THE IMPACTS OF FREE CASH SURPLUS FLOWS, AUDIT QUALITY AND OWNERSHIP ON EARNINGS MANAGEMENT: THE JORDAN CASE

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Abstract

This paper primarily aims to identify and evaluate the effect of Free Cash Surplus flows, Audit Quality and the ownership on Earnings Management. The study shows that financial distress has a significant impact on earnings management for samples on the Jordanian listed companies during (2003-2016). The Cash Flow Statement provides information on the flow of cash in and out of the organization over a specific period. It shows how an organization spends its money (cash outflows) as well as the source of the money (cash inflows). The Cash Flow Statement – additionally alluded to as the statement of cash flows or fund flows, which is one of the financial statements that is often utilized in the measurement of an organization's financial performance and overall wellbeing. The study also investigates the prevalence of both accrual and base earnings management for the empirical corporate finance which claims that the better corporate governance constraints between earnings management and the relation of high free-cash -flows firms the more will the increase will be at the income management and the earnings management. Although, the research has addressed the issues of earnings management and the real activities handling; this research paper put these two issues together. The analysis provides a mixed support when using different earnings management detection models. The findings of this study could serve as a guideline to a proper and understanding of earnings management to public listed companies, regulators, and various stakeholders

Keywords: Earnings Management, Surplus Free Cash Flows, Accruals

1. INTRODUCTION & BACKGROUND

This study attempts to examine the empirical relationship between high free-cash -flows firms and the income-increasing management and earnings management, used as a sample of the Jordanian listed industrial organizations during (2003-2016).

The earnings predictability had been the source for many researches that investigated the integrity of accountant data. Earnings released information which is considered to be of high quality to investors if it enables them to anticipate a particular firms' performance and better predict its future prospects, where cash flow information have more interest when it comes to seeking a high quality of earnings numbers (Cheng et al., 2013).

The aim of this paper is to investigate the association between high free-cash -flows firms with income-increasing management and income-increasing earnings and to carefully examine whether the audit quality has any or some effects on the income increasing management and the surplus free cash flows (SFCF hereinafter).

The focus of the previous studies was on USA and Europe data. USA data (1984-1996) investigate the association between high free-cash-flows firms with low-growth and income-increasing earnings management. The finding of Chung Alabama (2005), is that companies with low growth and high free cash flow, amends the low and negative earnings, using income-increasing discretionary accruals.

Free cash flow in excess, as well as low-development opportunities, are somewhat related to organizational issues. To begin with, we examine whether free cash flow administrators especially in low development organizations, exercise income-increasing earning management techniques. Second, we ruminate on the impact of a national social viewpoint on profit management and on the relationship between free cash flow in low development organizations and earnings management. Third, we examine the impact of audit/review quality on earnings management and on the relationship between free-cash-flow in low development organizations and earnings management.

This study gives valuable data on the relationship between positive free cash and earnings management. It scientifically records the impact of social contrasts and audit quality on the organization administrators' accounting decision in dealing with their free-cash-flow in the low development organization.

Previous researches examined the various factors affecting earnings management globally, with a greater focus on legal establishments and investor/investment protection, however, this study places a critical emphasis on the adequacy of external monitoring by professional auditors working in various nations in alleviating administrative advantage in "free-cash-flow, low development" organizations.

2. LITERATURE REVIEW

Companies' executives have adopted various incentives to manage their entities' financial performances. They did so, to obtain more compensation, which is linked to accrual earnings that benefit the sales of shares particularly when the stock markets react positively to high accrual. In literature, discretionary accruals and altering the timing of real transaction (e.g. advertising and research & development activities), is considered the best techniques used by executives to manage earnings (Jones, 1991; Dechow et al., 1995; Dechow & Dichev, 2002; Kothari et al., 2005; Cohen et al., 2008; Cohen & Zarowin, 2010).

Ronen and Yaari (2010, p. 27), defined earnings management as "the collection of managerial decisions, such that its result is not reported to the true short-term, value-maximizing earnings as known to management." Therefore, it can be noticed that earnings management can beneficial to firms because it could refer to long-term value.

Nekhili et al. (2016), conducted an investigation on the basis of a sample cash flow of a French company listed in the SBF 120 index for the period 2001 to 2010, whether the corporate administration and ownership features in reduction, affects the earnings management practices in a free cash flow (FCF) circumstance. Their results revealed that the external audit and independence of the audit committee gives it the power to reduce the extent of earnings management of the organization as well as the institutional investors. The results also highlighted the facts that managers, in the presence of free cash flows, tend to exercise earnings management with a specific end goal to build are the reported income.

Raeisi and Vaez conducted a research in 2016 that analyzed the relationships between the Corporate Governance Mechanisms, the Free Cash Flow, and Earnings Management in Tehran Stock Exchange Listed Companies, the results, according to Jensen theory 1986, indicated that corporate administration features minimize both earnings management and free cash flow.

A study conducted by Susanoo et al. (2016) demonstrated that the impact of the board of commissioner, board autonomy and audit quality on the relationship between free cash flow and earnings management is negative and significant. Furthermore, they indicate that board autonomy and audit quality together can minimize earnings management problems appearing from free cash flow. Board of commissioners, board autonomy and audit quality could checkmate the opportunistic behavior of managers that result from free cash flow issues.

Shadmehri et al. (2017) used the listed Iran companies to test the relation between excess free cash flow and the forecasting power of accounting data, specifically the earning. The main thrust of his finding was a positive and statistically significant relationship between surplus free cash flow and earnings' predictability power. Further, the result demonstrated that the big company mechanism would enhance this relationship.

Nouri and Gilaninia (2017), in their study of 126 companies listed in Iran stock exchange, checked the interaction between audit quality, earnings management and surplus free cash flow. Their results were consistent with previous research findings in favour of audit quality; the results showed a negative relationship with earnings management. On the contrary, they found a positive and significant relationship between free cash flow and earnings management. Furthermore, the results also conveyed a positive and significant effect of audit quality on both earnings management and free cash flow.

Mohammdjani and Sadeghi (2015), in their research titled 'the impact of SFCF on earnings management and the role of the audit committee by using the data of 87 great research companies, through Pearson t-test'. found that there is a significant and straightforward relationship between earnings management and SFCF. In contrast, the Companies' SFCF can be deliberately used as a trigger for earnings management. Also, the resulting state that those companies who set up their own audit committee, have superior earnings management than other companies without such audit committee. Besides, if an audit committee exists, there would be no significant relationship between the audit committee, SFCF and earnings management.

Vichitsarawong and Pornupatham (2015), in their study, inspected if the auditors' appraisal is the reflector of the earnings steadiness. After examining the accounting data of 305 companies in Thailand, they found that those organizations who obtained justified assessment have fewer profit stability than organizations who received an adequate assessment. Hence, the mode of assessment has different consequences on earnings stability. Nevertheless,

organizations with provided or rejected assessment have fewer earnings stability.

Jensen (1986), argued that firms with low growth-opportunities favour investing their free cash into less or negatively profitable project. This states that the ultimate agency cost of free cash flows is a sequence of investing the free cash flows in negative net present value (NPV) projects. The manager might choose accounting policies and techniques to manage to earn regardless of the availability of surplus free cash flow Chunk et al., (2005). Managers would behave so when stakeholder's monitoring and disciplinary action are not taken Furthermore, they will start to work on their own interest, which is referred to in agency theory literature as a moral hazard, and ignore the firm as a whole while choosing to invest in short-term and marginal projects. This happens especially when it is difficult to detect the agency's cost of using free cash flow. The absence of the regulations makes the manager free to choose whether or not to release any information about negative present value project, which will lead to commercial secrecy and encourage the managers and administrators to conceal their bad investment behaviors. However, managers will still have the ability to camouflage their bad behavior, investing in marginal and negative NPV project, by hoping that poor investment will reveal itself in the future and by utilizing the creative accounting.

Peas Nell et al., (2005) in a UK context research, specifically suggested the institution of an autonomous board of directors, which will probably be identified with a decrease in earnings management. Another related study by Jouber and Fakhfakh, (2012), utilized 180 sample firms from both France and Canada (2006-2008). In their study, they investigated the effect of grounded corporate administration instrument (e.g. board autonomy, institutional ownership e.t.c.) on the reduction of income at the administrative level. Also, in the USA, Anglin et al., (2013), discovered that an autonomous board of directors prompt a compelled level of earnings management, utilizing a sample of (153) real-estate investment trusts firms (2004-2008).

According to the previous information, Company managers execute earnings management and smoothing through creative accounting by managing discretionary accruals (DAC). Therefore, the first proposed hypothesis is (all hypotheses are stated in the alternative):

H_1: Ceteris paribus, firms with SFCF is most likely to adopt income-increasing earnings management (DAC) than others.

In response to the pressure of the corporate governance, policy makers, investors and reformists; for the appropriate mechanism to control excessive opportunistic behavior, this research attempts to evaluate the impact of audit quality on earnings management.

The epicentre of external monitoring is the auditor quality itself; therefore, auditor quality is considered one of the key determinants of earnings management. Many prior scholars have argued that auditor quality is largely determined by the relevance of the auditor's report, in evaluating contractual relationships and reporting on breaches (Watts & Zimmerman, 1986; DeAngelo 1981). In the same line Becker et al. (1998), Frankel et al. (2002), Gul et al. (2003), and Lin and Hwang (2010), for example, argued that the higher the auditors quality, the greater the chances of detecting the practices of earnings management. Furthermore, prior researches document that the 'Big Four' auditor firms provide higher quality auditing services than non-Big Four auditors, and this relatively high-quality service equip firms with the provision of minimal information asymmetry between managers and stakeholder (e.g. Francis et al., 1999).

Based on a large sample of Taiwanese listed firms (1997-2004). Yang et al. (2008), examined the relationship between director ownership, as a proxy for managerial ownership, and the earnings management which is based on the modified Jones model. They found a positive association between managerial ownership and discretionary accruals. In another study based on data from Singapore, Yeo et al. (2002), they found a positive association between managerial ownership and income-increasing discretionary accruals.

In light of a huge example of Taiwanese recorded firms (1997-2004). Yang et al. (2008), inspected the connection between executive possession, as an intermediary for administrative proprietorship, and the earnings management which depends on the altered Jones model. They found a positive relationship between administrative ownership and discretionary accruals. In another investigation in light of information from Singapore, Yeo et al., (2002), found a positive relationship between administrative proprietorship and income-increasing discretionary accruals.

In a related work, Bartov et al. (2001), Lai (2009) and Bliss et al. (2011), suggested that auditors with high quality prefer to report errors and irregularities, and they are unwilling to accept accounting practices under questions. In response to these arguments, used in previous studies, the circumstances where companies with SFCF might face agency cost of free cash flow, the argument was that the high-quality auditors will be more likely to discover the practices of earnings management. Therefore, this study also proposes the following hypotheses:

In a related study, Bartov et al. (2001), Lai (2009) and Bliss et al. (2011), proposed that highly valued auditors like to report errors and anomalies, and they are unwilling to subject accounting practices under inquiries. In reaction to these contentions, utilized in past studies, the conditions where organizations with SFCF may confront office cost of free cash flow, the contention was that the high-quality auditors will probably find out the practices of earnings management. Consequently, this examination likewise proposes the accompanying hypothesis:

H_2: Ceteris paribus, high-quality auditors are more likely to demolish earnings management practices.

H_3: Ceteris paribus, high-quality auditors moderate the SFCF-earnings management relationship.

3. SAMPLE, DATA, AND METHODOLOGY

3.1. Sample

The study sample consists of all the services and industrial Jordanian companies listed on the Amman stock exchange (ASE) with the available data in (2003-2016). The data is not restricted to any firm size or fiscal year end date. The sample was restricted to

December year-end makes the sample biased towards larger firms (Strong & Walker, 1993).

The target population comprises of the considerable number of administrations and industrial organizations in the Jordanian territory as recorded on the Amman Stock Exchange (ASE) with the access information in (2003-2016). The provided information isn't limited to any firm size or fiscal year end date. The example being confined to December year-end makes the example one-sided towards bigger firms (Strong & Walker, 1993).

The empirical analysis of the current research uses accounting. Data was collected from the firms' annual report where the financial statement is prepared and set according to the international accounting standards (IAS). Therefore, using the financial statement and the random selection of firms will fulfil and enhance the reliability and validity criteria of our sample. Including the entities in the sample required to satisfy the underlying criteria. First of all, the annual accounting should be available in the ASE database for the selected period. Finally, firms should have a positive book value (BV). The exclusion of firms with a negative book value is due to the fact that firms with negative BV have different approaches for valuation than those with a positive BV. Overall, the negative BV will affect the value of the coefficient in the model used, therefore, the results will be biased in these firms. A third point could be that a negative BV means that the firm is in distress, thus, the results will be affected by distress risk.

This study utilizes accounting Information obtained from the organizations' yearly report where the financial statement is generated with respect to international accounting standards (IAS). Accordingly, using the financial statement and the arbitrary choice of firms will satisfy and improve the reliability and validity of our sample data. Adding the elements to the required sample to fulfil the hidden criteria. First, the yearly accounting ought to be accessible in the ASE database for the specified period. Finally, firms ought to have a positive book value (BV). The exclusion negative BV rated firms with is important in terms of the difference in methodologies for valuation between negative BV and positive BV firms. Generally speaking, the negative BV will influence the value of the coefficient in the model utilized, in this manner, the outcomes will be one-sided in these organizations. A third point could be that a negative BV implies that the firm is in trouble, hence, the outcomes will be influenced by distress risk.

3.2. Model reconciliation

This research accounts for earnings management by Discretionary accruals (DAC). Total accruals are calculated using the following equation:

$$TAC_{ji} = \left(\Delta DCA_{ji} - \Delta CASH_{ji}\right) - \left(\Delta CL_{ji} - \Delta LTD_{ji} - \Delta ITP_{ji}\right) - DPA_{ji} \quad (1)$$

where TAC_{ji} is total accruals for firm j in time i; ΔDCA_{ji} is changes in current assets for firm j for the period i_{-1} to i; $\Delta CASH_{ji}$ changes in cash balance for firm j for the period i_{-1} to i; ΔCL_{ji} is changes in current liabilities for firm j for the period i_{-1} to i; ΔLTD_{ji} is changes in long-term debt for firm j for the period i_{-1} to i; ΔITP_{ji} is changes in income tax payables for firm j for the period i_{-1} to i and DPA_{ji} is the depreciation and amortization expense accruals for firm j in time t.

Then we decompose total accruals (TAC) into two normal main components, the normal accruals (NAC) and Discretionary accruals (DAC), using the modified Jones (1990) model as displayed follows:

$$\frac{TAC_{jk,t}}{TA_{jk,t-1}} = \alpha_{jt}\left[\frac{1}{TA_{jk,t-1}}\right] + \beta_{jt}\left[\frac{\Delta REV_{jk,t} - \Delta REC_{jk,t}}{TA_{jk,t-1}}\right] + \gamma_{jt}[PPE_{jk,t}/TA_{jk,t-1}] + \varepsilon_{jk,t} \quad (2)$$

where $TAC_{jk,t}$, is the total of accruals for firm j in industry k in year t; $TA_{jk,t-1}$ is total assets for firm j in industry k at the end of year t-1; $\Delta REV_{jk,t}$ is changes in net sales for firm j in industry k between years t-1 and t; $\Delta REC_{jk,t}$ the changes in receivables for firm j in industry k between years t-1 and t; $PPE_{jk,t}$ the gross property, plant and equipment for firm j in industry k in the year t, α_{jt} β_{jt} , γ_{jt} are the estimated coefficients; and $\varepsilon_{jk,t}$ the residuals. NAC computed (fitted values) from Equation (2) while DAC is the remaining amount after the deduction the normal accruals (NAC) of total accruals (TAC).

As the agency theory states, the association between SFCF and the low-growth opportunities were considered as the main problem where the agency theory severe in which executive manager start making investment decisions that would reduce the shareholder wealth. Therefore, the accounting discretion will be the tools to camouflage the effects of managers' behaviour. The manager can utilize accounting methodology to improve the reported income, in order to conceal the effects of their disposition towards shareholders' wealth. However, according to Slack resources theory, cash represents the major discretionary dimension of financial resources (Sharfman et al., 1988 and George, 2005).

Cash is the most liquid ratio current asset, and it indicates the entity's liquidity, solvency and its capability to respond and adjust to the opportunities and contentions. Furthermore, Subramanyam and Wild in their research conducted in 2009, they distinguished between the cash and the cash flows concepts. They argued that the residual balance of cash accumulated from past and different operating periods is cash, while the net cash flows of the current operating period are referring to as the cash flows. Free cash flow (FCF), however, connotes the inflow of finances generated by the company with regard to its operations irrespective of its financial debt and the capital expenditures. In close relation, is the equity cash flow method (ECF), which is derived by deducting both the interest and principal paid to the debtors from the FCF after taxation, therefore, adding new debt to the company's financial stake. Therefore, the capital cash flow method defines the future cash

flow as the sum of debt cash flow plus the equity cash flow. We can, therefore, redefine FCF according to (Penman, 2001):

$$FCF = NOPAT - ACCRUALS - IC \quad or \quad FCF = NOPAT - Increase\ in\ capital \tag{3}$$

Similarly, Penman (2001) defined FCF as:

$$FCF = CF\ from\ operations - CF\ used\ in\ investment \tag{4}$$

In this research, we estimate the retained cash flows (RCF) and the development potential of a certain organization by calculating SFCF (to indicate whether the agency problems exist). Entities that maintain material cash flows, as well as those with low-growth potentials, operate with a tendency of investing their income in marginal or negative NPV projects. Therefore, these entities are expected to make misguided investment decisions (Chung et al., 2005). RCF for each organization:

$$RCF_{ji} = NIBD_{ji} - TAX_{ji} - INT_{ji} - PSDIV_{ji} - CSDIV_{ji}/TA_{ji-1} \tag{5}$$

where RCF_{ji} is the cash the company *j* retained in year *i*; $NIBD_{ji}$ is the net operational income prior to depreciation expense for firm *j* in year *i*; TAX_{ji} is the total taxes for firm *j* in year *i*; INT_{ji} is the interest expense for firm *j* in year *i*; $PSDIV_{ji}$ is the preferred stock dividends for firm *j* in year *i*; $CSDIV_{ji}$ is the common stock dividends for firm *j* in year *t*; and TA_{ji-1} is the total assets for firm *j* at the end of year *i-1*.

This research evaluates and speculates the development for firm j using the measure of its booking price (PB) proportion in year i. SFCF is a marker variable with firm j scored 1, in the event that their RCF is over the sample median and their PB proportion is less than the sample median in the financial year I; which is generally scored 0. A high-value auditor is likewise thought to be a conceivable decisive factor of the extent of earnings management (Frankel et al., 2002). In earlier studies, non-Big 4 and Big 4 audit firms are usually distinguished from each other in the [pretext that the latter is of a higher quality than the former (Mayhew & Wilkins, 2003). Consequently, this study incorporates Big 4 as another estimator of earnings management conduct.

The main analysis technique and the current research are adapted to test the mentioned hypothesis in the ordinary least square (OLS). The basic model of this research is clearly, outlined in the following regression equation:

$$DAC_{jt} = \alpha_0 + \alpha_1 SFCF_{jt} + \alpha_2 Auditqyuality_{jt} + \alpha_3\, SFCF \times Auditquality_{jt} + \alpha_4 FSize_{jt} + \alpha_5 AbsTAC_{jt} + \alpha_6 Leverage_{jt} + \alpha_7 RelCFO_{jt} + \varepsilon_i \tag{6}$$

where DAC_{jt} is discretionary accruals of firm j for year *t* measured by Modified Jones model (1991); $SFCF_{jt}$ is Surplus cash flows and An indicator variable with firm *j* scored one (1) if their RCF is above the sample median and their price to book (PB) ratio is below the sample median in fiscal year *t*; and it scored zero (0); $Auditqyuality_{jt}$ is audit quality Indicator variable with firm *j* scored one (1) if their auditor in fiscal year *t* is a Big 4 audit firm; otherwise the score is zero (0); $FSize_{jt}$ is Natural logarithm of market value of equity of firm j for their fiscal year *t*; $Leverage_{jt}$ is Ratio of total debt of firm *j* for year *t* to total assets of firm *j* for year *t*; $AbsTAC_{jt}$ is Absolute value of total accruals for firm *j* divided by total assets for firm *i* for year *t-1*, and $RelCFO_{jt}$ is Relative cash flow measured by the difference between cash flow from operations for firm *j* during the year *t* and *t-1* deflated by total assets as at end of year *t-1*.

4. RESULTS

4.1. Empirical results

Tables 1 and 2 summaries the statistical description of the selected variables. The results show that the majority of the variables have a positive mean except for ΔOCF where the mean is negative. The mean and median earnings management (DACs) is 0.0572 and -0.0599, respectively, with a minimum of -0.7797 and a maximum of 0.0.3852. The number of observations that are classified as having potential SFCF agency-problem is 912 or 78.8% of observations. The Big 4 accounting firms audit 23.2% of sample companies. The percentage of ownership by the members in the board of directors with respect to the 49.7% of the sample observations, is, therefore, classified as a high percentage. Debt to total assets averages 0.3176 and the mean of the ΔOCF for the sample companies is -0.0086. The mean and median for absolute total accruals to total assets are 0.0857 and 0.0649, respectively, with a minimum of zero and a maximum of 0.5051.

Table 3 specifies the extent of the relationship between the independent variables are considered infinitesimal enough such that multicollinearity is eliminated in the regression models.

4.2. Univariate analysis

To investigate the relative effect of the surplus free cash flow (SFCF), audit quality and ownership on earnings management subsamples, formed the basis of SFCF, audit quality and the ownership test the differences in earnings management.

Table 1. Descriptive statistics for contentious variables

Variable	*Mean*	*Median*	*SD*	*Min*	*Max*
DAC	0.0572	0.0599	0.0708	-0.7797	0.3852
Ownership	0.2072	0.1500	0.21403	0.00	0.95
Leverage	0.3176	0.2886	0.2065	0.0025	1.07
ΔOCF	-0.0086	0.001	0.1487	-1.272	0.7600
Size	16.3059	16.2134	2.0007	0.000	21.8275
AbsTAC	0.0857	0.0649	0.08926	0.000	0.5051

Table 2. Descriptive statistics for categorical variables

SFCF	***Frequency***	***Percent***
High	912	78.8
Low	245	21.2
Total	1157	100
Auditor	***Frequency***	***Percent***
Big 4	269	23.2
Non-Big4	888	76.8
Total	1157	100
Ownership	***Frequency***	***Percent***
High	575	50.3
Low	582	49.7
Total	1157	100

Table 3. Pearson and spearman correlation matrix

Variable	***DAC***	***SFCF***	***Audit Quality***	***Ownership***	***Leverage***	***ΔOCF***	***Size***	***AbsTAC***
DAC		-.128**	.124**	.079**	-.310**	-.073*	-.105**	-.418**
SFCF	-.129**		.075*	-.007	-.141**	.034	-.163**	-.014
Audit Quality	.134**	.075*		-.005	-.061*	.002	-.262**	.035
Ownership	.098**	-.007	-.005		.005	.059*	-.056	.073*
Leverage	-.338**	-.135**	-.071*	.011		-.019	-.057	.135**
ΔOCF	-.059*	.019	.038	.063*	-.006		.018	-.114**
Size	-.306**	-.120**	-.304**	-.043	.033	.016		-.165**
AbsTAC	-.299**	-.057	-.006	.105**	.220**	.004	.034	

*Note: The significance of the correlation was observed at the 0.01 level (2-tailed). * Again the significance of correlation was observed at the 0.05 level (2-tailed). Where DAC_{jt} is discretionary accruals of firm j for the year t which is determined using the Modified Jones model (1991); $SFCF_{jt}$ is Surplus cash flows and an indicator variable with firm j scored one (1) in the event that their RCF is above the sample median and their price to book (PB) ratio is below the sample median in fiscal year t; which scored zero (0); $Auditqyuality_{jt}$ is the variable that indicated the audit quality of firm j scored as one (1) in the event that their auditor in fiscal year t is a Big 4 audit firm; otherwise the score is zero (0); $FSize_{jt}$ is the Natural logarithm of the market value of firm j equity for the fiscal year t; $Leverage_{jt}$ is the Ratio of total debt of firm j for year t to the total assets of firm j for year t; $AbsTAC_{jt}$ is the Absolute value of total accruals for firm j divided by total assets for firm i for year t-1, and $RelCFO_{jt}$ is the Relative cash flow measured by the difference between cash flow from operations for firm j during the year t and t-1 deflated by total assets as at end of year t-1.*

Table 4 presents the outcome of the impact of SFCF on earnings management. The results show that, organizations with highly rated SFCF average DAC 0.0619, which is higher than the average of the low SFCF at 0.0397. This result, however, is in line with our argument that organizations with highly rated SFCF are most likely to increase their income through managing the income. The findings of this research are consistent with previous studies that studied the relationship between SFCF and earnings management (e.g. Rusmin et al., 2014).

Table 4. Univariate test differences in DAC between sup-samples: surplus free cash flow SFCF

	N	***Mean***	***Std. Deviation***	***t***
High	912	0.0619	0.0663	4.370*
Low	245	0.0397	0.0834	

Table 5 shows the overall findings of this research (investigating the impact of the Audit Quality on earnings management). The reported results revealed that the organizations that are audited by Big 4 companies, tend to manage lesser earnings than other companies audited by non-Big 4. This finding consistent with previous results reported by the Stuieas examined the same relation (e.g. Rusmin et al., 2014, Lin & Hwang, 2010, Gul et al., 2003, Franked et al., 2002).

Table 5. Univariate test differences in DAC between sup-samples: audit quality

	N	***Mean***	***Std. Deviation***	***t***
Big 4	269	0.0413	0.0703	4.245
Non-Big 4	888	0.0621	0.0704	

Table 6 summaries the results of the impact of the member of the board of directors' percentage of ownership on the level of earnings management. The average of earnings management for the companies with a high percentage of ownership is 0.0629, which is significantly higher than companies with a small percentage of ownership which is 0.0516. (Peasnell et al., 2005, Anglin et al., 2013, Watts & Zimmerman, 1983, Chung & Kim, 2005; and Jensen & Meckling, 1976).

Table 6. Univariate test differences in DAC between sup-samples: ownership

	N	***Mean***	***Std. Deviation***	***t***
High	575	0.0629	0.0757	2.707
Low	582	0.0516	0.0652	

Certain Classifications of the DAC were formed, using the SFCF and audit quality as its basis in order to determine if the level of earnings management for high SFCF and low SFCF firms are affected by the audit quality, Table VII states the results of the statistical analysis, where it can be noticed that the organizations attributed with high SFCF, audited by Big-4 accounting firms, have an average DAC of (0.0481), compared to the DAC of 0.0664, for the organizations attributed with high SFCF, but were audited by non-Big 4 accounting firms. The difference in the average DACs is statically significant (at a p-value > 0.01). The results are shown in Table 7 also revealed that the average DAC for the organization attributed with low SFCF and audited by Big-4 accounting firms is 0.0038 which is statistically and significantly lower than the average for the companies attributed with low SFCF but were audited by non-Big-4 accounting firms which are 0.0472. These findings are, however, in line with the observations of (e.g. Rusmin et al., 2014; Lin &

Hwang, 2010; Gul et al., 2003; Franked et al., 2002; Yang et al., 2008; Yeo et al., 2002).

Table 8 shows the outcomes of the classification of DAC on the basis of percentage of ownership and audit quality. The companies with high level of ownership concentration by the members of the board of directors, who were audited by Big-4 accounting firms, have a significant and statistically lower average DAC which is 0.0457, in comparison with an average DAC of 0.0681 for the companies with high level of ownership by the members of the board of directors but were audited by non-Big-4 accounting firms. The companies with a low level of the board of directors' ownership concentration and were audited by Big-4 accounting firms have an average DAC of 0.0367, which is statistically and significantly less than the average for companies with a low level of the board of directors' ownership concentration but were audited by non-Big-4 accounting firms which are 0.0561.

Table 7. Univariate test differences in DAC between sup-samples: surplus free cash flow and audit quality

SFCF	*Audit Quality*	*N*	*Mean*	*SD*	
High	Non-Big 4	685	.0664	.0648	3.616
	Big 4	227	.0481	.0692	
Low	Non-Big 4	203	.0472	.0850	3.120
	Big 4	42	.0038	.0644	

Table 8. Univariate test differences in DAC between sup-samples: ownership and audit quality

Ownership	*Audit quality*	*N*	*Mean*	*Std. Deviation*	
Low	Non-Big 4	448	.0561	.0637	3.024
	Big 4	134	.0367	.0681	
High	Non-Big 4	440	.0681	.0761	3.028
	Big 4	135	.0457	.0723	

4.3. Multivariate results

Table 9 presents the outcomes of the multiple regression analysis are summarized. Two forms of equation (4) are tested: model 1 and model 2. Model 2 incorporates all the variables included in model 1, in addition to SFCF × Audit Quality and Ownership × Audit Quality. The results of the two models reveal that there is a statistically significant positive correlation between SFCF and DAC with p-value > 0.01. These findings support our hypothesis as the level of SFCF increases; the managers tend to adopt income-increasing earnings management practices. The results are totally in line with the findings of previous studies such as Rusmin et al. (2014).

In line with results of previous studies (e.g. Lin and Hwang, 2010, Gul et al. 2003, Franked et al. 2002), Audit Quality has a significant negative correlation with DAC at a p-value > 0.01 for both models. This is why the second hypothesis is supported by the big-4 accounting firms' work on demolishing earnings management practices. The research outcomes showed that the ownership variable is significantly and positively related to DAC at p-value > 0.01 (studies to support the result).

Table 9. Multiple regression

Variable	*Model 1*	*Model 2*
(Constant)	13.05	13.185
SFCF	8.519	5.470
Auditor	-3.488	-2.420
Ownership	4.520	2.855
Leverage	11.841	11.770
Change in CFO	-5.19	-5.197
SIZEMV	7.766	7.812
ABSTAC	-17.923	-17.936
SFCF × Audit Quality		-1.931
Ownership × Audit quality		-1.635
Adjusted R2	0.345	0.346
f-Stat	52.450	45.866

Note: Where DAC_{jt} is the discretionary accruals of firm j for year t as determined by the Modified Jones model (1991); $SFCF_{jt}$ is the Surplus cash flows and An indicator variable for firm j, which is scored one (1) in the event that their RCF is above the sampled median and their price to book (PB) ratio is below the sampled median in fiscal year t; otherwise, the score is zero (0); $Auditqyuality_{jt}$ is the audit quality Indicator variable for firm j, which is scored one (1) in the event that their auditor in fiscal year t is a Big 4 audit firm; otherwise, the score is zero (0); $FSize_{jt}$ is the Natural logarithm of the market value of the equity of firm j for the fiscal year t; $Leverage_{jt}$ is the Ratio of the total debt of firm j for year t, to the total assets of firm j for year t; $AbsTAC_{jt}$ is the Absolute value of total accruals for firm j, divided by the total assets for firm i for year t-1, and $RelCFO_{jt}$ is the Relative cash flow, which is determined by the difference between operational cash flow for firm j during the year t and t-1 deflated by the total assets as at end of year t-1.

The interaction variable SFCF × Audit Quality (Model 2) has a significant, negative correlation with DAC at a p-value > 0.06. The stated outcome supports hypothesis 4, in that, the big-4 audit firms limit managers' earnings management practices. However, this finding is not in line with the findings of Rusmin et al., 2014.

With a view to the other interactions, the variable Ownership × Audit Quality, (Model 2) has a negative and moderately significant correlation with DAC (p-value > 0.10). This indicates that the higher the audit quality, the lesser the effect of ownership concentration with the board of directors, which is in line with hypothesis 5.

Similarly, with a view to the control variables featured in both models, table VIII shows in the outcomes of the study that, there is a positive, significant correlation between leverage and DAC, which is in line with the results of previous research (e.g. Sweeney, 1994; DeFond & Jiambalvo, 1994;

Mather & Ramsay, 2006), but it is not consistent with the findings of Rusmin et.al., 2014. In relation to the results of previous studies (e.g. Rusmin et al., 2014; Heinger, 2001; Chung et al., 2005 and Becker et al., 1998), there is a positive and significant relationship between firm size and DAC. However, in both models, the control variable, which is a change in CFO shows a negative and significant association with DAC, which is in line with the results of Fabricio et al. 2014, but inconsistent with Rusmin et.al., 2014. Eventually, the AbsTAC variable has a significant and a negative correlation with DAC, which is in line with the results of previous studies (e.g. Fabricio et al., 2014; Rusmin et al., 2014; Becker et al., 1998)).

Firm size shows a positive and significant correlation with DAC in both models.

5. CONCLUSION

This study has presented a number of evidence that influences and give significant impact on earnings management. It also encourages administrator to exercise earnings management in the face of financial distress, in order to highlight the real financial condition of the organization. In summary, the results show the effect of the board of directors' percentage ownership on the level of earnings management, which statistically supported the observation that the average earnings management for the companies with a high percentage of ownership is higher than for companies with a small percentage of ownership.

With particular reference to the Jordanian listed industrial companies, with respect to certain findings in view of their operations, It is obvious that corporate governance practices played an effective legitimizing role in support of the perceptions that financial reports portray organizational realities.

Moreover, standard setters and regulators ought to be abreast of the fact that the earning management practices have a greater impact on the reliability and credibility of the accounting information. Since the study was conducted, on the Jordanian listed industrial companies; different accruals model could be relevant for the different economy of the country because traditional factors might influence the available alternative to accounting accruals for earnings management.

In conclusion, this study, however, pointed out that high-quality auditors have a high tendency to demolish earnings management practice, then high-quality auditors who moderate the SFCF-earnings management correlation. The high-quality auditors have a better change of discovering the bad earnings management practices and, firms with SFCF are most likely to adopt income-boosting earnings management (DAC) than others. This is consistent with the results that Audit Quality has a significant negative relationship with DAC for both models. In addition, there was a positive correlation between managerial ownership and income-boosting discretionary accruals.

6. LIMITATION

Considering the extent of this study, certain limitations are considered; first; the sample of firms used in this study is only limited to the manufacturing sector as listed in the Amman Stock Exchange (ASE). To future studies, the sample should be restructured to include non-financial companies also listed on ASE. Second, the study utilized only moderating variables that were used in previous pioneer research, while there are other variables that can be investigated and could affect the relationship between FCF and earnings management, such as independent directors, audit committee and corporate governance bonding (Cong, 2013).

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