the DeFond and Jiambalvo (1994) model to consider only working capital accruals. His findings are compatible with short-run transient and long-run orientation views of institutional investors' shareholdings where the study showed a positive correlation within lower levels of institutional ownership and a negative correlation within higher. Based on data collected from S&P500, Mid-Cap400 and Small-Cap600 companies for the period during 2001-2004. Hadani et al. (2011) investigate the relationship between institutional investors and practises of earnings management in USA. They found a negative association between the institutional investors and the discretionary accruals.

Moreover, Muchoki (2013) for Nairobi listed firms and González and García-Meca (2014) for non-financial firms listed Latin America pointed out a negative and significant correlation coefficient between institutional investors and the level of earnings management. Chung et al. (2002) who applied the modified Jones (1991) model to measure earnings management and measured the institutional ownership as a dummy variable. If the variable's value is above the cross-sectional median, it takes the value of one and zero otherwise. Their results show that there is no significant association between institutional ownership and earnings management.

Overall, the institutional investors with a significant ownership stake supposed to be engaged with a vital role in minimizing the opportunistic behaviour like earnings management. Nevertheless,

this seemingly cannot occur when the proportion of the institutional ownership stake becomes lower. This study will be followed Liu and Peng (2006) and Greco (2012) to measure the institutional ownership by computing the average percent of shares outstanding that are held by institutional shareholders such as insurance companies, investment companies, pension funds, social security and other financial institutions including banks (Koh, 2003).

H1: There is a significant relationship between the higher institutional ownership and earnings management.

2.2. The Foreign Ownership Role

Foreign ownership refers to the value of foreigner investments, either directly or indirectly in the domestic market and usually involves transferring financial capital as well as managerial and accounting skills. This in turn helpfully influences economies, especially in the emerging markets where there is a shortage in capital and high unemployment rate (Moosa, 2002). Nevertheless, foreign investors have firm-specific motivations.

However, moving from the emerging market to the global competition can be achieved through changing the accelerating pace in the competitive environment, which leads to the increase in the uncertainty level as a result of increasing the expectations of customer. Thus, the development of strategies becomes one of the key success factors that will distinguish the institution from its competitors. This will then stimulate foreign investment (Feurer & Chaharbaghi, 1995). Actually, foreign investors are looking to invest in firms with good corporate governance structures (Aggarwal et al., 2005; Li, 2005). Lieberman and Kirkness (1998) argued that the foreign investors have better experience and are equipped in selecting companies with effective corporate governance where they can invest, as they are in most cases more sophisticated than their local counterpart's investors, especially in respect to their investment standards and finances. Therefore, it can be classified that foreign ownership is one of the effective monitoring mechanisms which is likely to complement the governance structure of the firm because its role is similar to the institutional investors (Dahlquist & Robertsson, 2001). Leuz et al. (2010) noted that firms will improve their corporate governance in order to endeavour provide additional funding through enticing the foreigner investors in the desired manner.

Randøy and Goel (2003) mentioned that the function of foreign ownership is to facilitate a strong monitoring role for managers' behavior. Plus, the foreign institutional investors play an important role in reducing the firm's cost of capital where they monitor the managerial behaviors vigorously (Randøy et al., 2001). Previous studies proposed that the presence of foreign investors is one of the reasons that led to reducing agency costs (Stulz, 1999). This is more relevant in small businesses and the emerging markets with minor investor communities. Based on that, Abor and Biekpe (2007) found that the existence of foreign ownership in the small countries will reduce the agency costs. They

also suggested that the companies with higher foreign ownership have a tendency to establish certain controlling actions, such as frequent reporting systems and auditing. Thus, this type of ownership is likely to decrease agency costs, which in turn can lead to a minimization of the opportunistic behaviors and maximization the firm's performance.

Ben-Nasr et al. (2009) noted that the existence of foreign investment in the firms has been associated with the best monitoring roles that decrease the personal benefits of control. Hence, they found that foreign ownership has been associated with conservatism accounting in reporting earnings changes, thus less persistence of negative earnings transform. In other words, it can be argued that foreign investment could also encourage the demand for higher levels of corporate governance and corporate transparency. According to this vision, Sarkar et al. (2008) applied the modified Jones model, through using the absolute value of discretionary accruals as a proxy of earnings management to examine the effectiveness of foreign institutional ownership in reducing earnings management based on data collected from a large 500 listed firms in India over the period of 2003-2004. They pointed out the insignificant association between foreign institutional investors and practices level of earnings management.

A study undertaken by Ali et al. (2010) for a sample of 1,001 observations from Malaysian listed firms for the period of 2002 through 2003 examined the relationship between foreign ownership and working capital accruals, that defined by applying the Jones model. Based on the assumption that foreign ownership structure plays an important role in monitoring a firm's activities and mitigating the opportunistic behaviors, they found similar evidence to Sarkar et al. (2008) where foreign investors are not effective in mitigating the opportunistic earnings management practice whilst this study used the firm size as a moderating variable.

Based on the sample of 5,189 firm-year observation collected from all companies listed in China over the period from 1998-2003, Firth et al. (2007) examined the effectiveness of ownership structure on the informativeness of earnings. Their findings concluded that foreign ownership is active in monitoring and mitigating the managerial opportunistic behaviors where they noted a negative coefficient. This means the firms with foreign ownership have lower earnings management and more earnings informativeness, especially when firms have a higher percentage of tradable shares. Subsequently, they noted that the existence of foreign ownership guarantees pressures on firm's management to enhance the financial reporting quality.

In sharp contrast, HAW et al. (2005) considered foreign ownership as a motivation for opportunistic behaviors in China, contrary to the fundamental belief that foreign ownership plays a mitigating role as a monitoring mechanism. They argued that the opportunistic behaviors in Chinese listed firms might differ from those in western countries. In China, the government ownership is concentrated where the government owns a significant share of the listed firms. Therefore, managers are appointed in most cases, through the state and seldom

obtained compensation based on firm performance. Moreover, firms in China generally are incapable to increase capital through offering seasoned shares or issuing corporate bonds due to restrictions of securities regulations where the initial public offering (IPO) and rights issued are considered as the primary sources of increasing capital. It is worth mentioning that this study was applied under the 1996-1998 Chinese security regulations, which is a unique period where the ROA was more than 10 percent over the research period. Consequently, HAW et al. (2005) found and discussed that managers used earnings management "income-increasing accounting accruals" to meet targets of regulatory returns on equity "ROE" for the right offering of stocks.

Actually, the effects of the ownership structure in developing countries is different than what they are in the developed countries where the common denominator in the developing countries is the existence of foreign shareholders (Douma et al., 2003). In the Arab region, Klai and Omri (2011) examined the association between corporate governance and the quality of financial reporting, through collecting data from 22 non-financial firms during the period of 1997 to 2007 on the Tunis Stock Exchange. They noted a significant negative correlation between foreign ownership and the quality of financial reporting. In contrast, Mohandi and Odeh (2010) found a positive correlation between foreign ownership and the quality of financial reporting in Jordanian listed firms. Whilst, Zureigat et al. (2014) pointed out that the foreign ownership over the Jordanian companies' sample have been insignificantly and negatively associated with going concern evaluation. However, numerous of studies pointed out that the existence of foreign investors are positively associated with companies performance e.g.: Ghazali (2010); Gurbuz and Aybars (2010); Aydin et al. (2007).

Overall, it can be observed a rarity of studies that interested in the association between foreign investors and managerial opportunistic behaviors in previous studies. Thus, it is important to highlight and consider further reflections on the role played by foreign ownership in either constraining and monitoring or motivating the managerial opportunistic behaviors. Actually, the Jordanian environment can be considered as an appropriate climate to attract foreign investments where Jordan adopts an open economic and financial policies in the wake of the privatization process where the foreigner investor, whether Arab or non-Arab, can invest in most of firms listed on the ASE (Naser & Nuseibeh, 2008). On the other hand, both portfolio and foreign direct investments are vital sources of capital for companies listed on the ASE. This seemed clear where the proportion of foreign shareholders in listed firms on the ASE at the end of 2014 reached about 48.8% of the total market capitalization of stock exchange (ASE, 2014) compared to 20% in 2002 (ASE, 2002), which is originally a high percentage compared to previous and other surrounding countries. Furthermore, this proportion can be attributed to the privatization project that Jordan adopt for all sectors where foreign investments are associated with restructuring and improving of

governance of firms that have been privatized recently. For example, Frydman et al. (1999) discussed that foreign investors are characterized by having managerial know-how, financial resources and extra expertise of corporate governance. Thus, they have more advantages than other owners in mitigating and mentoring managerial behavior. They pointed out a positive relationship between foreign ownership and the performance of companies after privatization in Europe. All of these make ASE an appropriate case for making further examinations about the foreign ownership role. However, following Ghazali (2010) and Firth et al. (2007), this study will be measuring foreign ownership as a proportion of shares outstanding that held by foreign investors. Thus the following hypothesis is proposed:

H2: There is a significant relationship between the higher foreign ownership and earnings management.

3. RESEARCH DESIGN

3.1. Sample and Data Collection

This study used the panel data analysis method. Panel data is a combining data that include the time-series and cross-sectional data (Yaffee, 2003; Hsiao, 2014). However, this study is limited to investigate the role of external ownership factors on the earnings management practices for the non-financial firms listed in ASE. Data collected for the firms listed in the industrial and services sectors over the period from 2009 - 2015. The number of non-financial firms that listed in ASE at the end of 2015 was 118 firms. Anyway, the sample of this study is balanced since the all firms with missing data are omitted from the study sample. The final sample composed 114 firms for a seven year period, thus, 798 observations was included in the estimation model.

3.1.1. Calculation Earnings Management Proxy

This study used the discretionary accruals as a proxy of earnings management by applied the Kothari et al. (2005) model "performance adjusted discretionary accruals" under the total accrual approach. Total accruals companied each of the discretionary and non-discretionary accruals (Healy & Wahlen, 1999). Following Dechow et al. (1995) and Jones (1991) total accruals computed by using the cash flow approach as:

$$TAC_{it} = NI_{it} - CFO_{it} \quad (1)$$

where:

NI_{it} - Net income for firm (i) in year (t);
 CFO_{it} - Operating cash flow for firm (i) in year (t).

In regards to the non-discretionary accruals we use the across-sectional technique of Kothari et al. (2005) model to compute the parameters regressions that used in the non-discretionary accruals model for each industry in each year as:

$$\frac{TAC_{it}}{A_{it-1}} = \alpha_0 + \alpha_1 \frac{1}{A_{it-1}} + \alpha_2 \frac{\Delta Rev_{it} - \Delta Rec_{it}}{A_{it-1}} + \alpha_3 \frac{PPE_{it}}{A_{it-1}} + \alpha_4 ROA_{it-1} + \varepsilon_{it} \quad (2)$$

where:

TAC_{it} - total accruals for firm (i) in year (t); A_{it-1} - total assets for the firm (i) at in year (t-1); α_0 - intercept; ΔRev_{it} - change in revenue for the firm(i) in year (t); ΔRec_{it} - change in account receivables for the firm(i) in year (t); PPE_{it} - total property, plant and

equipment for company (i) in year (t); ROA_{it-1} - rate of return on assets for firm (i) at the end of year (t-1); $\alpha_1, \alpha_2, \alpha_3$ - estimated parameters; ε_{it} - error term.

Using the estimate parameters in the model 2 to compute the non-discretionary accruals for each firm in each year as:

$$\frac{NDAC_{it}}{A_{it-1}} = \bar{\alpha}_1 \frac{1}{A_{it-1}} + \bar{\alpha}_2 \frac{\Delta Rev_{it} - \Delta Rec_{it}}{A_{it-1}} + \bar{\alpha}_3 \frac{PPE_{it}}{A_{it-1}} + \bar{\alpha}_4 ROA_{it-1} \quad (3)$$

where:

$NDAC_{it}$ - Non-discretionary accruals for firm (i) in year (t); $\bar{\alpha}_1, \bar{\alpha}_2, \bar{\alpha}_3, \bar{\alpha}_4$ - estimated parameters from the second equation.

Finally discretionary accruals (DAC) can be defined as:

$$DAC_{it} = TAC_{it} - NDAC_{it} \quad (4)$$

Following prior studies the absolute value of DAC_{it} used as a proxy of earnings management after compute its value.

3.1.2. Regression Model

The aim of this study is to examine the association between the external ownership structure factors and earnings management practices in non-financial Jordanian firms. This association had been evaluated after controlling for the effect of some relevant variables. Following the impact of firm size (FS) is controlled by using the natural logarithm of the firm total assets (Koh, 2003). The evidence for the firms with high level of debt is varied between some

researcher claim that the firms is less likely to practice earnings management when the level of debt is high (Abed et al., 2012). While, some other claim that the high level of debt become as incentives for the firms to managed earnings (Bartov et al., 2000). Thus, the impact of the financial leverage (F.leV) controlled in this study as a ratio computed by divided the total liabilities to the total assets. Because of the role that the external auditor could play in mitigating the opportunistic behaviours the type of audit firm (T.aud) is controlled also as a dummy variable take a value of one if the external auditor for the firm is one of the big4 audit companies (Sukeecheep et al., 2013). In addition, we include the impact of firm performance to be controlled by used the cash flow from operation (CF.o) as an indication of the firm performance. Finally, this study controls the sector type (S.ty) as a dummy variable take a value of one if the firm in listed under the industrial sector and zero if it's listed under the service sector.

The following model illustrates the association between earnings management and external ownership factors within existence of the control variables:

$$EM_{it} = \beta_0 + \beta_1 INSOW_{it} + \beta_2 FOROW_{it} + \beta_3 FS_{it} + \beta_4 F.LeV_{it} + \beta_5 T.aud_{it} + \beta_6 CF.o_{it} + \beta_7 S.ty_{it} + \varepsilon_{it} \quad (5)$$

where:

EM_{it} - the absolute value of discretionary accruals as a proxy of earnings management for the firm (i) in year (t); $INSOW_{it}$ - the proportion of the Institutional Ownership for the firm (i) in year (t); $FOROW_{it}$ - the proportion of the Foreign Ownership for the firm (i) in year (t); FS_{it} - Firm Size for the firm (i) in year (t); $F.LeV_{it}$ - Financial Leverage for the firm (i) in year (t); $T.aud_{it}$ - Audit firm for the firm (i) in year (t); $CF.o_{it}$ - Cash flow from operation for the firm (i) in year (t); $S.ty_{it}$ - sector type for the firm (i) in year (t).

between 0.0001 and 2.158 with 0.133 on average. The average number of shares held by institutional investors was 18.9% in the industrial and service sector which is lower than the value reported by Al-Fayoumi et al. (2010). This difference can be attributed to the sample size or the study period since Al-Fayoumi et al. (2010) collected data from the industrial listed firms in ASE over the period 2001 to 2005. While, shares held by foreign investors was 16.7% on average which is higher than the value reported by Zureigat et al. (2014) who obtained the average of foreign ownership at 8.92% for the non-financial firms in Jordan for the period from 2010 to 2011. In regards to the control variables, the natural logarithm of total assets for the firms listed in ASE was ranged between 21.31 and 13.06 with 16.94 on average. The financial leverage ratio indicated that there are some firms completely depends on the liabilities since the Financial leverage was 35.09% on average and ranged between 227.5% and zero. On the other hand, 35.71% of the firms listed in ASE has been audited its financial statements by one of the big4 audit firms. Since 52.63% of the study sample represents firms listed in the industrial sector. Finally, the mean of

4. EMPIRICAL RESULTS

4.1. Descriptive Analysis

The results of the descriptive statistics for the study variables are provided in table1. The absolute value of the discretionary accruals was ranged between 0.0001 and 1.463 since the average was 0.109. This, result consist with the result of prior studies in Jordan such as Abed et al. (2012) whose found the absolute value of discretionary accruals was ranged

the cash flow from operations ratio was 4.65% and ranged between 59.9% as a maximum value and - 217.1%. The huge negative value of the CF.o due to the losses from operations that reported by firms.

Table 1. Descriptive Statistics

Variables Symbol	Obs.	Mean	Median	Std. Dev.	Minimum	Maximum
Continuous Variables						
EM	798	0.1090571	0.0706803	0.1360086	0.0001029	1.462804
INsOW	798	0.1829416	0.09634	0.223668	0	0.95251
FOrOW	798	0.1673222	0.06105	0.2357054	0	0.98758
FS	798	16.9455	16.91328	1.430832	13.06016	21.31029
F.LeV	798	0.350982	0.305089	0.2577153	0	2.27528
CF.o	798	0.04649	0.0463276	0.1605956	-2.170709	0.5991343
Categorical Variables						
	Obs	0			1	
T.aud	798		513 (64.29%)		285 (35.71%)	
S.ty	798		378 (47.37%)		420 (52.63%)	

EM - the absolute value of DAC_{it}; INsOW_{it} - the proportion of the Institutional Ownership; FOrOW_{it} - Foreign Ownership; FS_{it} - Firm Size; F.LeV_{it} - Financial Leverage; T.aud - Audit firm; CF.o_{it} - Cash flow from operation; S.ty_{it} - sector type.
Source: Authors' computation using STATA 13.0

Meanwhile, this study used the two indicators to check the multicollinearity problem. The first one is the Pearson correlation coefficients which indicate for the existing of the multicollinearity problem when the correlation coefficient is more than 0.8 between two variables (Gujarati, 2004). The second one is the variance inflation factor (VIF) and tolerance factor (1/VIF) as an additional step confirming with panel data assumptions. The multicollinearity problem exist when the value of the

variance inflation factor is higher than 10 and the value of tolerance factor is lower than 10 present (Gujarati, 2004; Baltagi, 2008). However, in table 2, the result of the Pearson correlation indicate there is no correlation exceed 0.8 between any of the study variables. In return, the variance inflation factor for all variables is lower than 10 and higher than 10% for the tolerance factor. Therefore, the multicollinearity problem does not exist in the study sample.

Table 2. Pearson correlation coefficients and the variance inflation factor

Variables Symbol	EM	INsOW	FOrOW	FS	F.LeV	T.aud	CF.o	S.ty
EM	1.0000							
INsOW	-0.2588	1.0000						
FOrOW	-0.2265	0.2192	1.0000					
FS	-0.1551	0.1523	0.2643	1.0000				
F.LeV	-0.1123	0.0122	0.0028	0.2579	1.0000			
T.aud	-0.2642	0.2677	0.3291	0.3706	0.0792	1.0000		
CF.o	-0.0530	0.0722	0.0143	0.1878	-0.0004	0.0194	1.0000	
S.ty	-0.0925	0.0086	0.0201	-0.1804	0.0451	-0.1309	0.0193	1.0000
Variables Symbol		VIF			1/VIF (Tolerance)			
INsOW		1.11			0.902582			
FOrOW		1.19			0.839657			
FS		1.38			0.726505			
F.LeV		1.09			0.915592			
T.aud		1.31			0.765914			
CF.o		1.05			0.951587			
S.ty		1.06			0.939443			
Mean VIF		1.17						

Source: Authors' computation using STATA 13.0

4.2. Multivariate analysis

Consistence with the assumptions of the panel data analysis, this study gone through two stages to determine the appropriate regression model for the study. The first stage makes a comparison between the fixed effect regression model (fe.) and the random effect regression model (re.) through using the Hausman test. The second stage used if the random effect is appropriate more than the fixed effect by make a comparison between the random effect regression model (re) and the pooled OLS through using the Breusch-Pagan Lagrange multiplier test (LM) (Dougherty, 2007; Gujarati & Porter, 2009). However, each of Hausman test and LM test are indicate that the random effect is the most appropriate to be used in this study. Since the

Hausman test results is higher than the significant level at 0.05 and the results of LM test is significant at 0.05 thus this study used the random-effect GLS regression to analyses data (see the appendix).

In regards to the heteroscedasticity and the autocorrelation problems, this study used the Modified Wald Test for GroupWise Heteroscedasticity (MWT) and the Wooldridge Test (WT) for autocorrelation. The result of the heteroscedasticity test was $1.6e^{+0.07}$ and significant at 0.01 level while F-value of the autocorrelation test was 0.004 and insignificant (see the appendix). These results indicate that the regression model in this study suffered from the heteroscedasticity problem while autocorrelation problem does not exist. Therefore, in order to avoid a heteroscedasticity problem the correcting robust

standard errors estimates for the random-effect GLS regression was used (Hoechle, 2007).

Table 3 present the result of the robust random-effect GLS regression model. The model as hole is fit and significant at 0.01 (Wald chi2 =77.17***). While, the explanatory power of the model was 13.94% (Overall R²= 0.1394) which indicate that 13.94% of the variation in the dependent variable explained by the independent and control variables used in the model. The consistent of the study model is significant at 0.05 and positive.

The result of the GLS regression indicates that each external ownership factors either the

institutional ownership or the foreign ownership are negatively and significantly associated with earnings management practices. These results are consistent with the study hypotheses H1&2, indicating that there is a significant relationship between a higher institutional ownership and/ or higher foreign ownership with earnings management practices level. These results recommend that firms with higher institutional ownership and/ or higher foreign ownership are less likely to engage in earnings management practices. Thus, the external ownership factors considered as a monitoring role in the emerging environments such as Jordan.

Table 3. The result of the robust random-effect GLS regression

Variables	$EM_i = \beta_0 + \beta_1 INsOW_i + \beta_2 FOrOW_i + \beta_3 FS_i + \beta_4 F.LeV_i + \beta_5 T.aud + \beta_6 CF.o_i + \beta_7 S.ty_i + \varepsilon_i$		
	Coefficients	Z(t-static)	P>Z
INsOW	-0.097231	-4.22	0.000
FOrOW	-0.0739251	-2.62	0.009
FS	-0.0060142	-0.72	0.474
F.LeV	-0.0175992	-0.68	0.494
T.aud	-0.0386759	-2.48	0.013
CF.o	-0.0386759	-0.94	0.345
S.ty	-0.0307583	-2.09	0.037
R-sq between	0.2806		
R-sq overall	0.1394		
Wald Chi2(F-value)	77.17***		

*, **, ***= p-value < .10, .05, .001; EM_i = the absolute value of DAC_i; INsOW_i = the proportion of the Institutional Ownership. FOrOW_i = Foreign Ownership. FS_i = Firm Size. F.LeV_i = Financial Leverage. T.aud = Audit firm CF.o_i = Cash flow from operation. S.ty_i = sector type

Source: Authors' computation using STATA 13.0

In conclusion, the result of the institutional ownership supports the vast majority of the prior studies that discussed the role of institutional ownership as a monitoring mechanism in reducing opportunistic behaviours of managers such as (Bushee, 1998; Bos & Donker, 2004; Hamdani & Yafeh, 2012; Rock, 2015). On the other hand, the result of the foreign ownership supports the Abor and Biekpe (2007) perspective who argued that the companies with higher foreign ownership have a tendency to establish certain controlling actions, such as frequent reporting systems and auditing. Thus, this type of ownership is likely to decrease agency costs, which in turn can lead to minimization of the opportunistic behaviours and maximize the firm's performance. Anyway, existence the institutional ownership and/ or foreign ownership seems to play a pivotal role in mitigating and monitoring the opportunistic behaviours such earnings management in Jordanian listed firms.

Looking at the control variables, firm size (FE) present insignificant relationship with earnings management practices which indicate that firms size is not sufficient enough to be lead firms to engage with the earnings management. Likewise, the financial leverage (F.LeV) and cash flow from operation (CF.o) both have an insignificant relationship with earnings management practices. On the contrary, the type of the audit firms (T.aud) have a significant negative association with earnings management. This result indicates that firms become less likely to managed its earnings when the external auditor is one of the big4. Furthermore, the

results refer to the significant negative relationship exists between the sector type and the earnings management proxy. This refers that firms in the service sector are practice earnings management more than firms in the industrial sector. In the other words, the service sector in ASE practices earnings management in higher level comparing with the industrial sector.

5. CONCLUSION

This study used a panel data analysis methods to examine the relationship between the external ownership factors and earnings management for the non-financial firms listed in ASE during the period from 2009-2015. Overall, findings of the study provide evidence that firms with a higher level of institutional ownership and/or foreign ownership are associated with high level of effective monitoring to minimize the practice of earnings management. This concludes that either a higher existence of institutional ownership and/ or foreign ownership is liable to deter managers for engaging in the manipulate earnings. Moreover, the finding provides evidence that the role of the foreign ownership is similar to the institutional ownership role. Since both of these type of the external ownership have a high level of financial experience, able to effect the activities of managers and more active in influencing the firms' strategic policy. Thus, the reported earnings quality on firms with a high proportion of institutional ownership and/or foreign ownership is likely to be high.

In regards to the control variables, the results indicates that firm size, the financial leverage of the firms and the cash flow from operations are not significantly affecting the earnings management practices. However, type of audit firms appears to be effect earnings management practices significantly and service firms are more engaged in earnings management than the industrial firms in the ASE.

However, the results of this study are restricted to some of the limitations. For instance, the validity of these results counts on the discretionary accruals that computed by using the performance-adjusted discretionary accruals model as a proxy for earnings management. Although, the validity of these result also is count on the appropriate estimation of the institutional ownership and the foreign ownership on the firm. On the other hand, our results focused on the existing of the external ownership and it's monitoring role to minimize the opportunistic behaviours of managers but neglect and does not explore the situations that conflict of interest could exist between large shareholders, thus, it can be pointed out to the voting right for the institutional investors and the foreign investors appears to be an operative measurement for these variables in future research.

Regardless of the inherent limitations, the results of this study provide more understandable for the earnings management practices level in Jordan which in turn can assist current and potential investors to determine the quality of financial statement and identify the investment situations in ASE. As well as, its provide envisage about the investment size of the foreign and institutional investors in the industrial and service sectors of ASE. This finding can be generalized on the emerging markets such as Jordan. In this sense, future research can contribute to investigate the monitoring role of the external ownership to minimize the real earnings management practises under the abnormal cash flow from operation, discretionary expenses and the production costs. Also, future research can contribute to investigate the role of the foreign ownership in improving the corporate governance practises in the developing countries. Finally, investigate the role of the institutional investor or / and the foreign investors as a board member in mitigating the earnings management practises either in financial or in non-financial firms.

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APPENDIX

Appendix 1. Breusch-Pagan Lagrange multiplier test (LM)

Breusch and Pagan Lagrangian multiplier test for random effects

$$EM[ID,t] = Xb + u[ID] + e[ID,t]$$

Estimated results:

	Var	sd = sqrt(Var)
EM	.0184983	.1360086
e	.010885	.1043314
u	.0052632	.0725478

Test: Var(u) = 0

chibar2(01) = 223.43
Prob > chibar2 = 0.0000

Appendix 2. Hausman test

	Coefficients		(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
	(b) fixed	(B) random		
INsOW	-.030684	-.097231	.066547	.0526784
FOrOW	-.0664787	-.0739251	.0074463	.0434735
FS	-.016021	-.0060142	-.0100067	.0149724
FLeV	.0249774	-.0175992	.0425766	.0250418
Taud	-.004521	-.0334494	.0289283	.0152321
CFO	-.0440448	-.0386759	-.0053689	.0083593

b = consistent under Ho and Ha; obtained from xtreg
B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic

chi2(6) = (b-B)'[(V_b-V_B)^(-1)](b-B)
= 9.40
Prob>chi2 = 0.1522

Appendix 3. The Modified Wald Test for GroupWise Heteroscedasticity (MWT)

Modified Wald test for groupwise heteroskedasticity
in fixed effect regression model

H0: $\sigma(i)^2 = \sigma^2$ for all i

chi2 (114) = 1.6e+07
Prob>chi2 = 0.0000

Appendix 4. The Wooldridge Test (WT) for autocorrelation

Wooldridge test for autocorrelation in panel data

H0: no first-order autocorrelation
F(1, 113) = 0.004
Prob > F = 0.9527

Appendix 5. The robust Random-effect GLS regression

Random-effects GLS regression Number of obs = 798
Group variable: ID Number of groups = 114
R-sq: within = 0.0052 Obs per group: min = 7
 between = 0.2806 avg = 7.0
 overall = 0.1394 max = 7
corr(u_i, X) = 0 (assumed) Wald chi2(7) = 77.17
 Prob > chi2 = 0.0000

(Std. Err. adjusted for 114 clusters in ID)

EM	Coef.	Robust Std. Err.	z	P> z	[95% Conf. Interval]	
INsOW	-.097231	.0230577	-4.22	0.000	-.1424232	-.0520387
FOrOW	-.0739251	.0282256	-2.62	0.009	-.1292462	-.018604
FS	-.0060142	.0084028	-0.72	0.474	-.0224834	.0104549
FLeV	-.0175992	.0257334	-0.68	0.494	-.0680357	.0328373
Taud	-.0334494	.0134607	-2.48	0.013	-.0598319	-.0070668
CFO	-.0386759	.040947	-0.94	0.345	-.1189305	.0415787
Sty	-.0307583	.0147442	-2.09	0.037	-.0596563	-.0018602
_cons	.2772382	.1293494	2.14	0.032	.023718	.5307584
sigma_u	.07254785					
sigma_e	.10433143					
rho	.32592968					(fraction of variance due to u_i)