

# The study of effects of accounting conservatism on the flexibility of the financial decisions

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**ABSTRACT:** Today, by increasingly rapid changes in the internal and external factors affecting organizations, the increased flexibility of them toward such changes is imperative. In today's competitive world, flexibility is a key factor for the survival of organization and a tool to dominate competitors. Therefore, this study attempts to examine the relation between accounting conservatism and flexibility in financial decisions, such as liquidity, decisions on stock or debt issuance and the sensitivity of investment cash flows. Therefore some hypotheses were tested during the period 2001 to 2010. The statistical sample consisted of 100 companies operating in different parts of Tehran Stock Exchange which are selected considering five limitations and by a screening method. The test procedure which was analyzed using EvIEWS software is correlation analysis, and the relationship between dependent and independent variable is estimated using panel data. The results indicate that at time interval of the study and at confidence interval of 95% in the manufacturing companies at Tehran Stock Exchange Market, conservative accounting has a direct and significant relationship with liquidity management, and a significant and inverse relationship with the sensitivity of investment cash flows. In addition, there is not any significant relationship between conservative accounting, decisions on the distribution of cash dividends and decision to issue shares and using debt.

**Keywords:** Accounting Conservatism, Financial Flexibility, the Sensitivity of Investment Cash Flows.

## INTRODUCTION

Ball and Shivakumar (2005) have identified two concepts distinct from conservatism that lead to reduction of agency conflicts between managers and creditors. First, conservatism by imposing less reporting of net asset value of company reduces managers' tendency to report more on net asset values, and secondly, conservatism make managers committed to identify bad news in a more timely approach than good news. This on the one hand limits managers' incentives to transfer wealth in favor of shareholders and to the detriment of creditors and on the other hand provide creditors with timely information in order to enable them to transfer their salary in bad financial conditions, and in the case of violation of contract terms. Lafond and Watts (2008) showed that conservatism by reducing information asymmetry between managers and shareholders, limits management's ability to manipulate and overstate the financial performance. Their findings indicate that in response to information asymmetry, conservatism increases. This issue has been confirmed in the Iranian capital market (KhoshTinat and YousefiAsl, 2008; Rezazadeh and Azad, 2008). These results indicate that conservatism provides important information to shareholders and limits management of opportunistic motives in manipulating company's value. In general and based on the results from previous studies it could be said that conservatism plays a governing and guiding role in reducing debt contract costs and reduces the conflict between management and shareholders. Therefore, debt suppliers and company capital are more willing to participate in the process of increase in capital. Based on above mentioned and with reference to workability of contracts, it is expected that financial flexibility in companies with more conservatism in financial reporting will be higher (Lee, 2010).

Based on the above, the main purpose of this study was to evaluate the type and amount of conservatism on the companies' financial flexibility and explanation of defining view on this relationship in Iran capital market. In this study, Dichev & Tang model (2008) was applied to measure financial flexibility, and to

measure financial flexibility, four liquidity criteria including decision to issue debt or equity, the sensitivity of investment cash flows and the decisions related to the distribution of the profits were used.

### **Literature And Research Background**

According to conceptual statement number two by the U.S. Financial Accounting Standards Board, conservatism is "a prudent reaction to uncertainty and ambiguity in order to ensure that ambiguity and risks inherent in the prevailing business conditions be considered necessary". The Basu (1998) and Haltsen and Watts (2001) regard conservatism as clear difference of sensitivity required for identifying accounting loss as opposed to accounting loss, which leads to less-than-real presentation of net earnings. According to Smith and Scovn(1987), conservatism is an accounting policy under uncertainty, which ultimately results in the less presentation of income and assets and has the minimum positive effect on equity holders. Conservatism, provides important information to shareholders and limits management of opportunistic motives in manipulating the limiting value makes. Therefore, debt suppliers are more willing to participate in the process of capital increase, which it will increase the financial flexibility of companies. It is expected that in the companies that have more conservatism in their financial reporting financial flexibility will be higher (Lee, 2010). Therefore, debt suppliers are more willing to participate in the process of capital increase, which it will increase the financial flexibility of companies. It is expected that in the companies that have more conservatism in their financial reporting financial flexibility will be higher (Lee, 2010). Financial flexibility is the ability of commercial units to take effective action to change their amount and timing of cash flows, in a way that can react against unexpected events and opportunities (Committee to develop standards, 2008). Therefore financial flexibility in strategic financing program can play a valuable role for companies to deal with uncertainty and inconsistency in the future. Thus, a company's financial flexibility is desirable and experimental studies strongly indicate that managers are strongly sensitive to financial flexibility in choosing one's own capital structure (Mitto & Bancel, 2004).

### **Study Background**

Almeida and colleagues (2004) showed that companies that have greater financial constraints are more likely to accumulate cash for creating domestic capital to finance future investment opportunities and increase their financial flexibility. Lafond and Watts (2008) have provided empirical evidence on the relation between conditional conservatism (Basu approach) and information asymmetry among informed investors (managers) and uninformed investors (external investors). Using a sample of U.S. stock firms which was chosen for the period 1983-2001 showed that with increase in information asymmetry in the capital market, conservatism also will be increased. Sapra ET. Al (2009) in their theoretical model showed that accounting conservatism can reduce informative content of reports on bad information and may increase the risk of being unrealistic. So that it can eventually reduce a debt contract efficiency and decrease the level of financial flexibility of companies. Lee (2010), in a study examined the role of accounting conservatism in corporate financial decisions. According to him, companies that are more conservative in their self-reporting have less financial flexibility in liquidity management and decisions on debt or equity issuance. In addition, this weakness is seen in financial flexibility, the sensitivity of corporate investment in relation to financing constraints and profit distribution policies. Nikoomaram(2001) in a study examined the effects of operational cash flow decisions and financial performance includes financial flexibility has been studied. The results indicate that reporting on the statement of cash flows and information on operational cash has failed to impress decisions and related financial performance. BaniMahd(2006) has performed the first comprehensive study of conservatism in Iran. In this study, different models of conservatism and Giouli and Hine index (2000) are chosen and its relation to assets revenue, dividend ratio, the ratio of cash flows from operations to total assets, sales growth rate, long-term debt ratio, the ratio of shareholders' salary to total assets, ratio of fixed assets to total assets, tax savings ratio and firm size is also investigated. The results of his research on 66 companies during the period 1994-2004 shows the relationship between conservatism and the return on assets, financial leverage, dividend ratios, sales growth ratio and the ratio of cash flows from operations to the total assets. Meanwhile the remaining factors were not associated with conservatism. Haghghat and Bashir (1999) in a study evaluated the effect of financial flexibility on the capital structure of listed companies in Tehran Stock Exchange Market. The main objective of the study was to investigate the relationship between capital structure and financial flexibility. Financial flexibility through the stages of organization life cycle (birth, growth and maturity) has undergone an operational definition. Companies in birth, growth and maturity have lowest to maximum financial flexibility.

### **Study Hypotheses**

For this study, three hypotheses are presented as follows:

There is a significant relation between accounting conservatism and liquidity.

There is a significant relationship between accounting conservatism and decision to issue debt or equity

There is a significant relationship between conservative accounting and investment cash flow sensitivity.

**Concept model**

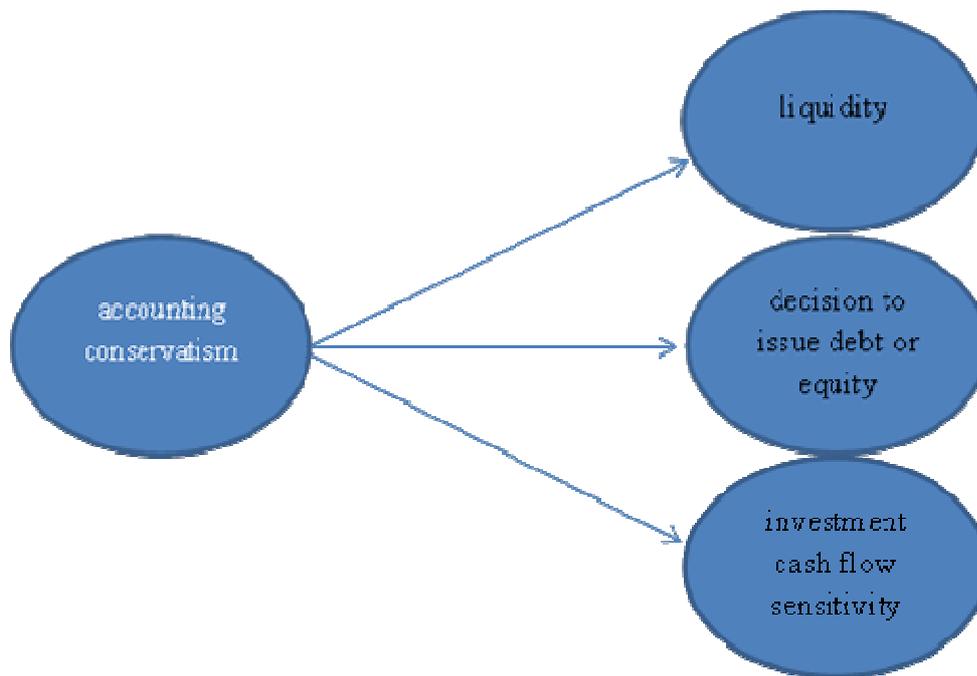


Figure 1. research conceptual model

**METHOD**

In accordance with the aim of this study, an applied method is used which is in the area of proof theory. In addition, considering data collection, the study is descriptive-inferential (non-experimental) and of correlative type which to explore the correlation between variables, post-event method is used. According to research literature, this study used a combination of data. To analyze and test theories and the study hypotheses, correlation method was chosen. The data collection source in this study was financial statements of companies. The statistical community is composed of all listed companies on Tehran Stock Exchange Market, which have been active from 2001 to 2010 in stock market. Screening method (exclusion-based) is used in the study. For this purpose, five criteria are considered and if a company has met all the criteria, it is selected as one company under study. The criteria are as follows:

- 1 . Company should have been listed before 2001 in Tehran Stock Exchange Market and been active until the end of 2009.
- 2 . Company should have not changed its fiscal year during fiscal years 2001 to 2009 and its fiscal year ending in March.
- 3 . There must not be any interruption of the company's transactions more than 6 months
- 4 . Necessary information on the company must be available
- 5 . Companies must operate in the manufacturing sector.

Of eligible companies in the manufacturing industry, 100 companies were selected using systematic exclusion. Data for this study were extracted from the Tehran Stock Exchange Market databases, research management database, research, database management software, TadbirPardaz software database, weekly reports, financial statements of companies and necessary explanatory notes.

The collected data were entered in Excel software and classified and arranged based on the studied variables. The final analysis is performed using the software Eviews6. In this study, to investigate the association between accounting conservatism with flexibility factors in financial decisions, multiple variable linear regression and logistic regression model were used and fitted as follows.

$$CASH_t = \alpha + \beta CONSEV_{t-1} + \sum \gamma Controls_t + \varepsilon_t$$

Using the following model, the relationship between liquidity dependent variable and conservative independent variable is examined.

$$Pr(DISSUE_t) = \alpha + \beta CONSV_{t-1} + \psi(LEVERAGE_t^* - LEVERAGE_{t-1}) + \sum \gamma CONTROLS_t + \varepsilon_t$$

In addition, using the following model, the relationship between the decisions dependent variable related to financing through equity or debt issuance, and conservative independent variable is investigated.

$$CFSI_t = \alpha + \beta CONSV_{t-1} + \sum \gamma Controls_t + \varepsilon_t$$

To investigate the relationship between dependent variable of sensitivity, investment cash flows and conservative independent variable, the following model is used:

$$REVENUE_t = \alpha_0 + \alpha_1 * EXP_{t-1} + \alpha_2 * EXP_t + \alpha_3 * EXP_{t+1} + \varepsilon_t$$

For a conservative measure, the model proposed by Dichu and Tang (2008) is used. In this model, the mean of index  $\alpha_1$  which shows conservatism and is the result of performing time series for a 10-years alternating period in the form of year-company is obtained.

In the above model,  $REVENUE_t$  is the earning of company in year t divided by average total assets. In addition, EXP is the company cost for the year t and is equal to the difference between company's revenue and operating income divided by average total assets.

$$CFSI_{i,t} = \sum_{t=1}^n (I_{i,t} \times \frac{CF_{i,t}}{\sum_{t=1}^n CF_{i,t}}) - \frac{1}{n} \sum_{t=1}^n I_{i,t}$$

Cash flow sensitivity of investments ( $CFSI_t$ ): Cash flow sensitivity of investment is calculated by the following equation (Havakimian, 2009).

In this model, the profit before tax and amortization expense of company i in year t is divided by first time net fixed assets of company i in year t. also, the capital expenditures of the company i is divided by first time net fixed assets of company i in the year t.

In this study, the dependent variables include liquidity ( $CASH_t$ ), decisions concerning equity or debt issuance ( $DISSUE_t$ ), the sensitivity of investment cash flow ( $CFSI_t$ ).

Also cash at the end of the fiscal year divided by company total assets has been considered liquidity ( $CASH_t$ ).

Decisions relating to equity or debt ( $DISSUE_t$ ): it is a dummy variable and it is one if change in net debt is more than 5% of market value of assets, and it is zero when net change in shares is more than 5% of the market value of assets. In addition, based on Havakimian model, the investment cash flows sensitivity variable is examined.

The independent variables in this study include conservatism ( $CONSEV$ ), financial leverage ( $LEVRAGE$ ), changes in liquidity ( $\Delta CASH$ ).

As described above, for the measurement of conservatism, Dichev and Tang model (2008) is used. In addition, the financial leverage ( $LEVRAGE$ ) is equal to total debt at the end of financial year divided by the market value of total assets

In this study, the control variables are as follows:

Ratio of market value to book value of assets (MB) which is equal to stock price at the end of fiscal year to book value per share.

Company size which is equal to the natural logarithm of total assets at the end of each financial year.

### Research finding

In the first hypothesis, the relationship between liquidity and conservative is considered. Figure 2 shows explanation coefficient statistics, percentage of changes caused by independent variables on liquidity dependent variable. The mentioned coefficient is only 0.011, i.e. 1.1% percent of changes in the independent variable results from the independent variable. The correlation coefficient which is a degree of the strength of the link between the independent and dependent variables is equal to 0.0104.

Figure 3 is called analysis of variance (ANOVA). Using test F (Fisher), the ability of the model is discussed and tested in this figure. Test F (Fisher) determine the significant effects of the independent variables on the dependent variable. Assumption of this test is:

$$\left\{ \begin{array}{l} H_0: \beta_1 = \beta_2 = \beta_3 = 0 \\ H_1: \beta_i \neq 0 \quad i=1, 2, 3 \end{array} \right.$$

Figure 2. explanation coefficient statistics

Standard error of estimate	Coefficient corrected	Explanation coefficient	Coefficient of determination	Model
0.3694	0.010	0.011	0.104	1

Rejection of hypothesis H0 on this test indicates that the effect of at least one variable from independent variables on dependent variable (liquidity) is not confirmed at the significance level of 0.05 percent. In other words, the model is confirmed at confidence level 0.095.

Figure3. analysis of variance (ANOVA)

Sig.	F	Mean square	df	Sum squares		
0.041	3.469	0.0034	3	0.013	Regression	1
		0.001	896	1.233	Residual	
			899	1.233	Total	

Figure 4 is called the regression coefficients. In this table, corresponding regression coefficient of the independent variable ( $\beta_i$ ), with standardized regression coefficients and t-test are presented. Rejection of hypothesis H0 on this test at the significance level of 0.05 percent indicates that the significant effect of conservatism variables and company size on dependent liquidity variable is confirmed at significance level of 0.05 percent. In addition, conservative variable has a direct relationship and company size variable has an inverse relationship with dependent variable. Therefore, fitted regression equation is a term.

$$CASH_t = \alpha + \beta CONSEV_{t-1} + \sum \gamma Controls_t = 0.066 + .023 CONSEV_{t-1} - .002 SIZE + 0.00001MB$$

The results of this study are similar to Jimi Lee (2010). In fact, since a substantial amount of capital required by companies in Iran is provided by banking system and considering uncertain economic conditions and bank rules and guidelines for providing facilities, companies have become more willing to hold cash.

Figure 4. regression coefficients

Sig.	t	standardized regression coefficients		regression coefficients		Model
		Beta		Std. Error	B	
0.000	4.693			0.014	0.066	(Constant)
0.013	2.487	0.024		0.018	0.023	CONSEV
0.472	0.720	-0.096		0.00001	0.00001	MB
0.046	-1.998	-0.078		0.001	-0.002	SIZE

In the second hypothesis, using the following model, the relationship between decision variables for the issuance of debt or equity and conservatism is considered. Technique used is regression analysis (logistic regression) in which debt or equity issuance variable is considered dependent variable (which has been corresponded in two levels and with zero and one) and conservative variable is independent variable. Figure 5 investigates the goodness statistics of the model. In the following table, the rejection of hypothesis H0 on test KHI 2 in the significance level of 0.05 percent ( $Sig < .05$ ) indicates that "the independent variables have not successfully explained the changes in dependent variable".

Figure 5. goodness statistics of the model

Sig.	df	Chi square	Step	Step 1
0.396	4	4.072	Step	Step 1
0.396	4	4.072	Block	
0.396	4	4.072	Mode	

Figure 6 represents some statistics for examining the likelihood of the model. Likelihood-2 statistics is called log-likelihood ratio which estimates an amount of model goodness. So that its low values indicate the success of model and its great values indicate the failure of the model. Considering the low value of this variable, the goodness of the model is assumed. The following figure presents Cox & Snell R Square. This statistics in the logistic regression model, explains an amount of percentage of changes identified by the model. The mentioned coefficient is equal to 0.05 percent, i.e. model acts successfully in explaining 0.05 percent of the cases in predicting decision making for issuing debt or equity.

Figure 6. likelihood of the model. Likelihood

Nagelkerke R Square	Cox & Snell R Square	-2 Log likelihood	Step
0.006	0.005	1237.827	1

Figure (7) presents compliance rate of specified values and predicted values (the percentage of correct prediction of the model) for the studied units.

Figure 7. the percentage of correct prediction of the model

Predicted	Actual	Percentage Correct	Overall Percentage
1.00	17	96.5	54.7
.00	23	5.6	
Overall Percentage			

Values predicted by the model in the 54.07% are consistent with the actual situation of company. In simpler terms, the suggested logistic regression model has acted appropriately in the estimation of 54.07 % of the surveyed companies (in terms of making decisions on debt or equity issuance).

Figure 8. Wald test statistic

Exp(B)	Sig.	df	Wald	S.E.	B	Model	Step 1(a)
0.730	0.813	1	0.057	1.335	-0.315	CONSEV	
1.000	0.999	1	0.000	0.003	0.000	T.LEV	
1.000	0.068	1	3.329	0.000	0.000	M.B	
1.088	0.170	1	1.884	0.062	0.085	SIZE	
0.301	0.127	1	2.327	0.788	-1.202	Constant	

Using the Wald test statistic, the significance of the effects of the studied variables is examined in Figure 8. Studied hypothesis in this test is as follows:

$$H_0: \beta_1 = \beta_2 = \beta_3 = 0$$

$$H_1: \beta_i \neq 0 \quad i=1,2,3$$

Acceptance of  $H_0$  with regard to this test indicates that the effect of studied independent variables on the dependent variable (decision on debt or equity issuance) is not confirmed in the significance level of 0.05 %. In the third hypothesis, using the following model, the relationship between investment cash flows and conservatism is examined. Figure 9 shows explanation coefficient statistics of the percent of changes caused by independent variables on independent variables (the sensitivity of investment cash flows). The mentioned coefficient is only equal to 12.05 percent of changes in independent variable caused by surveyed independent variables. The correlation coefficient which indicates an amount of the strength of the link between the dependent and independent variables is equal to 0.354.

Figure 9. explanation coefficient statistics

standard error of estimate	Coefficient corrected	Coefficient (R-squar)	R	Model
6.42739	0.122	0.125	0.354	1

Test F (Fisher) in figure (9) determine the significant effects of the independent variables on the dependent variable. The assumption of this test as follows:

$$\left\{ \begin{array}{l} H_0: \beta_1 = \beta_2 = \beta_3 = 0 \\ H_1: \beta_i \neq 0 \quad i=1,2,3 \end{array} \right.$$

Figure 10. analysis of variance (ANOVA)

Sig.	F	Squared squares	df	sum squares	Model	Step
0.000	41.838	1728.371	3	5185.114	Regression	1
		41.311	878	36271.333	Residual	
			881	41456.447	Total	

Rejection of hypothesis  $H_0$  on this test indicates that the effect of at least one variable from independent variables on dependent variable (sensitivity of investment cash flows) is not confirmed at the significance level of 0.05 percent. To put it in simpler tests, the model is confirmed at confidence level 0.095. Test statistics used is as follows:

$$\left\{ \begin{array}{l} H_0: \beta_1 = \beta_2 = \beta_3 = 0 \\ H_1: \beta_i \neq 0 \quad i=1,2,3 \end{array} \right.$$

According to the results in Figure 10, rejection of  $H_0$  at significance level of 0.05 percent indicates the significant effect of variables MB and CONSEV on dependent variable at significance level of 0.05 percent is confirmed. CONSEV and MB variables have an inverse and direct relationship with dependent variable, respectively.

Figure 11. regression coefficients

Sig.	t	standardized regression coefficients	Standardized regression coefficients are not		Model
		Beta	Std. Error	B	
0.533	-.624		2.504	-1.563	(Constant)
0.043	-1.738	-0.056	3.147	-5.871	CONSEV
0.000	9.476	0.346	0.000	0.000	MB
0.581	0.552	0.020	0.195	0.108	SIZE

Therefore, fitted regression equation is as follows

$$CFSI_t = \alpha + \beta CONSV_{t-1} + \sum \gamma Controls_t + \varepsilon_t = -1.563 - 5.871 CONSEV + 1.2769027733 \cdot 15e-009MB + 0.108SIZE$$

The results of this study are similar to Jimi Lee (2010) in which companies with a more conservative level in reporting, experience lower levels of investment cash flows.

### CONCLUSION AND SUGGESTION

In total, the accounting conservatism in financial reporting has affected some of the parameters of flexibility in financial decisions and has no effect on some others. According to overall summary of findings, accounting conservatism affects investment decisions and investment cash sensitivity, and is not effective on decisions about how to finance through the issuance of equity or debt. Future research is suggested as follows:

Considering characteristics of Iran capital market, the factors influencing flexibility in the financial decisions could be examined.

The impact of flexibility of financial decisions on capital structure cost of companies active in stock market could be investigated.

The effect of macroeconomic variables such as economic inflation and recession could be added to the variables of in this study.

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