

The Auditing Quality and Accounting Conservatism

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[Abstract] This study aims at verifying that there is accounting conservatism in the financial reports issued by the industrial corporations listed on the Amman Stock Exchange (ASE) and testing the impact of auditing quality characteristics (the auditing firm size, contacts with other global auditing firms, client retention period, auditing fees and the specialty in client's industry) on the enhancement of the level of accounting conservatism. Towards realizing the objectives of the study, the relationship was estimated and examined through the Binomial Test to test the first hypothesis a One-Sample T-Test to test the second hypothesis, and multiple regressions of (Ordinary Least Squares OLS). Data of 39 companies of the industrial sector for the period 2001-2006 were arranged in a way that made it possible to apply the Pooled Data Regression. The study found significant results indicating a low level of accounting conservatism in the financial statements issued by the Jordanian industrial corporations. The results indicated that some of the characteristics of auditing quality are good, and some of audit quality characteristics have an impact on improving the level of accounting conservatism. Based on these results, we have provided recommendations to the interested parties.

[Keywords] auditing quality; accounting conservatism; Amman stock exchange (ASE); Jordanian company

Introduction

Many of the accounting scandals and breakdowns in financial markets have emerged in recent years, but the most important results, which were not expected for these events, increased awareness of the importance of the role of auditing, and many of the parties realized the crucial role played by the audit in the performance of financial markets (Abu Ijela & Hamdan, 2010). On the other hand, the number of audit failures declared, as evidenced by the lawsuits and penalties imposed by the stock and Exchange Commission (SEC), are very small, having an annual failure rate close to zero (DeFond & Francis, 2005). These events led to increased calls for an increase of the quality and effectiveness of the auditing. However, there is no agreement on the concept of the auditing quality. Both of the International Federation of Accountants (IFAC), and American Institute of Certified Public Accountants (AICPA) failed to introduce an explicit concept of the auditing quality. However, there are several attempts to define the quality of the auditing, including the concept of auditing quality being defined as the external auditor detects an anomaly in financial statements and then revealing it to the users of these statements (DeAngelo, 1981).

Deis and Giroux (1992) argue that the auditing quality is the auditor's ability to detect weaknesses and gaps in the accounting system for the client and the reporting. However, Copley and Doucet, (1993) go in another direction by defining the auditing quality as the application of professional standards related to field work and reporting standards. The audit quality is a set of methods and techniques that

work to reduce errors and fraud, which is supported through access to sufficient and convincing evidence in order to protect the interests of relevant parties (Abu Ijela & Hamdan, 2010). The probability of detection is a matter of competence, whereas the probability of revelation depends on the independence of the auditor, i.e., his/her willingness to face the pressure exerted by the producers of financial statements (Piot & Janin, 2005).

Many of the researchers examined the auditing quality and its ability to detect fraud in the financial statements and to assist the auditor in reaching the appropriate opinion about the fairness of the financial statements. This study attempts to provide additional evidence on the auditing quality in Jordan, and then study the ability of the auditing quality to increase the degree of Accounting Conservatism in the financial statements that are prepared by Jordanian industrial companies. Accounting conservatism, one of the bedrock precepts of financial reporting, reflects a firm's tendency to recognize "bad news" more promptly than "good news" (Basu, 1997). Actually, conservatism requires a greater level of verifiability for recognizing good news than bad news in earnings (Basu, 1997; Watts, 2003). The authoritative definition of "conservatism" is provided in Financial Statement Concept No. 2, requiring that "possible error in measurement be in the direction of understatement rather than overstatement of net income and net assets" (FASB, 1980). Changes in compensation patterns, litigation risk, and accounting standards could increase the level of conservatism by delaying the recognition of gains (Srivastava & Tse, 2009). However, this study is the first study in Jordan that studies the relationship between the auditing quality and accounting conservatism, and it is expected to provide significant results in this regard.

Study Problem

Countries differ in regulations of standards and accounting principles; some use the public sector method for accounting standards, while others use the private sector method. All of them try to secure the best possible quality of accounting information that helps in decision-making, regardless of their different objectives. Such accounting information should be conservative in disclosing profits. The Federal American Standard Board (FASB) in its statement of Financial Concepts No. 2 (SFAC No. 2) declared that the possible standards error should be geared toward reducing net income and assets, not increasing them (FASB, 1980). In a comparative study conducted by Ball et al. (2008) on seven countries using private sector accounting regulations found that they were more conservative in their accounting policies than those that used the public sector accounting practices.

Hendriksen (1982) observed that one of the aspects of conservatism was the tendency to be pessimistic, not optimistic, when preparing financial reports. This study tries to measure the level of conservatism in the financial reports of the industrial companies listed on the Amman Stock Exchange (ASE) and the impact of auditing quality characteristics on the enhancement of the level of accounting conservatism. Measuring the accounting conservatism in the industrial corporations listed on the ASE helps in measuring the efficiency of this emerging market. Some studies indicate that the Efficient Market Hypothesis (EMH) is achieved through the conservative financial reports issued by any company, as the stock price reflects all the information available at the suitable time (Yaseen, 2008).

The problem discussed in this study is exemplified through answering the following questions: What is the level of accounting conservatism in the financial statements issued by the industrial companies listed in (ASE)? What are the impacts of auditing quality characteristics on enhancement of the level of accounting conservatism?

Significance and Objectives of the Study

The significance of this study stems from being the first to measure the level of accounting conservatism in the financial statements issued by industrial companies listed in (ASE) using Book-to-Market approach and Abnormal Accruals approach. Through this, the study evaluates the role of auditing quality characteristics on the enhancement of the level of accounting conservatism and to what extent it can oblige companies to have a reasonable level of accounting conservatism.

Literature Review

The study of DeAngelo, (1981) was the first study about the auditing quality and the factors affecting it. This study found a positive relationship between auditing quality and the size of the audit firm, but Palm (1988) found the auditing quality as adversely affected by litigation in a sample of 472 U.S. companies during the period 1960-1985. St. Pierre and Anderson (1984) found that a lower incidence of litigation is associated with the Big 5 auditors compared to non-Big 5 auditors. Using Australian data, Gul et al. (2002) showed that higher quality of the Big 5 auditors are associated with higher earnings that may be used as an agency-reducing device for firms with low management share ownership or higher agency costs.

The study of Hoitash et al (2007) examined the relationship between auditors' fees and the audit quality. Contrary to what was expected, this study found a negative relationship between the auditing fees and auditing quality. One of the important studies that were conducted in Jordan is the study of Abu Ijela and Hamdan (2010). The research investigates the existence of Earnings Management practices in the public industrial companies listed in the ASE, and tests the impact of auditing quality characteristics (the auditing firm size, connection with other global firms, client retention period, auditing fees, and specialization in client's industry) on Earnings Management practices. The researchers conclude that there is a significant effect of each characteristic of auditing quality on Earnings Management practices.

The connection with other global firms and auditing quality differences between big auditing firms and non-big auditing firms has received considerable attention in previous research. In Jordan, the Big 5 auditing firms are commonly associated with higher auditing quality (Abu Ijela & Hamdan, 2010). DeAngelo (1981) demonstrated analytically that larger auditing firms have incentives to detect material errors and irregularities.

Accounting conservatism is one of the most important accounting principles that accountants still insist on it. Previous studies find persuasive evidence that accounting conservatism has increased over time (Basu, 1997; Givoly & Hayn, 2000; Holthausen & Watts, 2001; Sivakumar & Waymire, 2003; Ryan & Zarowin, 2003; Srivastava & Tse, 2009).

The accounting conservatism concept was controversial at the turn of last century and is still used. Despite the critiques against this principle, it still plays an important principle in accounting practices (Watts, 2003a). Today, in the middle of the waves of skepticism regarding financial reports, adherence to this principle has become a distinguishing aspect for companies with reference to the transparency of their financial reports and a standard for classifying countries according to adherence to accounting principles (Hamdan, 2010a) and conservatism, which disclose the expected losses aside from the anticipated earnings, in addition to the lowest values of assets. Accounting conservatism implies using strict standards when declaring profits (LaFond & Roychowdhury, 2008). This should not lead to undervaluing of assets or income (IASB framework, paragraph 37).

There are two types of conservatism: first, is the conditional, which rapidly acknowledges economic losses. Second is the unconditional which reduces the values of net assets or reveals book values of the least ownership equity (Ball et al., 2005). The significance of the conservatism principle was re-emphasized through issuing the following standards, which contain a lot of conservatism: the issuance of the (FASB) of standards for Accounting for Contingencies (SFAS5) in 1975; the Employer's Accounting For Pensions (FSAS87), in 1985; Accounting for the Impairment of Long-Lived Assets (SFAS121) in 1995; and the two International Standards (IAS 36) and (IAS 37) (Al-Sahli 2009).

Some of the benefits of Accounting Conservatism of financial lists are reducing opportunist motives for managers when disclosing optimistic results, increasing contracts control, and reducing court costs (Watts 2003a, b; Ball & Shivakumar, 2005). The need for accounting conservatism is related to the increase of credibility in accounting information (Hellman, 2008), as conservatism of declaring good results of the company increases accounting credibility and the ability to predict the future. The need for conservatism appeared together with the Agency Theory (Basu, 1997) to solve the problem that might emerge between managers and stockholders on the separation between management and ownership. Suppose that the financial reports issued by the management were conservative (Ball, 2001; Watts, 2003a), so stockholders might resort to reducing management salaries to compensate for the difference attributed

to the manager's care for their personal interests.

To avoid such a situation, managers might resort to present more conservative numbers as an indication of not caring for their personal interests (Watts & Zimmerman, 1983), thus shunning legal responsibility (Givoly & Hayn, 2000). Ahmed & Duellman (2007) found out that accounting conservatism helps reduce agency costs. Finally, Hamdan (2010b) found that accounting conservatism contributes to the improvement of quality of financial reporting through an external auditor for a clean opinion. This study helps in establishing a relationship between the high level of accounting conservatism in Jordanian industrial companies and the improvement of the opinion of external auditor. As for the role of accounting conservatism in improving the efficiency of debt contracts, studies of the last period ascertained that accounting conservatism helped in improving the efficiency of the debt contracts by increasing the ability of accounting information to predict the future (Watts, 2003a; Ball & Shivakumar, 2005; Ball et al., 2008).

Accounting conservatism secures for the debtors stricter policies in declaring profits and, consequently, limits profit distribution, as this provides the company with a better opportunity to meet its liabilities. But Gigler et al., (2009) saw that accounting conservatism reduces the efficiency of debt contracts because it changes the content of accounting, thus reducing the possibility of future prediction. In the search for the factors influencing the level of accounting conservatism, many studies considered the distinction between companies regarding accounting conservatism in their financial reports. Hamdan, (2010a) and Yaseen, (2008) found out that banks are the most conservative in their accounting policies. But Al-Sahli (2009) disagreed with them as he found that the banking sector in Saudi Arabia was the least conservative in its accounting policies. As for the relation between the size of company and accounting conservatism, Hamdan (2010a) found that big companies adopt conservative accounting policies to avoid political costs, but Al-Sahli (2009) did not find any relation between the size of the company and the degree of accounting conservatism. Contrary to what was expected, Hamdan, (2010a) found that the low-debt companies were the most conservative in their accounting policies. Al-Sahli's (2009) study did not find any effect of debt size on accounting conservatism, but found that establishing the Saudi Stock Exchange had an effect on accounting conservatism in financial reporting and that agreed with what the study of Labo and Zhou (2006).

The demands of the US Securities and Exchange Commission helped in increasing accounting conservatism in financial reporting. The accounting conservatism also helps in Quality Disclosure (Paprocki & Stone, 2004; Yaseen, 2008). Accounting conservatism also plays a role in Earnings Quality, being continuous (Penman & Zhang, 2002). The Sarbanes-Oxley act is considered the most important legislation in reinforcing corporate governance, which helps increase accounting conservatism (Labo & Zhou, 2006). This was ascertained by the study of Lara et al. (2009), which found that corporate governance helped increase accounting conservatism. Krishnan and Visvanathan (2007) discovered that experience of the Audit Committee, one of the pillars of corporate governance, affected the degree of accounting conservatism. Yaseen, (2008) did not find any influence of the corporate governance on the relation between accounting conservatism and the improvement of quality of disclosure. Accounting conservatism is one of the active tools in the corporate governance, which managers can use to improve the level of corporate governance in the company (Lara, et al., 2007).

This study differs from previous studies by being the first to measure accounting conservatism in the financial statements issued by industrial companies listed on the ASE, using two different methods. Thus, it tries to discover the factors affecting the level of accounting conservatism in these companies. The study is expected to present important information for decision makers and regulators of accounting profession in Jordan.

Research Methodology

Hypotheses Development

Measuring the Auditing Quality. The auditing quality reflects the efficiency of the auditing operation, its ability to obtain evidence to support the opinion of the external auditor, and the ability to compel the

company management to implement the accounting principles, the reduction of fraud, manipulation in the financial statements, and to ban earnings management (see Abu Ijela & Hamdan, 2010; Tendeloo & Vanstraelen, 2008; Ebrahim, 2001). The majority of previous studies identified the following elements to measure the auditing quality: (Connie et al., 1998; Ebrahim, 2001; Piot & Janin, 2005; Abu Ijela & Hamdan, 2010):

- Size of the auditing firm; if it was one of the top five (Big 5) in Jordan or not.
- The contacts with other global auditing firm.
- The client retention period.
- The auditing fees.
- Specialization in client's industry.

The first hypothesis of this paper aims at measuring the auditing quality in auditing firms, which examines the financial statements of the Jordanian industrial corporations listed in the ASE. The first hypothesis can be written as follows: H_{01} : *The auditing firms in Jordan are not characterized by high auditing quality.*

Measuring the Accounting Conservatism. In this study, we examine whether this trend in accounting conservatism arises from delayed recognition of gains or from more prompt recognition of losses. This study attempts to provide additional evidence on the level of accounting conservatism in financial statements of the Jordanian industrial corporations listed in the ASE, using a different methodology from the methodology used by the study of Hamdan (2010a), which used the model of Basu 1997. Thus, the second hypothesis can be written as follows: H_{02} : *There is no acceptable level of accounting conservatism in financial statements issued by Jordanian industrial corporations.*

The Impact of Auditing Quality on Enhancement of the Accounting Conservatism level. After discovering the audit quality in the Jordanian auditing firms and after measuring the level of accounting conservatism in the financial statements issued by Jordanian industrial corporations, the third hypothesis aims at measuring the impact of auditing quality, which includes the size of the auditing firm, contacts with other global auditing firms, client retention periods, auditing fees, and specialization in client's industry, on the enhancement of the level of accounting conservatism in the financial statements issued by Jordanian industrial corporations. The third hypothesis can be written as follows: H_{03} : *There is no statistically significant impact of the auditing quality characteristics on increasing the level of accounting conservatism in the financial statements issued by Jordanian industrial corporations.*

Study Sample

The study sample includes all Jordanian industrial corporations listed in the ASE. The study sample included the company which achieved the following conditions: it is not merged with another company, it did not stop trading its shares, and it disclosed all data needed for the study. The number of companies which have achieved these conditions are (39) during the period 2001-2006.

Variables Measurement

This study depended in its measuring of variables on the previous studies, and it developed new measuring methods. Table 1 shows the measuring of the study variables and their expected sign.

Study Models

The current study has developed two models to measure the impact of the audit quality on improving the level of accounting conservatism. Two methods have been used to indicate the accounting conservatism: Book-to-Market (BTM) ratio and abnormal accruals. We have built a model for each method as follows:

First Model: The first measure for accounting conservatism is a market-value-based approach; in the first model, we used the (BTM) ratio as an indicator of accounting conservatism, which is considered the dependent variable in the following model:

$$BTM_{i,t} = \beta_1 + \beta_2 Big5_{i,t} + \beta_3 Global_{i,t} + \beta_4 Keep_{i,t} + \beta_5 Fees_{i,t} + \beta_6 prof_{i,t} + \beta_7 Size_{i,t} + \beta_8 Leverage_{i,t} + \beta_9 AC Mem_{i,t} + \beta_{10} AC Exp_{i,t} + \ell_{i,t} \quad (1)$$

Where:

$BTM_{i,t}$: “Measure of accounting conservatism” the Book-to-Market ratio for firm (i) at the end of year (t).

β_1 : is the constant.

$\beta_{2..10}$: is the slope of the independent and controls variables.

$Big5_{i,t}$: the size of auditing firm, for the firm (i) in the year of (t). (dummy variable).

$Global_{i,t}$: Link the auditing firm with global auditing firms, for the firm (i) in the year of (t). (dummy variable).

$Keep_{i,t}$: the client retention period, for the firm (i) in the year of (t).

$Fees_{i,t}$: amount of auditing fees, for the firm (i) in the year of (t).

$Professional_{i,t}$: the auditing firm specialized in the industry of the client, for the firm (i) in the year of (t). (Dummy variable).

$Size_{i,t}$: Natural log of total assets, for the firm (i) in the year of (t).

$Leverage_{i,t}$: the financial leverage, for the firm (i) in the year of (t).

$AC Mem_{i,t}$: Number of members of the auditing committee for the firm (i) in the year of (t).

$AC Exp_{i,t}$: Number of members of the auditing committee which have Financial experience for the firm (i) in the year of (t).

$\ell_{i,t}$: random error.

Second Model: The second measure of the auditing conservatism was carried out by using the accrual-based approach, and the model can be written as follows:

$$ABACC_{i,t} = \beta_1 + \beta_2 Big5_{i,t} + \beta_3 Global_{i,t} + \beta_4 Keep_{i,t} + \beta_5 Fees_{i,t} + \beta_6 prof_{i,t} + \beta_7 Size_{i,t} + \beta_8 Leverage_{i,t} + \beta_9 AC Mem_{i,t} + \beta_{10} AC Exp_{i,t} + \ell_{i,t} \quad (2)$$

Where:

$ABACC_{i,t}$: “Measure of accounting conservatism” the abnormal accruals for firm *i* at the end of year *t*.

In order to measure the abnormal accruals according to Phillips et al. (2003), we used the amended Jones model to estimate normal and abnormal accruals. Based on Dechow et al. (2003); Phillips et al. (2003); and Matsumoto (2002). The abnormal accruals can be calculated according to the following steps:

First step: Estimating Total Accruals: the total accruals are measured by the difference between net income and net cash flows from operating activities, as follows:

$$TACC_{i,t} = NI_{i,t} - OCF_{i,t} \quad (3)$$

Where:

$TACC_{i,t}$: is the total accruals for firm (i) in year (t). $NI_{i,t}$: is the net income for firm (i) in year (t).

$OCF_{i,t}$: is the operating cash flow for firm (i) in year (t).

Table 1
Variables Measurement

Variable	Label	Measurement	Expected sign Model 1	Expected sign Model 2
<i>Dependent variables:</i>				
<i>accounting conservatism</i>				
Book to Market Ratio	BTM	The book value/market value, market value are: (number of issued shares × price per share at the end of the year)	--	--
Abnormal Accruals	ABACC	Total accruals – normal accruals	--	--
<i>Independent variables:</i>				
<i>auditing quality</i>				
Size of the audit firm	Big5	Dummy value (1 = if the audit firm among the Big five auditing firms; 0 = otherwise) Based on study of (Farag, 2005), which defined big audit firms in Jordan.	--	--
The contacts with other global audit firms	Global	Dummy value (1 = if the auditing firm have links with global audit firms; 0 = otherwise)	-	-
The client retention period	Keep	Continuous variable: years numbers of the client retention period	-	-
Auditing fees	Fees	Continuous variable: amount of auditing fees	+	+
Specialization in client's industry	Prof.	Dummy value (1 = If the audit firm specialization in the client's industry; 0 = otherwise)	-	-
<i>Control Variables</i>				
Company size	Size	Natural log of total assets (in thousands of Jordanian Dinar)	-/+	-/+
Financial leverage	Leverage	Total debt/total assets	-/+	-/+
Audit committee members	AC Mem.	Number of members of the audit committee	-/+	-/+
Audit committee experience	AC Exp.	Number of members of the audit committee which have financial experience	-/+	-/+

Second Step: Estimating the regression model: in this model slope (coefficient β) is estimated

$$\frac{TACC_{i,t}}{A_{i,t-1}} = \alpha + \beta_1 \left(\frac{1}{A_{i,t-1}} \right) + \beta_2 \left(\frac{\Delta REV_{i,t} - \Delta REC_{i,t}}{A_{i,t-1}} \right) + \beta_3 \left(\frac{PPE_{i,t}}{A_{i,t-1}} \right) + \ell_{i,t} \quad (4)$$

Where:

$TACC_{i,t}$: is the total accruals of firm (i) in year (t).

$A_{i,t-1}$: is the total assets of firm (i) at the end of year (t-1).

$\Delta REV_{i,t}$: is the change in revenues of firm (i) between years (t) and (t-1).

$\Delta REC_{i,t}$: is the change in receivables of firm (i) between years (t) and (t-1).

$PPE_{i,t}$: is the level of fixed assets of firm (i) in year (t).

$\ell_{i,t}$: random error.

Third Step, Estimating Normal Accruals: use the beta (β), which was found in the previous step for the

estimation of abnormal accruals:

$$NACC_{i,t} = \alpha + \beta_1 \left(\frac{1}{A_{i,t-1}} \right) + \beta_2 (\Delta REV_{i,t} - \Delta REC_{i,t}) + \beta_3 (PPE_{i,t}) \quad (5)$$

Where:

$NACC_{i,t}$: is the normal accruals of firm (i) in year (t).

Final Step, Estimation of the Abnormal Accruals: the abnormal accruals are measured by the difference between total accruals and normal accruals, as follows:

$$ABACC_{i,t} = TACC_{i,t} - NACC_{i,t} \quad (6)$$

Where:

$ABACC_{i,t}$: is the abnormal accruals of firm (i) in year (t).

Data Analysis and Testing of Hypotheses

This item includes three major parts: the first is concerned with the validity of the data for statistical analysis. The second deals with descriptive statistics for variables of the study from the perspective of many descriptive statistical standards, and the third tests the study hypotheses.

First Stage: Testing the Validity of Data for Statistical Analysis

Models of this study belong to the General Linear Model (GLM) that requires many conditions before being practiced. Therefore, data of this study must be tested to make sure that they meet the conditions of the GLM. What follows is testing data credibility for statistical analysis. Tables 2, 3, and 4 show the necessary tests needed to test data validity of statistical analysis.

A. Normal-Distribution Test

To secure approximation of data to normal distribution, Jarque Bera (J-B), a parametric test, was used. The decision basis was to accept the null hypothesis that the data follow normal distribution if the probability of the J-B test was more than 0.05 (Gujarati, 2003). The proximity of the testing data from the normal distribution for all continuous variables was related to the study (Auditor Fees, Company Size, Financial Leverage, Members of AC, Experience of AC, BTM, and ATP). The remaining variable (Big5, Global, Keep, and Prof.), are dichotomous variables (Dummy variables); they are not subject to the normal distribution. From Table (2), which is related to the normal distribution to the study variables, the study has found from the Jarque-Bera test that the statistical value is high, and significant value (probability) is less than 5% for all continuous variables, which means that it's not close to its normal distribution. To overcome this problem, the natural logarithm for these variables was considered. Because the size of the sample was big, not distributing the data normally may not influence credibility of the study. To support the results from the Jarque-Bera test, we used the Kolmogorov-Smirnov test, and its results support the Jarque-Bera test.

Table 2
Tests for Normal Distribution of the Continuous Variables

Variables	Jarque-Bera Test		Kolmogorov-Smirnov	
	J-B	Prob.	K-S	Prob.
Fees	1139.3	0.000	0.242	0.000
Company Size	8820.0	0.000	0.374	0.000
Financial Leverage	843.2	0.000	0.117	0.000
Members of AC	2560.1	0.000	0.540	0.000
Experience of AC	9.7	0.008	0.282	0.000
BTM	1832.2	0.000	0.185	0.000
ATP	13346.8	0.000	0.312	0.000

B. Multicollinearity Problem Test

The strength of the General Linear Model (GLM) basically depends on the hypothesis that every variable from the independent ones is by itself independent. If this condition is not realized, the GLM will then be not applicable. It can never be considered good for parameters' evaluation (Sifo & Mishal, 2003). To actualize this, the correlation matrix among independent variables was used, and the Collinearity Diagnostics Standard used an incessant tolerance quotient for every variable of the independent ones. The Variance Inflation Factor (VIF) has to be found afterwards. This test is the standard that measures the effect of independent variables. Gujarati (2003) stated that getting a VIF higher than 10 indicates that there is a multicollinearity problem for the independent variable of concern.

Table 3 shows the results of Spearman and Pearson's correlation matrix between each pair of independent variables of the sample companies, and we note that there is multicollinearity between these variables. The correlation among them is very weak but has significant statistical association relationship at the 1% and 5% levels, which means that the study model is effective in explaining and determining the effect on the dependent variable. To certify the previous result, the study uses the Collinearity Diagnostics test to support the credibility of the results.

Table 3

Spearman (top) and Pearson (bottom) Correlations Matrix between the Independent Variables

Variables	Big5	Global	Keep	Fees	Prof.	Size	Leverage	Members
Big5		0.258**	-0.066	0.473**	-0.016	0.361**	-0.067	-0.085
Global	0.258**		0.007	0.023	-0.103	0.160**	0.075	0.085
Keep	-0.066	0.007		0.038	0.518**	-0.022	0.040	-0.045
Fees	0.331**	0.222**	0.096		0.050	0.374**	-0.030	-0.052
Prof	-0.016	-0.103	0.518**	0.060		0.143*	0.095	-0.348**
Size	0.202**	0.321**	0.038	0.266**	-0.027		0.047	-0.125
Leverage	-0.092	0.090	0.031	0.094	0.091	0.077		-0.019

Significant at ** 1%; * 5% levels (2-tailed)

From Table 4, one can notice that the VIF value for all independent variables is less than 10, which means that we do not have any Collinearity problem in the models of the study.

Table 4

Variance Inflation Factor test and Autocorrelation test and Heteroskedasticity Test

Variables	Multicollinearity Test		Autocorrelation Test	Heteroskedasticity Test			Time Series Stationarity Unit Root Test	
	Tolerance	VIF		White Test			ADF	PP
Global	0.756	1.322	D-W Calculated First Model (BTM) 1.225	First Model (BTM)			-5.290	-5.491
Keep	0.693	1.443		7.140		0.000	-6.686	-8.097
Fees	0.807	1.239				-6.359	-6.655	
Prof	0.595	1.682	Second Model (ABACC) 2.344	Second Model (ABACC)			-5.085	-4.557
Company Size	0.817	1.224		0.736		0.726	-3.400	-5.467
Financial Leverage	0.883	1.133					-5.085	-6.208
Members of AC	0.832	1.203				-5.916	-5.185	
Experience of AC	0.814	1.229				-5.177	-4.728	

ADF & PP-Critical value at confidence level of 99% is -3.44, and level of 95% is -2.87

Durbin-Watson d Statistic at $k=9$ and $n=234$ is: $d_L 1.675 - d_U 1.863$

C. Autocorrelation Problem Test

The autocorrelation problem in the model emerges when the two neighboring scenes are correlated, and that influences the credibility of the model. The influence of the independent variables will be great due to that correlation. To verify that the Durbin Watson (D-W) test was used, Table 4 shows that the D-W value of the two models is beyond the d -statistic range, which is less than the minimal range d_L in first model and more than d_U in the second model. This indicates the presence of autocorrelation in these two models (Gujarati, 2003). To overcome this problem Lag1 has to be considered when testing models of the study.

D. Heteroskedasticity Problem Test

One of the significant assumptions of the classical regression models and implementation of the Ordinary Least Square (OLS) is the actual presence of Homoskedasticity. Besides, its mean should be equal to zero (Awad, 2000). If the Heteroskedasticity is present in the model, then some statistical methods will be used to overcome this problem, like using the White test, which is routinely conducted by using the E-Views program after being elicited from the program themselves. From Table 4, we find that the p -value (Prob.) of the second model is more than (0.05), which indicates admitting the null hypothesis. This model suffers from actual Heteroskedasticity, but the problem was overcome by using White. As for the first model, the p -value for the White test was less than (0.05); this proves the presence of Homoskedasticity in the model.

E. Time Series Stationarity Test

Empirical research that uses time series, like the case of this study, presupposes stability of these series. Autocorrelation might occur in the model because the time series on which this study is based is non-stationary (Gujarati, 2003). To check the Stationarity of the time series, a Unit Root test, which includes the parametric Augmented Dicky-Fuller test (ADF) and the non-parametric Phillips-Person (PP) test,

were used. From Table 4, one could notice that the absolute value for one of the two tests: the parametric (ADF) and the non-parametric (PP) were bigger than the critical value of the levels 1% and 5%, which meant acceptance of the null hypothesis that the data of time series (2001-2006) was stationary.

Second Stage: Descriptive Statistics

Table 5 reports descriptive statistics for continuous and dummy study variables. From this table, the data can be described as follows: in the dependent variable (Accounting Conservatism), we noted that the BTM ratio is positive during all years of study (2001-2006), an indication of reduced conservatism in financial statements issued by Jordanian industrial corporations. These companies have been assessed greater than their fair market value. The independent variables (auditing quality) include five variables:) the size of auditing firms, and the connection of the auditing firms with global auditing firms, the period of the auditing firms work with the client, fees of the audit firm, and the specialization in client's industry. From Table 5, we noted that the Big 5 in Jordan, which have been classified based on Farag's (2005) and Belhaj's (2006) studies, dominate the auditing market. In the link between the auditing firms with global auditing firms, we noted that one-third of the auditing firms have links with global auditing companies, which contributes to earning a lot of experience and skills in auditing.

Table 5
Descriptive Statistics

Variables	Years					
	2001	2002	2003	2004	2005	2006
<i>Part (A) Dependent variables</i>						
<i>Accounting conservatism:</i>						
BTM ratio	1.369	1.063	0.624	0.853	0.783	0.944
<i>Part (B) Independent variables:</i>						
Big	0.690	0.690	0.690	0.690	0.640	0.620
Global	0.360	0.310	0.330	0.330	0.310	0.330
Keep	0.820	0.870	0.950	0.920	0.920	0.870
Fees	8,480	9,607	11,166	10,846	11,654	12,189
Prof.	0.670	0.690	0.690	0.690	0.690	0.690
<i>Part (C) Control Variables:</i>						
Company size (000` JOD)*	30,996	33,362	34,129	63,572	75,741	40,887
Financial leverage	0.322	0.300	0.321	0.297	0.263	0.273
Audit Committee Members	3	3	3	3	3	3
Audit Committee Experience	0.366	0.411	0.407	0.407	0.401	0.407

* 1 Jordanian Dinar = 1.4 US Dollar

Table 5 shows that auditing fees in Jordan are on continuous rise from year to year. The average of auditing fees in 2001 was 8,480 JOD; the auditing fees have increased until they became 12,189 in 2006. We note that 82-95% of the auditing firms of Jordan have been working with the same clients for more than 3 years, and more than two-thirds of the auditing firms of Jordan have experience in the client's

industry. As for the control variables, we note that the market value of Jordanian industrial corporations is growing from year to year, and the dependence of the Jordanian industrial corporations on debt to finance their assets had declined in recent years, and that all Jordanian industrial corporations abide by the law of Jordan in terms of the members of auditing committee, which should not be less than 3 members, and more than two-thirds of the members of auditing committees must have a certificate in the field of finance and accounting.

Third Stage: Data Analysis and Testing of Hypotheses

First Hypothesis

The first hypothesis aims at measuring the auditing quality in Jordanian auditing firms. In order to test the auditing quality, we will test four auditing quality characteristics: size of the auditing firm, connection with other global auditing firms, client retention period, and specialization in client's industry. We used the Binomial test because the distribution of these variables is binomial distribution. The most common use of the binomial test is in cases where the null hypothesis is that two categories are equally likely to occur. The null hypothesis states there is no difference in the auditing quality in the Jordanian auditing firms. In symbols: $H_0 : p = p(\text{high - auditing quality}) = 0.5$ and $q = p(\text{low - auditing quality}) = 0.5$

The alternative hypothesis states there is difference in the auditing quality in the Jordanian auditing firms. In symbols: $H_1 : p \neq 0.5$ (and $q \neq 0.5$)

Table 6

Results of Binomial Test for Testing the First Hypothesis

Dichotomous Variables	Category	Frequencies	Observed Prop.	<i>p</i> -value (2-tailed)
Big 5	1	157	67%	0.000
	0	77	33%	
Global	1	77	33%	0.000
	0	157	67%	
Keep	1	209	89%	0.000
	0	25	11%	
Prof.	1	161	69%	0.000
	0	72	31%	

Table 6 shows the results of the Binomial test for testing the first hypothesis. From this table, we noted that the high proportion of the following auditing quality characteristics: Big 5, Keep, Prof., and *p*-values are less than 0.05; based on these results, we accepted the alternative hypothesis and rejected null hypothesis, and we can say that the auditing quality in Jordan is good. This result consistent with the results of previous studies (e. g., Abu Ijela & Hamdan, 2010).

Second Hypothesis

The study of Hamdan (2010a) concluded that the level of accounting conservatism is low in the financial statements of Jordanian industrial corporations. Hamdan's (2010a) was based on Basu's (1997) model to reach these results and coincided with the results of Yassin (2008), who used a different approach in the research. However, the study at hand, uses the BTM ratio and Abnormal Accruals to measure the level of accounting conservatism. If the coefficient of the *t*-statistic comes with a negative sign and is statistically significant, we can ensure that there is a high level of accounting conservatism. Table 7 shows the results of a One-Sample T-test to test the second hypothesis.

Table 7 is divided into two parts: Panel A shows the results of the One-Sample T-Test to measure the accounting conservatism using the abnormal accruals. This part shows that the average of abnormal accruals were negative only in two years, which are 2001 and 2002. Therefore, we cannot confirm that the financial statements issued by the Jordanian industrial corporations have an acceptable level of accounting conservatism, based on the abnormal accruals approach.

Table 7

Results of One-Sample T-test to Testing the Second Hypothesis

Indicators of accounting conservatism	One-Sample T-test		
	Mean	t-statistic	p-value
Panel A: Abnormal Accruals for years:			
2001	-2,413,878	-1.721***	0.047
2002	-3,401,123	-2.466***	0.009
2003	-1,091,947	-1.348	0.093
2004	-1,241,101	-0.709	0.241
2005	278,589	4.169**	0.000
2006	2,773,550	1.113	0.136
Panel B: Book-to-Market ratio for years:			
2001	1.340	7.903***	0.000
2002	1.210	6.185***	0.000
2003	0.624	4.320***	0.000
2004	0.853	6.052***	0.000
2005	0.786	6.320***	0.000
2006	0.944	5.738***	0.000

Significant at *** 1%; ** 5%; * 10% levels.

t-Critical: at df 39, and confidence level of 99% is 2.457 and level of 95% is 1.684 and level of 90% is 1.303

Panel (B) shows that the results of the One-Sample t-Test to measure the level of accounting conservatism by using the Book-to-Market ratio. This part shows that all the study years do not meet these conditions of accounting conservatism. Therefore, we cannot say for sure that the financial statements issued by the Jordanian industrial corporations have an acceptable level of accounting conservatism, based on the Book-to-Market ratio approach. Based on the results in Panel (A) and (B), we cannot reject the null hypothesis, and we cannot say for sure that the financial statements issued by the Jordanian industrial corporations have an acceptable level of accounting conservatism based on the BTM ratio and Abnormal Accruals.

Our findings coincided with the results of Hamdan (2010a) and Yassin (2008), who concluded that the financial statements of Jordanian industrial corporations are not characterized by an acceptable level of accounting conservatism, and with the results of Al-Sahli (2009), who found that accounting conservatism in industrial corporations in Saudi Arabia is low.

Third Hypothesis

Eventually, the study models will be tested. These models aim at identifying the impact of auditing quality on improving the level of accounting conservatism. The sample of the study consists of a group of companies (Cross Section Data) during the period of time (Time Series Data); the best regression model for these data is (Pooled Data Regression), the statistical program (E-Views) was used to test the models. Table 8 shows the results of multiple regressions for the study models.

Table 8
Results of Multiple Regressions for the Study Models

Variables	Label	Exp. sign	Model 1 (N = 234)			Model 2 (N = 234)		
			B	t-statistic	p-value	β	t-statistic	p-value
Size of the audit firm	Big 5	-	-0.517	-3.164	0.002	-0.291	-2.159	0.032
The connection with other global audit firms	Global	-	0.132	0.852	0.395	0.186	1.049	0.295
The client retention period	Keep	+	0.174	0.630	0.529	-0.918	-2.093	0.038
The auditing fees	Fees	-	0.000	-0.830	0.408	0.786	1.889	0.060
Specialty in client's industry	Prof.	-	-0.466	-1.906	0.058	-0.482	1.888	0.060
Company size	Size	-/+	0.000	-4.170	0.000	0.000	-0.066	0.948
Financial leverage	Leverage	-/+	-0.007	-0.997	0.320	-0.942	-0.768	0.443
Audit committee members	AC Mem.	-/+	-0.668	-2.591	0.010	-0.372	-1.559	0.121
Audit committee experience	AC Exp.	-/+	0.171	0.783	0.435	-0.284	-0.768	0.444

t-Critical: at df 39, and confidence level of 95% is 1.684 and level of 99% is 2.423

F-Critical (df for denominator $n-\beta-1 = 39-9-1 = 29$) and (df for numerator $=\beta = 9$) and confidence level of 95% is 2.210 and confidence level of 99% is 3.070

Size of the Auditing Firm

The previous studies indicate that the big auditing firms are able to improve the quality of financial statements and reduce the earnings management (Connie et al., 1998; Ebrahim, 2001). But Hamdan and Abu Ijela (2010) found that the big auditing firms (Big 5) in Jordan are inefficient in limiting the earnings management as regards the impact of the Big 5 in Jordan to improve the level of accounting conservatism. Table 8 shows that the relationship between the Big 5 and the BTM ratio was negative in the first model, which means that the big auditing firms are able to improve the level of accounting conservatism in financial statements. When we tested the null hypothesis ($\beta_1=0$) against the alternative hypothesis ($\beta_1\neq 0$), we found that the value of *t*-statistic is -3.164, which is greater than the critical value, and the *p*-value is less than 0.05. In the second model (which uses abnormal accruals as an indicator of accounting conservatism), Table 8 shows that the relationship between the Big 5 and the Abnormal Accruals are negative, also ($\beta_1=0.291$). The value of the *t*-statistic is -2.159, which is greater than the critical value, and the *p*-value is less than 0.05, which means the acceptance of the alternative hypothesis and rejection of the null hypothesis. Accordingly, it is possible to confirm that the big auditing firms, the Big 5, in Jordan are able to compel corporations to observe a high level of accounting conservatism when preparing financial statements.

The Relationship with Other Global Auditing Firm

The study of Hamdan and Abu Ijela (2010) did not find the impact of "The connection with other global auditing firms" on improving the earnings quality and reduction of the earnings management. About the impact of "Global" on improving the level of accounting conservatism, Table 8 shows that the relationship between the "Global" and the accounting conservatism is positive, contrary to what is expected, is not statistically significant in the two models, which means rejection of the alternative hypothesis. We cannot reject the null hypothesis, because it can be emphasized that the "connection with other global auditing firms" is not able to compel companies to force a high level of accounting conservatism when preparing financial statements.

The Client Retention Period

Many of the previous studies confirmed that the auditing firms which maintain customers for a substantial period are not able to prevent fraud in financial statements. As for the impact of “Keep” on improving the level of accounting conservatism, Table 8 shows that the relationship between the “Keep” and the (BTM) ratio are positive in first model, and this variable is not statistically significant. But in the second model, the relationship between the “Keep” and the “Abnormal Accruals” was negative and statistically significant, which means that the auditing firms which retain customers for a substantial period may improve the level of accounting conservatism in financial statements. These results differ from previous studies.

The Auditing Fees

The rise in auditing fees is an incentive for auditors to increase their efficiency to detect and prevent earnings management and to improve the quality of financial statements (Abu Ijela & Hamdan, 2010). But the impact of “Fees” to improve the level of accounting conservatism, Table 8, shows that the relationship between the “Fees” and the “MTB ratio and abnormal accruals” is positive and not statistically significant, which means rejection of the alternative hypothesis. This means that the amount of auditing fees have no role in improving accounting conservatism in financial statements.

The Specialization of the Client's Industry

Our study inquires if the auditors’ specialization in the industry of the client helps them to exert a high level of accounting conservatism. Table 8 shows that the relationship between the “Prof.” and the accounting conservatism is negative and statistically significant at 95%; we can say that the auditor specialization in the industry of the client helps improve the level of accounting conservatism.

Testing of the Control Variables

The company size: The study of Hamdan (2010b) found that the large companies are most conservative. But Sahli, (2009) did not find that there is an impact of the company size on the level of accounting conservatism. Our study used a different approach to measure accounting conservatism and found that there is a negative relationship between the company size and BTM ratio and Abnormal Accruals. This means that a positive relationship between company size and accounting conservatism exists, which indicates that large companies are the most conservative.

Financial leverage: Table 8 shows that the relationship of “Financial leverage” with the BTM ratio and Abnormal Accruals is negative. This means that there is a positive relationship between financial leverage and accounting conservatism. This means that the companies which are more dependent on debt are most conservative. However, this relationship is not statistically significant, where: t -Statistic < t -Critical and the p -value > 0.05 in the two models. The previous results are different from the results of Hamdan (2010a), who indicated that there is a negative relationship between the value of debt and the level of conservatism.

Audit committee members: Table 8 shows that the relationship of “AC Mem.” with the “BTM ratio and Abnormal Accruals” is negative. This means that there is a positive relationship between audit committee members and conservatism; however, this relationship in the first model was statistically significant, but in the second model was not significant.

Audit committee experience: Table 8 shows us that there is no statistically significant relationship between “audit committee experience” and the level of conservatism. This means that the financial experience of audit committee members does not contribute to increasing the level of conservatism in financial statements issued by Jordanian industrial corporations.

Conclusions and Recommendations

This study aims to achieve three goals. The auditing quality in Jordan was investigated, and the study found that the majority of auditing firms which audited the financial statements of Jordanian industrial corporations, are among the big auditing firms, also found out that one-third of the auditing firms have

relations with the global auditing firms, and we also found that a large percentage of Jordanian auditing firms maintain their customers for more than three years; this is reflected negatively on the auditing quality. Finally, we found that the majority of auditing firms in Jordan are specialized in the client's industry. These results give good indicators on the auditing quality in Jordan. Based on these findings, the study makes a number of recommendations, which are as follows: encouraging auditing firms to establish relationships with global auditing firms, promoting the merger of auditing firms in order to increase efficiency, ensuring the client retention period not exceed three years, and dividing the auditing firms based on their specialization in their client's industry.

The second part of the study was designed to measure the level of accounting conservatism in financial statements issued by Jordanian industrial corporations. Based on the study results, we cannot determine the existence of an acceptable level of conservatism in the financial statements issued by the Jordanian industrial corporations; we recommend that supervisors of Jordanian companies issue laws and regulations that increase the level of accounting conservatism.

The third part of the study was designed to measure the impact of auditing quality characteristics on improving the level of accounting conservatism. This is clear from the use of multiple regression models for the study that some of characteristics of auditing quality have an impact on improving the accounting conservatism; these are the size of the auditing firm, the Big 5, and specialization in client's industry (Prof.). But the other auditing quality characteristics do not have an impact on improving the accounting conservatism; they are the connection with other global auditing firms (Global) and the auditing fees (Fees). But the relationship between the client retention periods (Keep) with conservatism was in doubt, and we have not been able to prove or disprove this relationship. Based on these results, we recommend that the professional associations in Jordan (which supervise the auditing work) and the government work to improve the auditing quality in Jordan, as some of the characteristics of auditing quality have impact on the enhancement the level of conservatism.

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