Impact of financial leverage on accounting conservatism application: the case of Vietnam

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Abstract

This research is conducted to investigate the impact level of financial leverage on the application of accounting conservatism principles of listed firms in Vietnam. Data were collected from audited financial statements of listed firms in the period from 2009 to 2018. The study employs fixed effect model (FEM), random effect model (REM), and generalized least squares (GLS). We measure accounting conservatism based on the models of (Ball and Shivakumar, 2005) and (Givoly and Hayn, 2000). The results show that financial leverage has a positive effect on accounting conservatism. In addition, we also examine a number of control variables such as corporate governance, state ownership, foreign ownership and firm size influencing accounting conservatism, but the results were not consistent between the two models. The findings are a useful basis to help listed firms determine the capital structure of the business reasonably, thereby help listed firms consider when applying accounting conservatism in particular and the accounting principles in general.

Keywords: financial leverage; accounting conservatism; operating firm.

1. Introduction

One of the most important issues in accounting is valuation in order to determine the monetary value of the accounting objects for the purpose of recording and preparing financial statements. However, in many cases, the value of some accounting objects is determined under uncertain conditions, then the estimation of their values is made according to a basic accounting principle (i.e. accounting conservatism). Prudence is one of the basic principles of accounting, affecting the recognition, measurement and presentation of items in the financial statements. Accounnting conservatism was a subject of considerable debate in the field of

accounting in the early twentieth century and until now, the debate about the application of this principle still exists. The recognition of accounting subjects according to accounting conservatism will generally lead to the firm's book value being undervalued in comparison with their market value (Feltham and Ohlson, 1995); (Zhang, 2000); (Beaver and Ryan, 2000); (Penman and Zhang, 2002). As a result, this principle has been criticized by a number of studies and argued that it conflicts with the requirements of the accounting information neutrality. Meanwhile, studies of (Ahmed et al., 2002), (Watts, 2003a), (Francis et al., 2004), (Ahmed and Duellman, 2007) again pointed out that accounting conservatism is still very useful and contributes protecting the interests of creditors, firm shareholders. (Basu, 1997) affirmed that accounting conservatism has influenced accounting practices for at least five hundred years, and (Sterling, 2014) emphasized the important influence of accounting conservatism on the valuation principles in accounting. Its long-term existence proves that despite the arguments against it, accounting conservatism plays an important role in accounting practice.

How does a firm optimize its capital structure? The basic objective of optimizing capital structure is to make decisions about the proportion of components of capital resources, including debt and equity to maximize the value of the business while minimizing the cost of capital. How does the leverage theory of contractual relationships affect leverage firms to the extent of accounting conservatism application?. Accordingly, given the trend of more and more research proposals that support the application of fair value caculation to accounting conservatism and criticism practices, the analysis, evaluation as well as the impact of financial leverage on the application of accounting conservatism in the context of emerging countries like Vietnam is really necessary and significant.

2. Theoretical Framework

2.1. Conservatism principle

Conservatism is one of the basic accounting principles and a requirement mentioned several occasions in accounting activities. The implementation of this principle will influence the valuation of the items presented in the financial statements, thereby influencing the accuracy, reliability and practice of accounting information. The vital role of implementing this principle has been recognized by the International Accounting Standards Board (IASB) when incorporating the concept of prudence into the Conceptual Framework as well as the requirement for the implementation of accounting conservatism that is present in many

accounting standards. Along with the development of the economy, the practice of accounting has shown the need of completing this principle when evaluating the value, making and presenting items in the financial statements.

The concept of conservatism was first introduced by IASB in the Financial Reporting Framework for 1989 and is considered a basic requirement of accounting information. The application of accounting conservatism will influence the reliability of accounting data, thereby influencing the economic decisions of financial statement users. Due to uncertain transactions and events during the preparation and presentation of financial statements; such as receivable may not be recovered, assets may suffer market value decrease, prepaid expenses related to many accounting periods, goodwill of an entity in the business combination, etc. In such a circumstance, in order to limit the event that the entity does not reflect the actual financial situation or business results, such as understatement of liabilities, overstatement of assets. IASB requires accountants to consider carefully in evaluating, recording and presenting uncertainty. The careful analysis is to make sure that assets and income are not overestimated, while costs and liabilities are not underestimated. There is also an asymmetry with respect to the timing of recording good and bad information about the business. Accordingly, good information (rising revenue, increasing assets) is only recorded when there is solid evidence; and bad information (increasing costs, reducing assets) will be recorded when there is indication of possibility. The asymmetry in recording this kind of data gives early warnings for investors about the probability of capital loss, early notice of unfavorable situations for shareholders, increasing the usefulness of financial statements.

A number of previous studies have shown the benefits of implementing accoutning conservatism, allowing managers to increase future investment opportunities (Lara et al., 2009), limiting managerial opportunity behavior, and reduce profit management (Watts, 2003a). However, in practice, firms can take advantage of accounting conservatism implementation in accounting as a tool to create information in the financial statements as desire with a variety of purposes, such as firms "intentionally" creating sink funds, or setting up excessive provisions, deliberately delaying interest recognition. Besides, the asymmetry in recording information will influence the neutrality of accounting information, causing many argurements.

Accounting conservatism will generally result in the firm's book value being underestimated in comparison with its market value, as this principle records bad news more timely than it does with good news, leading to disproportionate recognition of income (Basu, 1997); Ball et al., 2000; (Givoly and Hayn, 2000, Holthausen and Watts, 2001, Watts, 2003a).

The recognition of this principle benefits creditors, firms and regulators (Ahmed et al., 2002, Watts, 2003a, Francis et al., 2004, Ahmed and Duellman, 2007, Zhang, 2008). Accounting conservatism can be divided into two different categories, i.e. the conditional conservatism and the unconditional conservatism principle ((Ball and Shivakumar, 2005, Beaver and Ryan, 2005). Both of these require recording and estimating accounting objects in a "less optimistic" way under uncertain conditions.

First, unconditional accounting conservatism is the application of accounting conservatism uniformly according to the accounting policy prescribed in advance, or in other words, the acknowledgment of accounting values does not base on the conditions of their impacts but only adhere to the prescribed policies. For instance, the use of the accelerated depreciation method and the recognition of research and development costs as an expense can be regarded as an expression of the unconditional application of accounting conservatism. Many research results show that the unconditional application of accounting conservatism may be related to the incentive to avoid tax obligations, prevent the risk of corporate lawsuits, or merely to comply with accounting regulations in accounting policies in some countries (Qiang, 2007).

Second, conditional accounting conservatism requires that recording information under uncertain conditions is based on consideration of the impact of that event on the firm's financial statements (Watts, 2003a). An example case of the application of conditional accounting conservatism - when the firm has new information on the ability to decide whether or not to record this new data, it will depend on its effect of the financial statements to see whether there is a negative impact (i.e. information indicating that receivable will be less likely to be recoverable), a decrease in recognition (asset reduction, cost increase) will be made immediately. Nevertheless, in the event that this information indicates that the receivable capacity is high, their recognition will not be made until receivables are solved. Thus, it can be seen that conditional accounting conservatism and unconditional accounting conservatism tend to reduce the firm's revenue and book value. Unconditional accounting conservatism is an aspect of accounting policy, the degree to which these two prudent principles applied is measured by different approaches, in which unconditional accounting conservatism measurement requires a lot of data and more complex calculations (Lara et al., 2009).

2.2. Contract theory

Contract theory was first proposed by (Jensen and Meckling, 1976). This theory emphasizes that accounting criteria is an integral part of contractual arrangements between parties in a relationship with the firm. Accounting indicators are frequently used in contracts, so that they tend to be "adjusted" to meet the contractual requirements. In the study of accounting theory, two types of special contracts of interest are contracts between shareholders & managers and contracts between firms and creditors.

2.2.1. Relations between shareholders and management

The relationship between shareholders and management is a case of a delegated relationship in which the shareholder is the authorizing party - appointing or assigning another person - the authorized party to manage the firm. Relations between them exist certain conflicts of interests. Specifically, the goal of shareholders is to maximize their benefits through increasing the firm value in the long run, while the goal of the management is to maximize the welfare through paychecks.

Delegation theory states that if both parties in the trust relationship (shareholders and management) want to maximize their interests, then there is a basis to believe that corporate governance will do not always act in the best interest of the owner, that is shareholders. And so, the proxy theory proves that conflicts of interest in this relationship will incur a charge of delegation. Delegation theory emphasizes that shareholders need to use appropriate mechanisms to limit the divergence of interests between shareholders and management, by establishing appropriate remuneration mechanisms and effective monitoring mechanism to limit the self-interest behavior of management.

2.2.2. The contracting debt theory

The theory of debt in contractual relations states that the requirements of creditors for the application of accounting conservatism in the preparation and presentation of the financial statements come from asymmetric payoffs. While creditors are less likely to make additional profits when a firm is performing better than expected, there is a high chance that it will suffer from low performance or difficulty on firm's financial position. Accounting conservatism ensures that creditors will receive bad information in a timely manner, helping them monitor the firm's liquidation value more effectively so that they can promptly exercise their rights to protect interests (Nikolaev, 2010). Besides, the creditors' request to apply accounting

conservatism is also to limit the firm's ability to pay excessive dividends from incomes that are never realized in cash (Ahmed et al., 2002). (Ahmed et al., 2002) found that firms with the potential for serious conflicts between shareholders and creditors over dividend policy would have higher accounting conservatism application rates than other organizations.

On the other hand, satisfying creditors can reduce the cost of borrowing, creat additional incentives for firms to adopt accounting conservatism (Ahmed et al., 2002). There is also an argument that firms also have a strong incentive to delay the recognition of bad data if such understanding results in the application of restrictive terms of creditors. This effect is likely to be much stronger than the incentives that creditors offer when requesting accounting conservatism utilization. (DeAngelo et al., 1994) provided evidence that in the case of financial issues, instead of trying to prove their business is "problem free," the accounting policy of administrators still accept the recognition and disclosure of financial problems they encounter. This suggests that the countervailing effects could overcome the manager's profit management motive to loosen the terms of the loan agreement. The requirement for accounting conservatism function is therefore ensured by the impact of the debt market and the pressure of the audit on their compliance. Thus, the theory of debt in contractual relations states that firms with immense financial leverage will have higher levels of accounting conservatism application.

2.3. Conservatism measurement

2.3.1. Accounting conservatism measurement based on method of (Basu, 1997) – called AT approach

When an accountant performs accounting conservatism, income responds with "bad data" (information that increases sales or rises the firm value) faster than "good data" (information that enhances costs or reduces value) due to the asymmetry in verifying profits or losses. Although the timely recognition of economic events in accounting is known from the study of (Warfield and Wild, 1992), (Basu, 1997) is the first to investigate the relationship between asymmetry in the time of recording accounting information with accounting conservatism. The higher the time difference between recording good and bad information, the higher the level of accounting conservatism adoption.

(Basu, 1997) used stock return as a basis for determining whether a firm has good or bad data. The stock price is determined based on combining all information on the market in a timely manner from many sources, including the income statement of the entity. Therefore,

the change in stock prices is the criterion for evaluating news received in each period. Meanwhile, income statements of firms are influenced by the asymmetry of timely recording of information - often receiving bad information faster than good information. Basu's regression function is as follows:

$$EARN_{it} = \beta_0 + \beta_1 NEG_{it} + \beta_2 RET_{it} + \beta_3 NEG_{it}*RET_{it} + \varepsilon_{it}$$

In which:

β_0 = Intercept;

β_1, β_2, β_3: The coefficients;

$EARN_{it}$: Profit per share of firm i in year t;

RET_{it}: The share yield of firm i in year t;

RET_{it} is the share rate (stock return) of firm i calculated for the whole 12-month period according to CRSP data on the last day of fiscal year t. Basu (1997) employs RET_{it} to show "good information" and "bad information". A business is considered to have "good information" if $RET_{it} \geq 0$, otherwise a business is considered "bad information" if $RET_{it} < 0$.

NEG_{it} is a dummy variable with value = 1 in the case of bad information (the ratio of stock earnings adjusted to market declines ($RET_{it} < 0$)); $NEG_{it} = 0$ in the case of good information (if the stock return rate is adjusted by the market does not change or increase ($RET_{it} \geq 0$));

Basu regression model uses NEG_{it} dummy variable, thus allows slope and blocks coefficients for showing the difference between the two groups. In essence, Basu looks at the regression model between two accounting profit rate (EPS/P) and stock return (RET) for each case of "good information" and "bad information":

For "good information" ($RET_{it} \geq 0$): $NEG_{it} = 0$, the model's slope is β_0

For "bad information" ($RET_{it} < 0$): $NEG_{it} = 1$, the model's slope is ($\beta_0 + \beta_1$)

The slope of the model represents the degree of asymmetry of timeliness in recording information into the firm's profit value.

Intercept β_3 is the coefficient that shows the inadequate timeliness of information recording, which is also the main factor representing the level of accounting caution in Basu's model. The higher the β_3, the higher the degree to which the firm's accounting principles are implemented. It is expected to be positive and statistically significant.

2.3.2. Accounting conservatism measurement based on (Ball and Shivakumar, 2005) – called AACF - Asymmetric Accrual to Cash-flow Measure

The second approach in measuring accounting conservatism is based on the method of (Ball and Shivakumar, 2005). This method employs the regression function of correlation between accrual accounting value (ACC) and cash flow from business operations. This method was developed from the model of (Basu, 1997) for estimating the level of accounting conservatism implementation. The inadequate and disproportionate recognition of economic benefits and economic losses (expected revenue and costs) also creates asymmetry in the accrual method. (Ball and Shivakumar, 2005) argued that the inverse relationship between income and cash flow from business is first analyzed because (Dechow, 1994) presented less bad information as a consequence of asymmetry that requires income verification when there are good and bad information. Economic losses are identified rapidly when there is basis for unrealized deductions, while economic benefits are recognized when incurred in cash. In order to test the asymmetry of the deductions mentioned, Ball and Shivakumar (2005) recommended using the model:

$$ACC_t = \beta_0 + \beta_1 DCFO_t + \beta_2 CFO_t + \beta_3 CFO_t \text{ x } DCFO_t + \mu_t$$

In which:

ACC: The accrued accounting value from business activities of enterprise i in year t, which is measured by the difference between profit after tax and cash flow from business activities of firm i in year t:

$$ACC = LN_{st} - CFO$$

This index is calculated based on information on the cash flow statement of the firm.

CFO: Cash flow from operating activities of the firm in fiscal year t.

DCFO is a dummy variable whose value is 1 in the case of CFO <0 (negative) and equals 0 in the case of CFO> = 0.

In this model, β_2 is expected to be significantly negative meaning a negative correlation between accrual accounting value and cash flow. β_3 is expected to be significantly positive in the presence of conditional caution, indicating a positive relationship between cash flow and accrual accounting values when receiving bad information, which the accrual losses are likely to reduce the cash flow.

2.3.3. Accounting conservatism measurement based on Market-to-Book ratio – called The Market-to-Book (MTB) ratio method

The MTB method was first introduced by (Feltham and Ohlson, 1995), then developed by (Zhang, 2000), (Beaver and Ryan, 2000). According to this approach, if the other factors

are equal, an accounting system that implements accounting conservatism will tend to reduce its carrying value relative to its market value. Therefore, a high ratio of market value to book value (MTB) corresponds to a higher degree of accounting prudence in the enterprise and vice versa. From the MTB ratio, (Beaver and Ryan, 2000) has selectively developed to use MTB as a measurement of accounting conservatism performance in firms, widely applied in many studies.

(Beaver and Ryan, 2000) selectively developed in using the book value-to-market ratio of equity (BTM) as an enterprise's accounting conservatism measurement method. Since the rate of return on equity (ROE) is assessed on the basis of information from previous years, so in the regression model estimating accounting conservatism level of businesses, (Beaver and Ryan, 2000) divided the BTM ratio into two components; i.e. the deviation component and the latency component. (Beaver and Ryan, 2000) suggested that the BTM deviation component is viewed as an indicator of firm accounting conservatism performance. In addition, Beaver & Ryan (2000) regression analysis between BTM and ROE with a 6-year delay by using fixed-effect array data regression.

$$BTM_{t,i} = \alpha_t + \alpha_i + \beta_j R_{t-j,i} + \varepsilon_{t,i}$$

In which:

$BTM_{t,i}$: ratio between book value and market value of equity of firm i at the end of year t

α_i: Components of deviation of BTM ratio of the firm i

α_t: The latency component in BTM represents firms in the sample

$R_{t-j,i}$: Average return on equity (ROE) of the previous six years

β_j: regression coefficient of $R_{j,i}$

According to (Beaver and Ryan, 2000) in the regression model above, the α_i deviation component is a more accurate measure of the extent to which a firm applies accounting conservatism in comparison with the original BTM ratio. This is also the method many researchers employ when investigating accounting conservatism in the firm. The most significant advantage of this method is that it measures the coefficient of α_i for each firm in a given year.

2.3.4. Accounting conservatism measurement based on negative accruals (Givoly and Hayn, 2000) – called NA- The Negative Accruals Measure

Givoly and hayn (200) (Givoly and Hayn, 2000) proposed a model for measuring the

level of accounting conservatism performance based on cumulative values that do not function as part of book value. Accordingly, the level of accounting conservatism performance in operations is measured by the total accumulated value of the firm's accumulation of non-operating accruals. (Givoly and Hayn, 2000) found that cumulative non-operating accruals (NA) were significantly reduced through times, or in other words, the cumulative value inactive accumulations increase over time. At the same time, they also found that the cumulative operating accruals (OA) value increased significantly during that period. However, the increase in the active accrual is not large enough to compensate for the decline in the inactive accumulation, resulting in a gradual decrease in the value of the cumulative total before depreciation (TA) over the study period from 1965 to 1998. (Givoly and Hayn, 2000) argues that when implementing the prudent principle, accountants will delay the recognition of economic benefits and accelerate the record the losses. This process takes place over a long period of time, which will result in the cumulative total of the dormant accrual increasing and becoming negative. The formula for calculating the cumulative value (before depreciation) and the active accrual, the inactive cumulative value of firm i in year t according to (Givoly and Hayn, 2000) is as below:

$$NA = TA - OA$$

$$TA = NI + Depreciation - CFO$$

$$OA = \Delta\,Receivables + \Delta\,Inventories + \Delta\,Prepaid\,expenses - \Delta\,Payables - \Delta\,Payable\,taxes$$

In which:

NA: the cumulative value of the dormant accumulation;

TA: total cumulative value (before depreciation);

OA: cumulative value of active accrual;

Depreciation: Depreciation of fixed assets;

CFO: cash flow from operating activities;

The difference (Δ) is calculated by the difference between the end of year t and the beginning of year t.

The accumulation of inactive accruals is the accounting method of prudent measurement of (Givoly and Hayn, 2000). They also argued that finding the common and significant accumulation of negative inactive accruals was consistent with the increase in prudent reporting over the past several decades.

3. Literature Review

The majority of studies explaining the application of accounting conservatism come from the contractual relationship of the firm, such as those of (Ahmed et al., 2002); (Watts, 2003a, Watts, 2003b, Ball et al., 2008), (Zhang, 2008); (Wittenberg-Moerman, 2008). These studies all offered arguments or/and empirical evidence analyzing the application of accounting conservatism based on contractual relationship of the firm. Accordingly, the majority of studies are based on the argument that the main motivation of the requirement to apply accounting conservatism in the contractual relationship is to reduce costs and adjust the mandate's engines to match the mandator. (Watts, 2003a) suggested that users of financial statements would benefit from reports prepared under the accounting conservatism and therefore they asked to apply the accounting conservatism in preparing financial statements. In the contractual relationship between shareholders and managers, the separation of ownership and control between shareholders and managers create mandate costs (Jensen and Meckling, 1976). To reduce this mandate cost, shareholders create contractual arrangements with management, which requires the application of accounting conservatism in preparing financial statements as confirmed in the studies of (Watts, 2003b, Lafond and Roychowdhury, 2008), Dang et al. (2019), (Hoang et al., 2019).

The study of (Ahmed and Duellman, 2007) also provided evidence that the quality of corporate governance is closely related to the degree of accounting conservatism implementation. These findings suggest that firms have a higher quality level of governance will result in a higher level of accounting conservatism adoption for improving shareholder supervision. Studies of (Beekes et al., 2004), (Lafond and Roychowdhury, 2008) also showed the same results. In the contractual relationship between the creditor and the shareholder of the firm, creditors can also benefit from accounting conservatism, because their repayment arrangements are borrowed. (Wittenberg-Moerman, 2008) argued that applying accounting conservatism reduces the level of information asymmetry between shareholders and creditors. In addition, the studies of (Ahmed et al., 2002), (Zhang, 2008) proved that the application of accounting conservatism can decrease the cost of borrowing, which can be considered as an incentive for creditors in encouraging firms to adopt accounting conservatism.

4. Research Methodology

4.1. Research model

Based on literature review, together with explanations of the fundamental theories

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related to the application of accounting conservatism, combined with the current context of emerging countries like Vietnam, we propose a research model on financial leverage influencing the implementation of accounting conservatism by firms in Vietnam. First, we find that most relevant studies such as those of (Watts and Zimmerman, 1986), (Ball et al., 2000), (Watts, 2003a, Watts, 2003b) (Ball and Shivakumar, 2005), (Ball et al., 2008) employed contractual factors to explain the application of accounting conservatism, because these studies suggested that the existence and the development of accounting conservatism comes from the contractual relationships and the firm's mandate. Besides, the studies of (Qiang, 2007), (Lara et al., 2009) proved that the contractual relationship relates only to conditional accounting conservatism. The effect of the contractual relationship on the implementation of accounting is explained in detail based on the theory presented above. Therefore, based on the arguments of these theories, we include in the research model. The independent variable is financial leverage (showing the effect of debt). In addition, we also include some control variables such as corporate governance, state ownership, and foreign ownership and firm size.

Vietnam Stock Exchange is a growing and developing marginal stock market, so the measurement of accounting conservatism (dependent variable) will have certain limitations when it comes to stock prices in the market, so we use 2 accounting conservatism measurement models based on accounting information presented in financial statements, based on accounting conservatism's measurement model of (Ball and Shivakumar, 2005) ; (Givoly and Hayn, 2000); (Xu et al., 2012). The research model is built as follows:

$$CONACC1_{i,t} = \beta_0 + \beta_1 LEV_{i,t} + \beta_2 BOARDIND_{i,t} + \beta_3 STATEOWN_{i,t} + \beta_4 FOREIOWN_{i,t} + \beta_5 SIZE_{i,t} + \varepsilon_{i,t} \quad (1)$$

$$CONACC2_{i,t} = \beta_0 + \beta_1 LEV_{i,t} + \beta_2 BOARDIND_{i,t} + \beta_3 STATEOWN_{i,t} + \beta_4 FOREIOWN_{i,t} + \beta_5 SIZE_{i,t} + \varepsilon_{i,t} \quad (2)$$

The variables in models 1 and 2 are shown in Table 1 as below:

Table 1: Describe the variables in the research model

Variables	Codes	Measurement	Sources	Expectation
Dependent variable				
The level of conservatism principle	CONACC1	Factor β_3 of the equation $ACC_t = \beta_0 + \beta_1 DCFO_t + \beta_2 CFO_t + \beta_3 CFO_t \times DCFO_t + \mu_t$	(Ball and Shivakumar, 2005)	
	CONACC2	(Profit before tax + Depreciation of fixed	(Givoly and Hayn, 2000), (Xu et al.,	

Variables	Codes	Measurement	Sources	Expectation
		assets - Net cash flow) * (-1) / Book value of Total assets	2012)	
Independent variable				
Financial leverage	LEV	Ratio of total debt to total assets	(Lara et al., 2009), (Ahmed and Duellman, 2007)), (Mohammed et al., 2017).	+
Controlled variables				
Operating business	BOARDIND	Proportion of independent members in the Board of Directors	(Klein, 2002), (Krishnan, 2005), (Ahmed and Duellman, 2007), (Kootanaee et al., 2013).	+
State ownership	STATEOWN	State ownership ratio	(Xia and Zhu, 2009), Cullinan et al. (2012).	+/-
Foreign ownership	FOREIOWN	Foreign ownership ratio		+/-
Firm size	SIZE	Logarithm of total assets	(Ahmed and Duellman, 2007), (Jarboui, 2013).	+/-

4.2. Data and approach

Research on the effect of financial leverage on accounting conservatism of listed firms on Vietnam Stock Exchange for the period from 2009 to 2018 with 2,488 observations. Data of audited financial statements were collected on dataset of Vietstock together with data on securities websites such as cafef.vn or cophieu68.com. The original data will be synthezised and recalculated in the correct way of identifying variables, in which some variables will be regressed to get the remainder and initialize the corresponding new variable through Stata 14.0 software.

This research employs FEM and REM to estimate the impact of financial leverage on accounting conservatism. The research uses F-Test and Hausman tests to look at the FEM and RAM approaches to get better results, thereby checking the defects of the selected models and find solutions to overcome the model using the GLS method.

5. Results and Discussion

According to Table 2, the average level of accounting conservatism application of CONACC1 is -0.001, the highest is 0.920 and the lowest is -3.227. Similarly, when accounting conservatism measured CONACC2 has the average value of -0.049, the lowest is -1.043 and the highest is 1.805. Thus accounting conservatism is measured to be averaging a

negative value, but the value is relatively small near zero. Financial leverage (LEV) accounts for 50.8%, non-executive independent members (BOARDIND) is 67.8%, state ownership (STATEOWN) is 25.3%, and foreign ownership (FOREIOWN)) is 10.1%, and firm size (SIZE) is measured by total assets, according to the average Logarithm value of 11.744.

Table 2: Descriptive statistics

Variables	No. of Obs	Mean	Std.Dev	Min	Max
CONACC1	2,488	-0.001	0.087	-3.227	0.920
CONACC2	2,488	-0.049	0.134	-1.043	1.805
LEV	2,488	0.508	0.212	0.012	0.993
BOARDIND	2,488	0.678	0.175	0.2	1
STATEOWN	2,488	0.253	0.236	0	0.91
FOREIOWN	2,488	0.101	0.135	0	0.78
SIZE	2,488	11.744	0.690	10.132	14.459

Source: compilations by the authors

Table 3 presents the autocorrelation matrix, showing the direction of impact between variables. The correlation coefficient between the independent variables in the model does not have any pairs greater than 0.8, so it is less likely to have multicollinear when using the regression model.

Table 3: Correlation matrix

	CONACC1	CONACC2	LEV	BOARDIND	STATEOWN	FOREIOWN	SIZE
CONACC1	1						
CONACC2	0.0266	1					
LEV	0.0533	0.0793	1				
BOARDIND	-0.0018	0.0383	-0.128	1			
STATEOWN	0.0132	0.0163	0.1012	-0.136	1		
FOREIOWN	-0.0957	-0.0564	-0.1675	0.099	-0.1791	1	
SIZE	-0.0462	-0.0278	0.3033	0.0428	-0.0462	0.3812	1

Source: compilations by the authors

Table 4: Regression results with dependent variable of CONACC1

	VIF	FEM	REM	GLS
LEV	1.25	0.0465**	0.0254**	0.0218**
BOARDIND	1.04	0.0116	0.00741	0.00658
STATEOWN	1.05	-0.0122	-0.0021	-0.00205
FOREIOWN	1.34	0.0126	-0.0339*	-0.0490***
SIZE	1.4	-0.0346***	-0.00645*	-0.00429
_cons		0.376***	0.0613	0.0397
n	2,488	2,488	2,488	2,488
R-sq		0.214		
F test	F(5,2216) = 2.29 Prob > F = 0.0439			
LM test		Wald chi2(5) = 15.71 Prob > chi2 = 0.0077	Wald chi2(5) = 29.18 Prob > chi2 = 0.0000	
Hausman test	chi2(5) = 10.23 Prob>chi2 = 0.0689			
Breusch and Pagan	chibar2(01) = 182.04 Prob>chi2 = 0.0000			
Wooldridge test	F(1, 265) = 1.001 Prob > F = 0.0327			

t statistics in brackets * p<0.1, ** p<0.05, *** p<0.01
Source: compilations by the authors

Table 4 and table 5 show that, as expected, financial leverage has a positive effect on the application of prudent principle with a statistical significance level of 1%. The results are consistent when using all 3 models of FEM, REM and GLS. This finding is in agreement with the results of (Ahmed et al., 2002), (Wittenberg-Moerman, 2008), and (Zhang, 2008).

For the control variables, the results also show that the firm operating determinant influences the degree of application of the prudent principle when measuring from an accounting perspective (CONACC2), but it has no effect on accounting conservatism measurement by market. This result is consistent with expectations, and also consistent with the arguments and research findings of (Beekes et al., 2004), (Ahmed and Duellman, 2007), (Lara et al., 2009).

State ownership does not affect the implementation of accounting conservatism and this finding agrees with studies of (Cullinan et al., 2012). At the same time, foreign ownership is inversely related to the level of accounting conservatism use when measured by market value (CONACC1). Firm size has the opposite effect on the application of accounting conservatism when measuring from the accounting perspective (CONACC2), similar to the results of (Ahmed and Duellman, 2007), (Jarboui, 2013). Table 4 below shows the results of regression of CONACC1.

Table 5 shows the results of regression of CONACC2.

Table 5: Regression results with dependent variable of CONACC2

	VIF	FEM	REM	GLS
LEV	1.26	0.0920***	0.0610***	0.0610***
BOARDIND	1.04	0.0269	0.0431***	0.0431***
STATEOWN	1.05	0.0793**	0.00409	0.00409
FOREIOWN	1.33	0.0742*	-0.0256	-0.0256
SIZE	1.4	-0.0902***	-0.00958**	-0.00958**
_cons		0.918***	0.00506	0.00506
N		2488	2488	2488
R-sq		0.258		
F test		F(5,2216) = 6.69 Prob > F = 0.0000		
LM test		Wald chi2(5) = 32.05 Prob > chi2 = 0.0000	Wald chi2(5) = 32.13 Prob > chi2 = 0.0000	
Hausman test		chi2(5) = 30.72 Prob>chi2 = 0.0000		
Modified Wald test		F(1, 265) = 4.884 Prob > F = 0.0280		
Wooldridge test		F(1, 265) = 1.001 Prob > F = 0.0327		

t statistics in brackets * p<0.1, ** p<0.05, *** p<0.01
Source: compilations by the authors

6. Conclusion and Suggestions

The application of prudent principle of listed firms on Vietnam Stock Exchange for the period from 2009 to 2018 is influenced by financial leverage determinant. This proves the great impact of creditors on the firm's demand for accounting conservatism application. In addition to requirements stated by regulatory bodies' accounting rules, shareholders can also be considered as a motivation for the organization to apply accounting conservatism. With the newly developed capital market like Vietnam, the need for a complex and reasonable accounting system like IAS/IFRS to serve the capital market is necessary to be completed. Based on the findings together with results of in-depth interviews of management of listed firms and policy makers, we propose some recommendations regarding the application of accounting conservatism.

First, financial information recorded under the accounting conservatism can contribute to limiting the natural tendency of some parties in the firm, often to be too optimistic about

the performance of listed firms, thereby warning earlier about risks of losing capital to shareholders and creditors.

Second, financial leverage affects the application of accounting conservatism. Therefore, based on the benefits as argued by accounting conservatism for creditors, in the loan appraisal process, creditors need to examine and request the application of accounting conservatism in the preparation of financial statements of listed firms. It should be noted that while the implementation of accounting conservatism deducts risk to creditors, it leads to information on net assets which tend to be underestimated in comparison with their actual values. As a result, creditors need to learn more about the basic accounting policies employed by listed firms to be able to distinguish cases of financial statements with high operational results due to the recklessness accounting recognition, and the low financial results cases are simply due to the effect of accounting conservatism application. Considering the firm's application of accounting conservatism helps creditors set up appropriate lending policies, lower credit risk for loans. On the other hand, in order to limit the effects of information asymmetry, besides the financial information provided, in the credit appraisal process, creditors need to pay attention to more information sources.

Third, the findings show that determinant of management has a weight on the application of accounting conservatism, so it can be seen that accounting conservatism brings certain benefits in running the firm. Therefore, in addition to complying with prudent accounting regulations, firms need to issue more specific policies and regulations in recording of accounting objects. The accounting policies under uncertain conditions should be designed on the basis of suitability with the firm's business features.

Forth, under other conditions, as analyzed, because the impact of accounting conservatism makes the firm's net assets understated, firms need to increase more disclosure on how to record and detail the information presented in the notes to financial statements so that users of financial statements can have a basis to properly evaluate the business performance.

Fifth, from the discussion about the appropriateness and necessity of accounting conservatism, regulatory bodies need to issue more regulations on accounting conservatism, specific regulations applicable to different industries in accordance with the business characteristic by industry. The promulgation of policies applicable to each industry makes accounting conservatism focused and applied consistently.

As analyzed above, the application of accounting conservatism although reduces the risks for creditors, leads to information about net assets understated. As a result, like creditors,

the users of financial statements need to understand more about the recognition and the applicable accounting policies of listed firms to be able to distinguish cases of financial statements with high operational results due to imprudent accounting recognition, and low financial results cases are simply due to the impact of accounting conservatism application. Learning how firms' accounting records can help financial statements users make sound economic decisions. In addition, investors also need to be equipped with knowledge of legal mechanisms to take measures for protecting themselves when the rights gains are violated. Improved knowledge of accounting and laws help investors create more motivation for firms to apply accounting conservatism.

7. References

AHMED, A. S., BILLINGS, B. K., MORTON, R. M. & STANFORD-HARRIS, M. The role of accounting conservatism in mitigating bondholder-shareholder conflicts over dividend policy and in reducing debt costs. *The Accounting Review,* v.77, n.4, p. 867-890, 2002

AHMED, A. S. & DUELLMAN, S. Accounting conservatism and board of director characteristics: An empirical analysis. *Journal of accounting and economics,* v.43, n.2-3, p. 411-437, 2007

BALL, R., KOTHARI, S. & ROBIN, A. The effect of international institutional factors on properties of accounting earnings. *Journal of accounting and economics,* v.29, n.1, p. 1-51, 2000

BALL, R., ROBIN, A. & SADKA, G. Is financial reporting shaped by equity markets or by debt markets? An international study of timeliness and conservatism. *Review of accounting studies,* v.13, n.2-3, p. 168-205, 2008

BALL, R. & SHIVAKUMAR, L. Earnings quality in UK private firms: comparative loss recognition timeliness. *Journal of accounting and economics,* v.39, n.1, p. 83-128, 2005

BASU. The conservatism principle and the asymmetric timeliness of earnings. *Journal of accounting and economics,* v.24, n.1, p. 3-37, 1997

BEAVER, W. H. & RYAN, S. G. Biases and lags in book value and their effects on the ability of the book-to-market ratio to predict book return on equity. *Journal of accounting research,* v.38, n.1, p. 127-148, 2000

BEAVER, W. H. & RYAN, S. G. Conditional and unconditional conservatism: Concepts and modeling. *Review of accounting studies,* v.10, n.2-3, p. 269-309, 2005

BEEKES, W., POPE, P. & YOUNG, S. The link between earnings timeliness, earnings conservatism and board composition: evidence from the UK. *Corporate Governance: An International Review,* v.12, n.1, p. 47-59, 2004

CULLINAN, C. P., WANG, F., WANG, P. & ZHANG, J. Ownership structure and accounting conservatism in China. *Journal of International Accounting, Auditing and Taxation,* v.21, n.1, p. 1-16, 2012

DEANGELO, H., DEANGELO, L. & SKINNER, D. J. Accounting choice in troubled companies. *Journal of accounting and economics,* v.17, n.1, p. 113-143, 1994

DECHOW, P. M. Accounting earnings and cash flows as measures of firm performance: The role of accounting accruals. *Journal of accounting and economics,* v.18, n.1, p. 3-42, 1994

FELTHAM, G. A. & OHLSON, J. A. Valuation and clean surplus accounting for operating and financial activities. *Contemporary accounting research,* v.11, n.2, p. 689-731, 1995

FRANCIS, J., LAFOND, R., OLSSON, P. M. & SCHIPPER, K. Costs of equity and earnings attributes. *The accounting review,* v.79, n.4, p. 967-1010, 2004

GIVOLY, D. & HAYN, C. The changing time-series properties of earnings, cash flows and accruals: Has financial reporting become more conservative? *Journal of accounting and economics,* v.29, n.3, p. 287-320, 2000

HOANG, T. V. H., VU, T. T. V. & DANG, N. H. Impact of Social Reponsibility Information Disclosure on the Financial Performance of Enterprises in Vietnam. *Indian Journal of Finance* v.13, n.1, p. 20-36, 2019

HOLTHAUSEN, R. W. & WATTS, R. L. The relevance of the value-relevance literature for financial accounting standard setting. *Journal of accounting and economics,* v.31, n.1-3, p. 3-75, 2001

JARBOUI, A. An empirical examination of the relationship between board of director composition, ownership structure and accounting conservatism. *International Journal of Economics, Finance and Management Sciences,* v.1, n.5, p. 215-226, 2013

JENSEN, M. C. & MECKLING, W. H. Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of financial economics,* v.3, n.4, p. 305-360, 1976

KLEIN, A. Economic determinants of audit committee independence. *The Accounting Review,* v.77, n.2, p. 435-452, 2002

KOOTANAEE, A. J., SEYYEDI, J., NEDAEI, M. & KOOTANAEE, M. J. Accounting conservatism and corporate governance's mechanisms: Evidence from Tehran stock exchange. *International Journal of Economics, Business and Finance,* v.1, n.10, p. 301-319, 2013

KRISHNAN, J. Audit committee quality and internal control: An empirical analysis. *The accounting review,* v.80, n.2, p. 649-675, 2005

LAFOND, R. & ROYCHOWDHURY, S. Managerial ownership and accounting conservatism. *Journal of accounting research,* v.46, n.1**,** p**.** 101-135, 2008

LARA, J. M. G., OSMA, B. G. & PENALVA, F. Accounting conservatism and corporate governance. *Review of accounting studies,* v.14, n.1**,** p**.** 161-201, 2009

MOHAMMED, N. F., AHMED, K. & JI, X.-D. Accounting conservatism, corporate governance and political connections. *Asian Review of Accounting,* v.25, n.2**,** p**.** 288-318, 2017

NIKOLAEV, V. V. Debt covenants and accounting conservatism. *Journal of Accounting Research,* v.48, n.1**,** p**.** 137-176, 2010

PENMAN, S. H. & ZHANG, X.-J. Accounting conservatism, the quality of earnings, and stock returns. *The accounting review,* v.77, n.2**,** p**.** 237-264, 2002

QIANG, X. The effects of contracting, litigation, regulation, and tax costs on conditional and unconditional conservatism: Cross-sectional evidence at the firm level. *The Accounting Review,* v.82, n.3**,** p**.** 759-796, 2007

STERLING, R. R. 2014. The theory of the measurement of enterprise income. *The Development of Accounting Theory (RLE Accounting).* Routledge.

WARFIELD, T. D. & WILD, J. J. Accounting recognition and the relevance of earnings as an explanatory variable for returns. *The Accounting Review,* v.67, n.4**,** p**.** 821-842, 1992

WATTS, R. & ZIMMERMAN, J. Positive theory of accounting. *Englewood Cliffs, NY: Prentice-Hall,* n., 1986

WATTS, R. L. Conservatism in accounting part I: Explanations and implications. *Accounting horizons,* v.17, n.3, p. 207-221, 2003a

WATTS, R. L. Conservatism in accounting part II: Evidence and research opportunities. *Accounting horizons,* v.17, n.4, p. 287-301, 2003b

WITTENBERG-MOERMAN, R. The role of information asymmetry and financial reporting quality in debt trading: Evidence from the secondary loan market. *Journal of Accounting and Economics,* v.46, n.2-3, p. 240-260, 2008

XIA, D. & ZHU, S. Corporate governance and accounting conservatism in China. *China Journal of Accounting Research,* v.2, n.2, p. 81-108, 2009

XU, X., WANG, X. & HAN, N. Accounting conservatism, ultimate ownership and investment efficiency. *China Finance Review International,* v.2, n.1, p. 53-77, 2012

ZHANG, J. The contracting benefits of accounting conservatism to lenders and borrowers. *Journal of accounting and economics,* v.45, n.1, p. 27-54, 2008

ZHANG, X.-J. Conservative accounting and equity valuation. *Journal of Accounting and Economics,* v.29, n.1, p. 125-149, 2000

8. Acknowledgements