The Impact of Company Size, Debt Contracts, and Type of Sector on the Level of Accounting Conservatism: An Empirical Study from Bahrain

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Abstract

The study's objective is to evaluate the role of the public sector in regulating accounting standards in Bahrain Stock Exchange (BSE) through examining its ability to oblige those companies listed on the (BSE) to present a reasonable level of accounting conservatism when preparing financial reports. In addition, the study examines the factors that affect the level of accounting conservatism in those companies with regard to company size, debt contracts, and the type of sector the company belongs to. To achieve these goals, two different methods were used to measure conservatism level and the factors influencing it. The methods are: Basu (1997) model and Book-to-Market approach. The sample of the study comprises of (50) companies listed on the (BSE) during the period 2005-2008. Findings of the study showed that the public sector of regulating accounting standards succeeded in forcing Bahrain companies to present a reasonable level of accounting conservatism. The study also found out that the financial reports of big companies were conservative, while those of the small ones were not. In addition, the debt contracts left an impact upon financial reports of accounting conservatism. Thus, companies with higher debts were more conservative than those of lower ones. Moreover, the financial reports of the service sector in Bahrain Stock Exchange were the most conservative. The findings of the study showed how significant the accounting information in Bahrain was.

Keywords: Accounting conservatism, Company size, Debt contracts, Type of sector, Bahrain stock exchange

1. Introduction

The economic sector in Bahrain developed rapidly through the last few years and that made the country one of the most important stimulators of development and a source of labor in the region. This increasing regional development together with the need for a financial mediator facilitated the flux of capitals associated with oil. This explains why the financial sector in Bahrain Stock Exchange (henceforth BSE) is the largest among other sectors. The size of the financial transactions and the overall assets in Bahrain banks are more than 120% of the total Gross Domestic Product (GDP). Bahrain reinforced that with a group of legislations and rules that regulate the economic sector. This, in turn, consolidated its increasing role as a financial sector in the region. The development of the economic sector in Bahrain was gradual and made use of the financial needs of the region in the mid 1970s. The location of Bahrain helped it to become a meeting point for both Eastern and Western financial centers, due to the drastic changes in oil in the region. This paved the way for international big companies to invest in the country. The following factors exemplified in: tax-free environment, free-remittance of money, foreign and local well-experienced labor force, high level standards, stable exchange rates, well-organized environment, and suitable legislation in the country, all consolidated the role of Bahrain as an economic and financial center in the region. This success was not void of difficulties by caused incessant fluctuations in international oil markets, regional instability, and competition among Gulf Co-Operation Countries that enforced pressures on Bahrain to develop its tools and financial products (Grigorian & Manole, 2005). Such a development in economic life should pace with development in the rules and legislations in order to control businesses, since the regulatory framework of the monetary authority was completed in compliance with rule no. 23, 1973. As a result, the state bank-Central Bank of Bahrain- was established. Due to a recommendation suggested by a joint study done by the government of the Kingdom of Bahrain and the International Finance Corporation (IFC), Bahrain Stock Exchange was established in 1987 and started work in June, 1989. The market helped in reinforcing investments in Bahrain's capital sector and in the increase of the quality and quantity of the financial and investment tools registered in the market. Financial markets oblige listed companies to abide by accounting standards to secure credence and unity of accounting practices. Securing accounting standards is subject to two methods: first is the Private-Sector Regulation of Accounting Standards which assumes that the best way to serve the public interest is to leave enacting accounting standards to the private sectors such as societies and professional organizations. The second method is the Public Sector

Regulation of Accounting Standards in which the regulation of public-sector profession is left to the government in accordance with legislations and rules that coordinate professions and create different bodies to supervise the accounting profession. Regulating the Public-Sector Accounting still faces various types of failures in several countries (Belkaoui, 2005). In the Gulf Co-Operation council the state is the authority that puts down standards and regulates them through the rules of companies and securities laws. Several attempts were made to upgrade accounting standards among which was establishing an accounting and auditory organization for the Gulf Co-Operation Council Countries in 1982. International Accounting Standards (IAS) were practiced in Gulf Co-Operation countries starting with Oman in 1986 and Kuwait in 1991. In Saudi Arabia, the Saudi Monetary Agency was the leader to abide by accounting standards in 1992. As for Arab Emirates, it adopted the International Accounting Standards in1997 in order to consolidate its position and unity of accounting practices (UAECB, 1999). As for Bahrain, it adopted the (IAS) in 1996 when the financial market obliged the listed companies to submit their financial reports in compliance with (IAS). Abiding by these standards did not exceed 73% of the companies listed on the Bahrain's stock market and did not go beyond 75% in other gulf countries (Al-Hussaini et al., 2008). Bahrain's stock exchange market still moves forward in the development strategy whose goal is to place Bahrain on the map of International Stock Markets. Many initiations were made to secure a modern infrastructure analogous to that of the developed financial markets to encourage the private sector to move towards developing and attracting foreign investments (Rao & Shankaraiah, 2003).

1.1 Issue of the Study

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 Financial Accounting Standards 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 companies listed on the (BSE), thus evaluating the public sector method in regulating accounting standards in the country. Measuring the accounting conservatism in Bahrain Stock Exchange 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 reports issued by the general joint-stock companies listed on the Bahrain Stock Exchange? What are the factors that affect the level of this conservatism?

1.2 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 reports issued by companies listed on the Bahrain Stock Exchange and the factors that affect it. Through this, the study evaluates the regulation method of the public accounting sector in Bahrain and to what extent it can oblige companies to have a reasonable level of accounting conservatism. It also evaluates the efficiency of Bahrain Stock Exchange.

2. Literature Review

The accounting conservatism concept was controversial at the turn of last century and is still until now. Despite the critiques against this principle, it still plays an important role in accounting practices (Watts, 2003). Today, in the middle of the waves of skepticism regarding financial reports, adherence to this principle became 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, 2011a) 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 a group of standards which contains a lot of conservatism among which are the following: The issuance of the (FASB) of standards for Accounting for Contingencies (SFAS5) in 1975, 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 management were conservative (Ball, 2001; Watts, 2003), 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 presenting 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 that accounting conservatism helps reduce agency costs. Finally, Hamdan (2011b) 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 and Shivakumar, 2005; Ball al et., 2008). Accounting conservatism secures, for the debtors, more strict policies in declaring profits and consequently limits profit distribution as this provides the company with a better opportunity to meet its liabilities. But Gigler at el., (2009) see that accounting conservatism reduces the efficiency of debt contracts because it changes the content of accounting, thus reducing the possibility of future prediction.

In 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, (2011a) and Yaseen, (2008) found 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 conservation, Hamdan, (2011a) 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 expected, Hamdan, (2011a) 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 Saudi Stock Exchange had an effect on accounting conservatism in financial reporting and that agreed with what the study of Labo & Zhou, (2006) reached at. The demands of 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 & 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 in being the first to measure accounting conservatism in the financial reports issued by public-joint companies listed on the (BSE), 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 Bahrain.

3. Research Methodology

Several methodologies were used in measuring the level of conservatism in financial reporting were several. Despite the difference of the results reached at sometimes by these methodologies, yet they all depended on the heterogeneous effect on returns and losses in financial reports, specifically the net assets profits and accruals (Yaseen, 2008). As this study uses two different methodologies in measuring accounting conservatism and the factors influencing it, the results obtained are more accurate. The first method is based on Basu, 1997 model known by some as Earnings Stock Returns Relation Measures. The second method is based on Book-to-Market Ratio.

3.1 Study Sample

The corpus of the study comprises of the (50) companies listed on the (BSE) which published their financial reports between 2005–2008. The sample included all the companies of the corpus including those delisted or closed, pending that they issued financial reports during period of the study.

3.2 Study Hypothesis

The study posed four null hypotheses, the first of which aims at measuring the level of accounting conservatism in the financial reports issued by the companies listed on the (BSE). The other three hypotheses aim at measuring the factors influencing the level of accounting conservatism. The hypotheses are the following:

H_{01}: There is no acceptable level of accounting conservation in financial reports issued by the companies listed on the (BSE).

H_{02}: There is no statistically significant impact of the company size on the level of accounting conservation in the financial report issued by the companies listed on the (BSE).

H_{03}: There is no statistically significant impact of the debt contracts on the level of accounting conservation in the financial report issued by the companies listed on the (BSE).

H_{04}: The economic sectors listed in BSE are similar, with regard to the level of conservatism, in their financial reports.

3.3 Study Models

The study used two different methods in measuring conservatism and the factors influencing it. Thus, the Basu 1997 model was the first model to be used, but the second method is the one that depends on the market in measuring accounting conservatism. These methods are:

3.3.1 The First Method

The Basu 1997 model will be adopted here. It is based on the fact that accountants usually tend to admit unrealized losses before the unrealized earnings (Al-Sahli, 2009). The present realized earnings which include future losses, not the earnings expected to be more sensitive to bad news than the good ones (Basu, 1997). This means that conservatism did not allow simultaneous admissions of economic events when reporting earnings (Yaseen, 2008) because bad news will be more effective on earnings than good ones. It is then expected that earnings will be more related to stock trading through the period of bad news than good ones. Thus, conservatism measurement is the difference between stock trading and earnings' indicator during the period of bad news and its relation to periods of good news (Givoly & Hayn, 2000).

Basu's, 1997 model uses Reverse Regression for the earnings ($X_{i,t}$) divided by closure share price at the end of last year ($P_{i,t-1}$) on the return ($R_{i,t}$) according to the following regression model:

$$X_{i,t} / P_{i,t-1} = \alpha_0 + \alpha_1 DR_{i,t} + \beta_0 R_{i,t} + \beta_1 (R_{i,t} \times DR_{i,t}) \quad (1)$$

Where:

$X_{i,t}$: means earnings per share of the company (i), during period (t).

$P_{i,t-1}$: share price of the company (i), at the beginning of period (t) or closure of the year (t-1).

Ri,t = Returns (net income) of the company (i) during period (t).

$DR_{i,t}$ = Dummy variable which equals (1) if ($R_{i,t}$) is less than zero (net loss) and (0) if ($R_{i,t}$) is more than zero (net profit)

Using Basu Model in Testing the First Hypothesis: Level of Accounting Conservatism

This model will be used to test the first hypothesis whose goal is to measure the level of accounting conservatism as parameters of this model are assessed. If the R–squared is higher regarding the negative return ($R_{i,t} < 0$) which represents bad news –expected loss– than the positive return ($R_{i,t} > 0$) which represents good news, then the earnings are more in concurrence with bad news (Al-Sahli, 2009). Then, financial reports will eventually be more conservative, for earnings are more sensitive to bad news, than good ones, then the (β) will be higher for the negative earning than the positive one (Basu, 1997). Therefore, the presence of a suitable level of accounting conservatism means that the variable ($R_{i,t} \times DR_{i,t}$) will be statistically important in the model of Basu (1997).

Using Basu Model in Testing the Second Hypothesis: The Influence of Company Size on the Level of Accounting Conservatism

The aim of the second hypothesis is to measure the influence of the company size on the level of accounting conservatism. In other words, it tries to test what past studies concluded that big companies are more conservative than the small ones. It also tries to know how to use Basu 1997 model in measuring the effect of size on the level of conservatism. The Mean of total assets of every individual company between 2005-2008 was taken into consideration. Then the Mean of total assets of all the companies was taken as well. If the Mean of the total assets of the company through the study period was more than the general Mean, the company was then considered big, but less than that of small size. The number of big companies was (11) and the number of small ones (39). Afterwards, Basu 1997 model would be used to evaluate big and small companies individually. To measure the degree of conservatism of any company, the ($R_{i,t} \times DR_{i,t}$) should be statistically significant. To compare big companies with small ones regarding conservatism, the Adjusted R–squared used in comparing models should be considered. The higher this parameter was, the higher the degree of accounting conservatism would be.

Using Basu Model in Testing the Third Hypothesis: The Influence of Debt Contracts on Accounting Conservatism

Several past studies examined the influence of debt contracts on the level of accounting conservatism in financial reports and whether or not the debtors could force the company to have a high level of conservatism in its financial reports. This is what the third hypothesis of this study aims at. To use Basu 1997 model in measuring the influence of debt contracts on the level of conservatism, the study used the Financial Leverage in considering the (50) company sample for four years by dividing the total liabilities of the company on the shareholders' equity, then considering the Mean of financial leverage of every company during the period of study. Afterwards, the Mean of financial leverage for all companies was taken into consideration. If the Mean of the financial leverage of the company through the period of study was found to be more than the general average, then the company was regarded a high-debt one, less than that a low-debt one. The high debt companies were (24) and the low-debt ones (26). After classifying sample companies with regard to debt size, Basu 1997 model will be used to evaluate every category comparing all, with reference to the decision previously taken.

Using Basu Model in Testing the Fourth Hypothesis: Discrepancy between Economic Sectors in the Degree of Accounting Conservatism

The fourth hypothesis examines the impact of the type of the sector of the company on the degree of conservatism in its financial reports. There are six sectors in (BSE) which are; Commercial Bank, Hotels and Tourism, Industrial, Insurance, Investment, and Service. To get along with past studies and to make comparison easier, companies were divided into three sectors: financial (including banks, investments, and insurance), services (including services, hotels, and tourism), and finally, the industrial sector. The number of the companies in the financial sector were (30), services (15), and industrial the smallest among them were (5). After classifying the sample companies from the economic sectors, Basu 1997 model would be used to asses every sector and then compare them all, with reference to the decision taken previously.

3.3.2 The Second Method

To ensure the results reached at through using Basu, 1997 model, the study used a different model to measure the level of conservatism in financial reports and the factors influencing it. The model is:

Book-to-Market Approach for Testing the Level of Accounting Conservatism

Contrary to Basu 1997 model of accounting conservatism, many studies referred to the book-to-Market (BTM) as one of the indicators of accounting conservatism. The theoretical frame developed by Beaver & Ryan (2000), used by few studies like those of (Ahmed & Duellman, 2007; LaFond & Royohowdhury, 2007; Jain & Rezaee, 2004; Ahmed et al., 2002; Givoly & Hayn, 2000) proposed using BTM to measure conservatism. The Book-to-Market ratio value is used to test share value in comparison with the market value. The book value is gotten through dividing (total equity deducted from outstanding shares) on the average weighted of the number of outstanding shares. The market value is the closing price of the share at the end of the year.

Testing the first hypothesis using the Book-to-Market Approach will be gotten through considering the difference between the book and market values using the Parametric Independent Sample t-test and Non-Parametric Mann-Whitney test. If the parameter of this test was negative with a statistical significance, that meant the book value was less than the market's during an incessant period of time. Such a thing reflected the use of prejudiced accounting policies which hastened admitting expenses and loss, but delayed admitting incomes and returns. Beaver & Ryan, (2005); Jain & Rezaee, (2004) noted that reducing the ratio of book value to less than one compared to the market value refers to a reasonable level of accounting conservatism in the financial report.

Testing Factors Influencing the Degree of Accounting Conservatism Using the Book-to-Market Approach

The second method of testing the factors influencing the level of accounting conservatism is evaluated through the size Regression Method, debt, and type of sector compared to the Book-to-Market value as the following regression method shows:

$$BTM_{i,t} = \beta_0 + \beta_1 Size_{i,t} + \beta_2 Leverage_{i,t} + \beta_3 Sector_{i,t} + \ell_{i,t} \quad (2)$$

Where:

$BTM_{i,t}$: Dependent variable, Book-to-Market ratio as an indicator of the level of accounting conservatism of company (i) in the year (t).

β_0: Constant value.

$\beta_{1..3}$: Slope value of independent variable.

$Size_{i,t}$: First independent variable, company size (i) natural log of total assets in the year (t).

$Leverage_{i,t}$: Second independent variable, financial leverage (Total debt/total assets) as an indicator of the size of the company's debt (i) (debt contracts) in the year (t).

$Sector_{i,t}$: The third independent variable, the company sector (i) in the year (t) it is dummy variable, (1) if the company belongs to financial sector, (2) if it belongs to industrial sector, (3) if it belongs to service sector.

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

Because the data of this study are a cross section data (50 companies), and Time Series Data (between 2005-2008), for this, the suitable regression model to evaluate this relation is the Pooled Data Regression.

4. Data Analysis and Hypotheses Testing

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

4.1 Descriptive Statistics

Table (1) shows the descriptive statistical standards of the study variables from which we note that Earnings per Share (EPS) of the companies listed on the BSE continued rising since 2005-2007. The highest earning per share was in 2006, but the standard deviation was big in that year which reflects the difference of share earnings among those companies. The returns per share did not cope with the net income of those companies. Such a thing reflects the difference in the number of outstanding shares from one year to another, without coping with net income. As for the book and market values of Bahrain companies, one notices that 2008 witnessed a great reduction in both book and market values which might be referred back to the global financial crisis. But we noticed that the market value sustained its level through the first three years of the study and remained higher than the book value throughout those years. The apparent coping between the book and market values did not go in line with the size of the company measured by total assets. We also noticed that the total assets were steadily increasing from one year to another till 2008 in which the assets of companies listed on the BSE reached their highest value during the period of study. The increase in assets was accompanied by a constant increase, depending on debts, to finance those assets which were more than 40%. Finally, we noticed that the financial sector was the largest among economic sectors in Bahrain followed by the service sector. The smallest was the industrial. Such a thing copes with the general tendency of Bahrain's economy.

4.2 Testing Data Validity

Models of this study belong to 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 general linear model. What follows is testing data credibility for statistical analysis. Table (2) shows the necessary tests needed to test data validity of statistical analysis.

4.2.1 Normal Distribution Test

To secure approximation of data to normal distribution, Jarque Bera parametric test was used. The decision basis was to accept the null hypothesis that the data follow normal distribution if the probability of (J-B) test was more than 0.05 (Gujarati, 2003). From part (A) table (2), we notice that the (J-B) probability for all variables of the two models, first and second, was less than 0.05; that implies it was far away from normal distribution. What reinforces this result is the Skewness which was not close to zero and Kurtosis which was not close to (3). This ascertains that the study data are not close to normal distribution. To overcome this problem, 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.

4.2.2 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 time series on which this study is based is non-stationary (Gujarati, 2003). To check Stationarity of time series, Unit Root test, which includes the parametric Augmented Dicky-Fuller test (ADF), and the non-parametric Phillips-Person (PP) test, was used. From part (A) table (2) one could notice that the absolute value for one of the two tests: the parametric (ADF) and the non-parametric (PP), was bigger than the critical value of the levels 1% and 5% which meant acceptance of the null hypothesis that the data of time series (2005-2008) was stationary.

4.2.3 Multicollinearity 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 general linear model will then be inapplicable. It can never be considered good for parameters' evaluation (Sifo & Mishal, 2003). To actualize this, Collinearity Diagnostics Standard used incessant Tolerance quotient for every variable of the independent ones. 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. From part (C) table (2) 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.

4.2.4 Autocorrelation 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, Durbin Watson (D-W) test was used. Part (D) in table (2) model 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. This indicates the presence of a positive autocorrelation between these two models (Gujarati, 2003). To overcome this problem (Lag1) has to be considered when testing models of the study.

4.2.5 Homoskedasticity 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 (White) test which is routinely conducted, using (E-Views) program after being elicited from the program themselves. From part (D) of table (2), we find that *p*-value of the first 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 second model, the *p*-value for (White) test was less than (0.05); this proves the presence of Homoskedasticity in the model.

4.3 Testing Hypotheses

After securing the validity of data for statistical analyses, testing study models became possible. The level of accounting conservatism in the financial reports issued by companies listed on the BSE was measured, adopting two different approaches. The factors influencing this conservatism were studied as well.

4.3.1 Testing the First Hypothesis

The level of accounting will be measured through the Basu, 1997 evaluation model. To ensure that the Book-to-Market approach was used. Part (A) in table (3) shows testing of the first hypothesis.

Using Basu Model to Measure the Level of Accounting Conservatism

Testing the presence of conservatism in the financial reports of the companies is measured through earnings which include bad news (negative return). This means that the variable ($R_{i,t}\times DR_{i,t}$)in Basu model should be statistically important. In part (A) of table (3) we find that the variable ($R_{i,t}$ return) in the model has no statistical significance. This means that net earnings of the company does not affect the share return. Thus, accounting information plays no role in BSE. When the first null hypothesis was tested, it was found that the financial report of companies listed on the BSE showed no conservatism. This could be arithmetically expressed as follows: (H_0: $\beta_2=0$) for the substitution hypothesis (H_a: $\beta_2\neq0$), the (β) of the variable ($R_{i,t}\times DR_{i,t}$) is statistically significant when the t-test is more than its tabulated value and the probability (*p*-value) is less than (0.05). Therefore, we reject the null hypothesis and accept the alternative one instead. Thus, we might say that the financial reports issued by the companies listed on the BSE are conservative.

Measuring Accounting Conservatism using BTM Approach

The second approach of measuring the level of accounting conservatism in the financial reports issued by companies listed on the BSE is BTM. The presence of a reasonable level of accounting conservatism means that the Book Value (BV) is less than that of the Market Value (MV) through a certain period of time. This indicates that certain accounting policies were used and those were biased in admitting loss and lower values of the assets. The company would be eventually evaluated less than its real value which might be evaluated higher in the market as the following formula (BV-MV<0) shows. By testing the null hypothesis according to which there is no reasonable level of accounting conservatism as expressed in the following (H_0: BV-MV≥0) in opposition to the alternative hypothesis according to which there is a reasonable level of conservatism. The book value is less than that of the market and this is explained as follows (H_1: BV-MV<0). In testing this hypothesis, two kinds of tests were used: the parametric and the non-parametric. The rule of having a reasonable level of conservatism stipulates that the outcome of these tests must be negative with statistical significance. From part (B) table (3), we notice that the *t*-Statistic of the independent sample test was negative with statistical significance. The *z*-Statistic of the non-parametric, White Mann-Whitney test was also negative with statistical significance of two levels 5% and 1%. This means that the parametric and the non-parametric test results reinforce each other in the approach of BTM. It also indicates that there is a reasonable level of accounting in the financial reports issued by the companies listed on the BSE. The results of this approach consolidate those reached at by using Basu model.

4.3.2 Testing the Second Hypothesis

The second hypothesis is concerned with examining the influence of company size on the level of accounting conservatism in its financial reports. The hypothesis was tested by using two different approaches: the first was the Basu 1997 model and the second was based on size regression company size on BTM ratio.

Testing the Influence of Company Size on the Level of Accounting Conservatism using Basu Model

To examine the effect of company size on the level of accounting conservatism using Basu model, it was assessed for both big and small companies divided according to the size of their assets. The results were presented in table (4) part (A). The table shows that the variable ($R_{i,t}\times DR_{i,t}$) in the model of big companies was with statistical significance. Such a thing reflected the presence of a reasonable level of accounting conservatism in the big companies of BSE. This is viewed from the perspective that big companies adhere to conservatism in preparing their financial reports in order to avoid political costs, governmental alertness, financial analysts, and high level control of the corporate governance. As for the small companies, there is a low level of conservatism in their financial, the variable ($R_{i,t}\times DR_{i,t}$) does have a statistical significance. As a result, the alternative hypothesis is accepted while the null hypothesis is rejected. Generally speaking, the size of the company affects the level of accounting conservatism when preparing financial reports. The big companies are more conservative than the small ones. This reinforces the formula that Adjusted R^2 is bigger in models of big companies than in small ones.

Testing the Influence of Company Size on the Level of Accounting Conservatism Using the Book-to-Market Approach

To certify the test results of the company size on the level of accounting conservatism the regression model of company size on, the Book-to-Market ratio was assessed. From table (5) the size variable (β_1) was positive which shows the reversal relation between the level of accounting conservatism and company size. This variable did not have any statistical significance at level 5% or 1%. Consequently, the size of the company had no influence on the level of accounting conservatism. The results based on the Book-to-Market approach were different from the results reached at in Basu 1997 model. Thus, if we want to outweigh one of the two results, we take those of Basu model because the results based on Book-to-Market approach might be less accurate for the regression model includes variables not found in the model. The result reached through using Basu 1997 model copes with the results of past studies concerned with similar things.

4.3.3 Testing the Third Hypothesis

Testing the Influence of debt Contracts on the level of conservatism using Basu Model

In the third hypothesis, we examine the influence of debt contracts on the level of accounting conservatism and question whether the more in debt companies are more conservative. In part (B) table (4) we notice that the companies of more financial leverage are conservative regarding the financial reports issued by them, as the variable ($R_{i,t}\times DR_{i,t}$) shows a statistical significance. The financial reports of the less financial leverage companies are characterized by accounting conservatism. It seems that the companies of high debts were more conservative for the Adjusted R^2 of companies with higher debts was more than that of lower in-debt ones.

Testing the Influence of debt Contracts on the Level of Accounting Conservatism Using the Book-to-Market Approach

To assure the influence of debt on the level of accounting conservatism, the regression of financial Leverage on the BTM value was assessed. From table (5) we notice that (β_2) of the financial leverage variable was negative. This shows that there is a positive relation between the level of accounting conservatism and size of the debt of the company. This variable was of statistical significance at level 5% and 1%. Thus, there is an influence of the debt contracts on the level of accounting conservatism, as companies of higher debts are more conservative. The results reached at through using the BTM approach agree with those of the Basu 1997 model. Consequently, we might reject the null hypothesis and accept the alternative hypothesis instead. The size of company debt affects the level of accounting conservatism of that company. The financial reports of companies with higher debts were more conservative.

4.3.4 Testing the Fourth Hypothesis

The aim of this hypothesis is to know the difference in the economic sectors in BSE regarding the level of accounting conservatism in their financial reports. The sectors, therefore, are divided into three types: financial sector, industrial sector, and service sector. The hypothesis then is tested using Basu 1997 model and the BTM approach. The results were as follows:

The Influence of the Sector Type on Accounting Conservatism using Basu Model

The Basu 1997 model in the three sectors in BSE was evaluated. Because the industrial sector in BSE was small (5 companies only), its companies did not suffer from any losses between 2005-2008. Therefore, it was difficult for us to evaluate Basu model in this sector. We were satisfied with the financial and service sectors. The results are presented in table (4) part (C). From this table, one could notice that the (30) financial sector companies were distinguished for their reports which showed accounting conservatism. The (15) companies of the service sector also issued reports reflecting accounting conservatism. We also noticed that the financial reports of the service companies were more conservative than those of the financial sector companies because the adjusted (R^2) of the former was more than that of the latter.

Influence of the Type of Sector on Accounting Conservatism through Using Book-to-Market Approach

In examining the influence of the type of sector on the level of accounting conservatism, dummy variables were used. The three sectors were given three numbers: the financial no. (1), the industrial (2), and the services (3).The regression of the type of sector on BTM value was assessed. From table (5) the (β_3) of the sector variable was negative. This indicates that the industrial and service sectors were more conservative than the financial, as this variable showed statistical significance. Thus, we might say that the type of the sector influences the level of accounting conservatism while preparing financial reports. Such a thing consolidates what was reached at by Basu 1997 model.

5. Discussion of Findings and Recommendations

Bahrain witnessed a steady quick development in economic life. Such a development should go side by side with a similar development in legislations and laws to control economic life exemplified in organizing accounting and auditing profession. Bahrain committed itself to apply International Accounting Standards (IAS) and abide by the accounting standards of GCC. It issued a group of legislations to control work in BSE. What was remarkable about accounting profession in Bahrain was its subjection to Public Sector Regulation of Accounting Standards which failed in forcing companies in several countries to have a reasonable level of accounting conservatism. This is the springboard from which the idea of this study emerged. The idea aims at measuring the level of accounting conservatism in the financial reports issued by the companies listed on the BSE. The study was similar to other ones conducted in Jordan and Saudi Arabia. To achieve the objectives of this study, two methods were adopted in order to measure the level of accounting conservatism and the factors influencing Bahrain companies. The models were: Basu 1997 model and Book-to-Market Approach. The study concluded with significant results which are:

We measured the level of accounting conservatism in the financial reports of all Bahrain companies through using the Basu 1997 model. It was clear from the results that the financial reports issued by those companies were conservative. To reinforce these results, we also used the BTM ratio to test the accounting conservatism in the financial reports, using the Parametric and non-parametric tests. All of them assured the results reached at by Basu 1997 model which revealed that the financial reports issued by Bahrain companies were all distinguished for the reasonable level they had. Such a result did not agree with the results of past studies conducted in similar environments like the study of (Hamdan, 2011a) which disclosed that the financial reports of Jordanian companies never had accounting conservatism. So did (Al-Sahli's, 2009) study which also showed that Saudi companies never presented any accounting conservatism when preparing financial results. Many studies conducted in other environments (see Ball, Kothari, Robin, 2000; Ball, Robin, Sadka, 2008). Accounting conservatism in BSE showed an increasing demand for: accounting information in BSE, more powerful censorship by owners, more financial analysts, and more governmental bodies.

After evaluating the level of accounting conservatism in all Bahrain companies, we investigated the influencing factors on the conservatism level. We proposed three factors: company size, debt contracts, and the type of sector to which the company belongs. We tested the influence of such factors, using Basu 1997 model and the Book-to-Market approach. The results were as follows:

Regarding the influence of company size on the level of accounting conservatism, we tested this relation by using Basu 1997 model. We divided the companies into big and small according to the size of their assets. Afterwards, we assessed the Basu 1997 model in both the small and big companies. It was obvious that the company size had an influence on the level of accounting conservatism i. e the financial reports of the big companies were more conservative than those of the small ones. This might be referred back to the desire of big companies to shun the political costs that might emerge from disclosing great earnings or values of big assets and to avoid the increasing censorship of government, financial analysts, and the more governance over them than over the small companies. This result agrees with the study of Hamdan (2011a) which proved the influence of the size on the level of conservatism in Jordanian companies.

To verify these results, we examined the regression of company size on BTM ratio to the market value. The results were different from the findings arrived at by using the Basu 1997 model. The relation, in the second model, between the size and the level of accounting conservatism was negative with no statistical significance. This implies that there is no influence of the company size on its accounting conservatism. Such a result agrees with Al-Sahli's (2009) study which disclosed that company size did not influence the level of conservatism, though the small size companies in Saudi financial market were more conservative.

Regarding the influence of debt contracts on the level of accounting conservatism in the financial reports of the Bahraini company, we divided companies according to their financial leverage and evaluated the Basu model for the companies of high debts with those of low debts. It was clear that the financial reports of both the high debt companies and the low debt ones reflected accounting conservatism. But companies of high debts were more conservative. In verifying these results, it was clear that the financial leverage slop of the second model was positive with statistical significance. Such a finding implies that the size of debts (Debt contracts) influences the level of conservatism. This consolidates the findings reached at in the first model that debt contracts influence the company's accounting conservatism. This also reflects the pressure enforced by debtors on the company's

management to be conservative in the disclosure of earnings and high level assets. This result agrees with Hamdan's (2011a) study which found out that debt contracts had an effect on the level of accounting conservatism, but differs with it in that companies of high debts in Bahrain were more conservative, while Hamdan's revealed that the low-debt companies in Jordan were more conservative. Al- Sahli's (2009) study did not find any influence of debt on the level of accounting conservatism in the companies listed on the Saudi market.

Finally, in the fourth hypothesis, the economic sectors in BSE were put into comparison regarding the level of accounting conservatism. The service sector was found to be more conservative than the financial one. This result was based on Basu 1997 model and BTM approach in relation to the market value. The reports issued by financial sectors were usually distinguished for accounting conservatism due to the nature of the sector that needed a high level of conservatism when disclosing earnings and assets value. Many past studies made clear that the financial sector was distinguished for having a reasonable level of conservatism more than any other sectors (Hamdan, 2011a; Yaseen, 2008; Ahmed & Duellman, 2007; Lara & Osma & Penalva, 2007; Beaver & Ryan, 2005). Our study found out that the financial reports issued by the financial sector showed accounting conservatism, but at a lesser degree. The study of Sahli (2009) found out that the financial sector in Saudi Stock Exchange did not show any distinction in its reports regarding accounting conservatism.

The findings of this study reflect the success of the method of Bahrain's general standards of accounting in obliging the companies to present a reasonable level of accounting conservatism. The regulating and supervising authorities should force these companies to increase their commitment to accounting conservatism and to force, as well, the other sectors to have a reasonable level of conservatism. Such findings will contribute to the quality of accounting information, the ability to assess the present status, and the prediction of the future.

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Table 1. Descriptive Statistics

Variables	Years	Mean	St. Dev.	Min. value	Max. value
EPS	2005	1.534	9.478	0.000	62.959
	2006	3.077	20.943	-0.104	145.150
	2007	1.684	11.409	-0.068	79.920
	2008	0.029	0.085	-0.228	0.309
Net income (BD '000)	2005	20,625	26,789	3	104,464
	2006	14,181	55,733	-304,999	113,967
	2007	24,970	35,001	-3,252	128,204
	2008	12,479	63,825	-331,760	125,170
Book value	2005	34.741	220.975	0.049	1467.000
	2006	40.610	277.334	0.061	1922.000
	2007	36.485	251.347	0.063	1760.000
	2008	0.493	0.434	0.064	1.930
Market value	2005	54.055	351.577	0.000	2360.000
	2006	51.487	345.551	0.035	2370.000
	2007	55.887	379.307	0.035	2629.000
	2008	30.973	212.630	0.035	1489.000
Corporations size (BD '000)	2005	529,856	1,289,270	4,139	6,630,676
	2006	730,794	1,708,704	4,364	8,445,554
	2007	919,550	2,223,686	4,878	12,344,488
	2008	986,435	2,242,988	5,250	10,739,222
Financial Leverage	2005	0.406	0.284	0.026	0.888
	2006	0.410	0.288	0.000	0.912
	2007	0.422	0.288	0.001	0.934
	2008	0.450	0.299	0.001	0.927
Sectors					
	Financial		Industrial		Services
Frequency	30		5		15
Percent	60		10		30

1 BD = 2.652 US Dollar

Table 2. Test the validity of data for statistical analysis

Model 1							Model 2		
Panel A: Normal Distribution Test: Jarque-Bera Test									
Variable	J-B	*p*-value	Skewness	Kurtosis	Variable	J-B	*p*-value	Skewness	Kurtosis
EPS ($X_{i,t}$)	54,661	0.000	8.932	87.467	BTM	8,475	0.000	5.620	34.387
Price ($P_{i,t-1}$)	29,084	0.000	7.847	63.989	Size	2,118	0.000	3.752	17.883
Net income ($R_{i,t}$)	5,113	0.000	-3.342	28.546	Leverage	14	0.000	0.173	1.675
Panel B: Time Series Stationarity Test: Augmented Dicky-Fuller and Phillips-Person Tests									
Variable	PP			ADF	Variable	PP			ADF
EPS ($X_{i,t}$)	-3.164			0.253	BTM	-4.424			-4.404
Price ($P_{i,t-1}$)	3.162			-0.181	Size	-3.602			-3.994
Net income ($R_{i,t}$)	-11.090			-5.925	Leverage	-5.589			-4.700
Panel C: Multicollinearity Test: Collinearity Statistics Test									
Variable	Tolerance			VIF	Variable	Tolerance			VIF
$DR_{i,t}$	0.119			8.403	Size	0.764			1.309
$R_{i,t}$	0.514			1.946	Leverage	0.544			1.838
$R_{i,t}\times DR_{i,t}$	0.121			8.264	Sector	0.653			1.531
Panel D: Autocorrelation and Homoskedasticity Tests:									
Variable	D-W		F (White)	*p*-value (White)	Variable	D-W		F (White)	*p*-value (White)
$X_{i,t}/P_{i,t-1}$	0.991		0.918	0.471	BTM	0.231		3.202	0.005

ADF critical value at confidence level of 99% is -3.475, and level of 95% is -2.881

PP critical value at confidence level of 99% is -3.469, and level of 95% is -2.878

Durbin–Watson *d* Statistic at k=3 and n=200 is: d_L1.738 – d_U1.799

Table 3. Testing of the first hypothesis

Panel A: Measurement of accounting conservatism using Basu model			
Variable	Coefficient (β)	*t*-Statistic	*p*-value
$DR_{i,t}$	1.084	1.333	0.185
$R_{i,t}$	0.000	-1.755	0.082
$R_{i,t}\times DR_{i,t}$	0.000	2.115**	0.036
R-squared	-0.697		
Panel B: Measurement of accounting conservatism using BTM			
Mean:	Book Value	Book Market	BTM Ratio
	28.429	47.898	1.284
Parametric Test: Independent Sample t-Test		Non-Parametric Test: Mann-Whitney Test	
t-Statistic	*p*-value	*Z*-Statistic	*p*-value
-1.993**	0.048	-2.872**	0.004

Significant at **1%; *5% levels

t-Critical value at df 199 and 1% level is 2.358 and at 5% is 1.658

z-Critical value 1.65

Table 4. Estimating of Basu Model

Panel A: the effect of corporations size on accounting conservatism using Basu model						
	Big Corporations (n=11)			Small Corporations (n=39)		
Variable	Coefficient (β)	*t*-Statistic	*p*-value	Coefficient (β)	*t*-Statistic	*p*-value
$DR_{i,t}$	0.531	27.723	0.000	1.807	1.459	0.148
$R_{i,t}$	0.000	0.388	0.702	0.000	-1.086	0.280
$R_{i,t}\times DR_{i,t}$	0.000	6.015**	0.000	0.000	1.527	0.130
Adjusted R^2	0.002			-0.690		
Panel B: the effect of debt on accounting conservatism using Basu model						
	High Financial Leverage (n=24)			Low Financial Leverage (n=26)		
Variable	Coefficient (β)	*t*-Statistic	*p*-value	Coefficient (β)	*t*-Statistic	*p*-value
$DR_{i,t}$	-0.012	-0.370	0.713	2.184	1.518	0.134
$R_{i,t}$	0.000	-2.056**	0.044	0.000	-1.098	0.277
$R_{i,t}\times DR_{i,t}$	0.000	2.626**	0.011	0.000	1.957**	0.055
Adjusted R^2	-0.008			-0.623		
Panel C: the effect of sector type on accounting conservatism using Basu model						
	Financial Sector (n=30)			Services Sector (n=15)		
Variable	Coefficient (β)	*t*-Statistic	*p*-value	Coefficient (β)	*t*-Statistic	*p*-value
$DR_{i,t}$	1.126	1.133	0.261	0.075	1.756	0.088
$R_{i,t}$	0.000	-1.532	0.130	0.000	-1.987**	0.055
$R_{i,t}\times DR_{i,t}$	0.000	2.195**	0.031	0.000	2.816**	0.008
Adjusted R^2	-0.721			0.286		

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

t-Critical value at df 199 and 1% level is 2.358 and at 5% is 1.658

Table 5. Estimating of Second Model:

Pooled Least Squares			
Variable	Coefficient (β)	t-Statistic	p-value
Constant	4.919	2.631	0.010
Company size	0.000	0.482	0.630
Financial leverage	-3.758	-2.333**	0.020
Sectors	-1.160	-2.152**	0.033
R-squared	-0.327		
Adjusted R-squared	-0.357		

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

t-Critical value at df 199 and 1% level is 2.358 and at 5% is 1.658