

# The Relationship between Accounting Conservatism, Government Ownership, Firm Size and Financial Leverage with Company Losses

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## Abstract

The purpose of the present study is to investigate the relationship between accounting conservatism (ACO), government ownership (GOW), firm size (SIZE) and financial leverage (LEV) with company losses (LOSS) of the listed companies on the Tehran Stock Exchange (TSE). The population includes 94 firms selected through systematic sampling. The data is collected from the audited financial statements of the firms provided by TSE's website from 2010 to 2015. The results of multiple linear regression analysis show that there is a significant relationship between accounting conservatism, firm size with company's losses. Also, the results of multiple linear regression analysis show that there is an inverse significant relationship between financial leverage with company's losses. Also, the results of multiple linear regression analysis show that there is no significant relationship between government ownership with company's losses.

**JEL Classification:** G31, G38, M41, M48

**Keywords:** Conservatism, government ownership, firm size, leverage.

## 1. INTRODUCTION

(Balkrishna et al., 2007) provided evidence on three important aspects of Australian financial reporting; namely, the characteristics of losses, the extent to which Australian firms earnings are conditionally conservative (i.e. bad news is reflected in earnings more quickly than good news) and the extent to which losses reflect incrementally greater conditional conservatism. They found evidence that loss incidence in Australia is frequent, with around 40 per cent of the sample firm-years from 1993 to 2003 being losses. Losses are also surprisingly persistent, and the probability of loss reversal declines monotonically as the history of losses extends. Although conditional conservatism is also shown to be a pervasive aspect of Australian Generally Accepted Accounting Principles, they demonstrated that it is more evident among loss observations. This result was robust across different methods of capturing conditional conservatism, and supported the conclusion that the relatively high frequency of losses is, at least in part, a reflection of conservative reporting. (Givoly et al., 2007) examined the power and reliability of the differential timeliness measure (DT) developed by (Basu, 1997) to gauge reporting conservatism. They identified certain characteristics of the information environment unrelated to conservatism that affect the DT measure and found that the measure is sensitive to the degree of uniformity in the content of the news during the examined period, the types of events occurring in the period, and the firm's disclosure policies. Their tests, based on both actual and simulated data, indicated that assessing the extent of reporting conservatism requires the recognition of, and control for, these characteristics. They also found that the difference in the timeliness of bad versus good news was likely to be more pronounced than previously reported. Further, they provided additional evidence on the negative association between the DT measure and alternative aspects of conservatism, suggesting that the exclusive reliance on any single measure for assessing the overall conservatism of a reporting regime (firms, countries or time periods) is likely to lead to incorrect inferences. (Klein & Marquardt, 2006) examined accounting and non-accounting factors behind accounting losses over a fifty-year period. They used multivariate time-series analysis; they reported evidence that the annual percentage of losses for U.S. firms is significantly related to accounting conservatism, Compustat coverage of small firms, real firm performance as measured by cash flows from operations, and business cycle factors. They further found that non-accounting factors tended to play the dominant role in explaining accounting losses over our sample period. Their results were robust to alternative definitions of macroeconomic productivity, as well as to varying model specifications. Their findings contributed to the literature on accounting losses and accounting conservatism and have implications for the use of accounting loss information in numerous settings.

## 2. REVIEW OF LITERATURE

(Basu, 1997) interpret conservatism as resulting in earnings reflecting 'bad news' more quickly than 'good news'.

This interpretation implies systematic differences between bad news and good news periods in the timeliness and persistence of earnings. Using firms' stock returns to measure news, the contemporaneous sensitivity of earnings to negative returns is two to six times that of earnings to positive returns. He also predicted and found that negative earnings changes are less persistent than positive earnings changes. Earnings response coefficients (ERCs) were higher for positive earnings changes than for negative earnings changes, consistent with this asymmetric persistence. (Feltham & Ohlson, 1995) models the relation between a firm's market value and accounting data concerning operating and financial activities. Book value equals market value for financial activities, but they can differ for operating activities. Market value is assumed to equal the net present value of expected future dividends, and is shown, under clean surplus accounting, to also equal book value plus the net present value of expected future abnormal earnings (which equals accounting earnings minus an interest charge on opening book value). A linear model specifies the dynamics of an information set that includes book value and abnormal earnings for operating activities. Model parameters represent persistence of abnormal earnings, growth, and accounting conservatism. The model is sufficiently simple to permit derivation of closed form expressions relating market value to accounting data and other information. Three kinds of analyses develop from the model. The first set deals with value as it relates to anticipated realizations of accounting data. The second set examines in precise terms how value depends on contemporaneous realizations of accounting data. The third set examines asymptotic relations comparing market value to earnings and book values, and how earnings relate to beginning of period book values. They demonstrated that in all three sets of analyses the conclusions hinge on the extent to which the accounting is conservative as opposed to unbiased. Further, the absence/presence of growth in operating activities is relevant if, and only if, the accounting is conservative. (Givoly & Hayn, 2000) documented changes in the patterns of earnings, cash flows and accruals over the last four decades. In the absence of a generally accepted definition of conservatism, a number of measures of reporting conservatism are identified and examined. These measures rely on the accumulation of nonoperating accruals, the timeliness of earnings with respect to bad and good news, characteristics of the earnings distribution and the market-to-book ratio. The patterns are consistent with an increase in conservative financial reporting over time. The findings have implications for accounting standard setting, regulation of financial information and financial statement analysis. (Ryan, 2006) provided guidance for empiricists interested in measuring conditional conservatism and in interpreting associations of those measures with variables of interest. He begin by discussing the nature and importance of conditional conservatism and surveying the literature identifying conditional conservatism. He then described and comment on the various limitations of asymmetric timeliness identified in the literature. Despite these limitations, He argued that asymmetric timeliness is the most direct implication of conditional conservatism, and that alternative measures that have been proposed need not capture any type of conservatism. Finally, He provided four specific suggestions for estimating asymmetric timeliness and for interpreting it as a measure of conditional conservatism. (Ahmed et al., 2002) Using both a market - based and an accrual - based measure of conservatism, they found that firms facing more severe conflicts over dividend policy tended to use more conservative accounting. Furthermore, they documented that accounting conservatism is associated with a lower cost of debt after controlling for other determinants of firms' debt costs. Their collective evidence was consistent with the notion that accounting conservatism plays an important role in mitigating bondholder - shareholder conflicts over dividend policy, and in reducing firms' debt costs. (Watts, 2003) examined alternative explanations for conservatism in accounting and their implications for accounting regulators. He summarized the empirical evidence on conservatism, its consistency with alternative explanations, and opportunities for future research. The evidence was consistent with conservatism's existence and, in varying degrees, the various explanations. Conservatism is defined as the differential verifiability required for recognition of profits versus losses. Its extreme form is the traditional conservatism adage: "anticipate no profit, but anticipate all losses." Despite criticism, conservatism has survived in accounting for many centuries and appears to have increased in the last 30 years. The alternative explanations for conservatism are contracting, shareholder litigation, taxation, and accounting regulation. They suggested the contracting and shareholder litigation explanations are most important. Evidence on the effects of taxation and regulation is weaker, but consistent with those explanations playing a role. Earnings management could produce some of the evidence on conservatism, but cannot be the prime explanation. The explanations and evidence have important implications for accounting regulators. FASB attempts to ban conservatism in order to achieve "neutrality of information" without understanding the reasons conservatism existed and prospered for so long are likely to fail and produce unintended consequences. Successful elimination of conservatism will change managerial behavior and impose significant costs on investors and the economy in general. Similarly, researchers and regulators who propose the inclusion of capitalized unverifiable future cash flows in financial reports should consider the costs generated by their proposal's effect on managerial behavior. (Ahmed & Duellman, 2008) hypothesized that if conservatism reduces managers' ex ante incentives to take on negative NPV projects and improves the ex post monitoring of investments, firms with more conservative accounting ought to have higher future profitability and lower likelihood (and magnitude) of future special items charges. Consistent with this expectation, they found that

firms with more conservative accounting have (i) higher future cash flows and gross margins, and (ii) lower likelihood and magnitude of special items charges than firms with less conservative accounting. (Qiang, 2007) examined whether each proposed explanation applies to conditional conservatism, unconditional conservatism, or both. The findings were as follows: (1) contracting induces conditional conservatism; (2) litigation induces both forms; (3) regulation induces unconditional conservatism; and (4) taxation induces unconditional conservatism. These findings indicated that the two forms of conservatism play distinct roles in contracting, regulation, and taxation, as well as a common role in litigation. They also play an interrelated role, as suggested by the finding that unconditional conservatism reduces conditional conservatism. The combined evidence implied that because the two forms meet distinct needs but are negatively interrelated, it is necessary to trade them off. (McConnell & Servaes, 1995) empirically investigated the relation between corporate value, leverage, and equity ownership. For 'high-growth' firms corporate value was negatively correlated with leverage, whereas for 'low-growth' firms corporate value was positively correlated with leverage. The results also hinted that the allocation of equity ownership among insiders, institutions, blockholders, and atomistic outside shareholders is of marginally greater significance in low-growth than in high-growth firms. The overall interpretation of the results was that debt policy and equity ownership structure 'matter' and that the way in which they matter differs between firms with many and firms with few positive net present value projects. (Zeitun & Tian, 2007) examined the impact of ownership structure on firm performance and the default risk of a sample of publicly listed firms. they examined the impact of ownership structure on firm performance and the default risk of a sample of 59 publicly listed firms in Jordan from 1989 to 2002. The main findings were: ownership structure has significant effects on the accounting measure of performance return on assets (ROE); government shares are significantly negatively related to the firm's performance ROE; defaulted firms have a high concentration ownership compared with non - defaulted firms and also high foreign ownership firms have a low incidence of default; government ownership is significantly negatively related to the firm's probability of default; both mix and concentration ownership structure data can be used to predict the probability of default as the largest five shareholders (C5) and government ownership fraction (FGO) are significantly negatively correlated with the probability of the default. These results further suggested that reducing government ownership can increase a firm's performance but will also cause some firms to go bankrupt, at least in the short term. (Hisyam et al., 2008) examined the impact of an alternative ownership/control structure of corporate governance on firm performance among government linked companies (GLCs) and Non-GLC in Malaysia. It is believed that government ownership serve as a monitoring device that lead to better company performance after controlling company specific characteristics. They used Tobin's Q as market performance measure while ROA is to determine accounting performance measure. Their study was based on a sample of 210 firms over a period from 1995 to 2005. They used panel based regression approach to determine the impact of ownership mechanism on firm's performance. Findings suggested that there is a significant impact of government ownership on company performance after controlling for company specific characteristics such as company size, non-duality, leverage and growth. The finding is off significant for investors and policy maker which will serve as a guiding for better investment decision. (Dai & Yang, 2014) Using a sample of A-share listed firms in China during the 2003–2012 periods, they investigated the effect of accounting conservatism on trade credit, taking changes in monetary policy into account. They found that corporations with higher accounting conservatism obtain more trade credit and that accounting conservatism has a greater influence on trade credit under tight monetary policy. Furthermore, the backgrounds of the supplier and customer influence the positive relationship between accounting conservatism and trade credit. This influence was more evident when a company is privately owned and has greater market power and less evident when the supplier or customer is the controlling shareholder.

### 3. HYPOTHESES

- $H_1$ : There is a significant relationship between accounting conservatism and company losses.
- $H_2$ : There is a significant relationship between Sales to total assets (SA/TA) and company losses.
- $H_3$ : There is a significant relationship between government ownership and company losses.
- $H_4$ : There is a significant relationship between firm size and company losses.
- $H_5$ : There is a significant relationship between financial leverage and company losses.

### 4. METHODOLOGY

#### 4.1. Population and sample

The present research studies two types of industries; the chemical and pharmaceutical listed companies on the TSE. The sample comprises firms that meet the following conditions:

1. Firms that have been listed in the stock exchange before 2015;
2. Firms whose financial year ends at the end of the Iranian calendar;
3. Firms that have no financial year changes;
4. Firms that have been operating in TSE during the period of interest;

5. Firms that have data available for the period of interest;  
 6. Investment companies are excluded.  
 Given these conditions, 94 firms were selected as sample.

#### 4.2. Dependent variable

In this study, the dependent variable is company losses.

#### 4.3. Independent variables

In this study, the independent variables are accounting conservatism, government ownership, sales to total assets (SA/TA). The present research uses the model proposed by (Givoly & Hayn, 2000) for measuring accounting conservatism

#### 4.4. Control Variables

In this study, the Control variables are firm size and financial leverage.

Firm size is the natural logarithm of total sales.

$$\text{financial leverage} = \frac{\text{total debt}}{\text{shareholders equity}}$$

#### 4.5. Data analysis

Multivariate regression analysis was applied at the 5% significance level for testing the hypotheses.

### 5. FINDINGS

Descriptive and inferential (multivariate regression analyses) analyses are used for testing the hypotheses of the research.

#### Descriptive statistics

The data is collected from 94 samples firms listed in Tehran Stock Exchange for the period from 2010 to 2015.

Table 1 provides mean, median, standard deviation, maximum, and minimum values for the research variables.

Table 1. Descriptive Statistics

	N	Mean	Std. Deviation
ACO	470	43.01	22.152
SA/TA	470	0.174	0.141
GOW	470	0.07	11.35
SIZE	470	1.88	1.478
LEV	470	0.710	0.158

#### Inferential statistics

In the regression model, the effect of the independent variable (ACO, SA/TA, GOW, SIZE, and LEV) on the company's losses (LOSS) of the sample firms is examined. A multivariate linear regression model is used at the 5% significance level for testing the hypotheses. If there is no relationship between the independent variables and the dependent variable, all the coefficients in the regression model must be equal to zero. Thus, we can test the significance of the regression model, which is often done using F test. If the obtained F-statistic is less than the Table value of F at the 95% confidence level, the regression model will be significant.

Table 2. Analysis of variance

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	54.910	5	10.884	207.514	0.000
Residual	18.412	320	0.0652		
Total	72.321	325			

a. Dependent Variable: LOSS

b. Predictors: (Constant), ACO, SA/TA, GOW, SIZE, LEV

The results of estimating the regression model at the 5% significance level are provided in Table 3.

**Table 3. The results of estimating the regression model**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)					
ACO	0.598	0.041	0.0587	18.65	0.000
SA/TA	0.047	0.042	0.046	1.208	0.291
GOW	0.061	0.048	0.038	1.325	0.210
SIZE	0.210	0.011	0.085	2.625	0.014
LEV	-0.201	0.008	-0.499	-15.254	0.000

a. Dependent Variable: LOSS

#### Hypothesis 1

According to the first hypothesis, ACO is significantly associated with LOSS. Based on the results of multivariate regression model (Table 3), ACO has a beta coefficient of 0.598 and p-value of 0.000. Therefore, there is significant relationship between ACO and (LOSS) at 5% significance level.

**Table 4. Results of testing the first hypothesis with multivariate regression analysis**

Variable	Beta	Sig	Result
ACO	0.598	0.000	accepted

#### Hypothesis 2

According to the second hypothesis, SA/TA is significantly associated with LOSS. Based on the results of multivariate regression model (Table 3), SA/TA has a beta coefficient of 0.047 and p-value of 0.291. Therefore, there is no significant relationship between SA/TA and (LOSS) at 5% significance level.

**Table 5. Testing the second hypothesis with multivariate regression analysis**

Variable	Beta	Sig	Result
SA/TA	0.047	0.291	rejected

#### Hypothesis 3

According to the third hypothesis, GOW is significantly associated with LOSS. Based on the results of multivariate regression model (Table 3), GOW has a beta coefficient of 0.061 and p-value of 0.210. Therefore, there is no significant relationship between GOW and (LOSS) at 5% significance level.

**Table 6. Testing the third hypothesis with multivariate regression analysis**

Variable	Beta	Sig	Result
GOW	0.061	0.210	rejected

#### Hypothesis 4

According to the fourth hypothesis, SIZE is significantly associated with LOSS. Based on the results of multivariate regression model (Table 3), SIZE has a beta coefficient of 0.210 and p-value of 0.014. Therefore, there is significant relationship between SIZE and (LOSS) at 5% significance level.

**Table 7. Testing the fourth hypothesis with multivariate regression analysis**

Variable	Beta	Sig	Result
SIZE	0.210	0.014	accepted

#### Hypothesis 5

According to the fifth hypothesis, LEV is significantly associated with LOSS. Based on the results of multivariate regression model (Table 3), LEV has a beta coefficient of -0.201 and p-value of 0.000. Therefore, there is significant relationship between LEV and (LOSS) at 5% significance level.

**Table 8. Testing the fifth hypothesis with multivariate regression analysis**

Variable	Beta	Sig	Result
LEV	-0.201	0.000	accepted

## 6. Discussion

The present research examined the relationship between five variables (ACO, SA/TA, GOW, SIZE, and LEV) and LOSS of the chemical and pharmaceutical firms listed in Tehran Stock Exchange. The results of multiple linear regression analysis show that there is a significant relationship between accounting conservatism, firm size with company's losses. Also, the results of multiple linear regression analysis show that there is an inverse significant relationship between financial leverage with company's losses. Also, the results of multiple linear regression analysis show that there is no significant relationship between government ownership with company's losses. This finding is consistent with results (Givoly & Hayn, 2000), (Klein & Marquardt, 2006), (Ahmed et al, 2002).



### Limitation

The limitation is related to the lack of classified data in the database of TSE. Therefore, the researchers were forced to use the audited reports of the firms and data collection became a very time consuming process.

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