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經理人之股份基礎給付對穩健原則之影響

Executives' Equity-Based Compensation and Accounting Conservatism

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中文摘要

本篇論文研究目的是探討經理人的權益薪酬比例與公司會計穩健原則之關係。當公司所有權與經營權分離時，股東與經理人會因資訊不對稱而有代理問題產生，而給予經理人股票選擇權及限制性股票這類權益薪酬，目的是為了連結雙方的利益，激勵經理人以公司的利益為主要考量，進而減緩代理問題;穩健會計就 Watts 契約面解釋而言，認為它能限制經理人的行為，是為了解決因資訊不對稱、有限期間與有限責任所導致的道德危機，而發展出的一種有效率的機制，可藉由認列損失與利得時存在的不對稱時效性來降低代理成本,所以我預期經理人的權益薪酬比例與穩健會計間存在負向關係。

實證研究以美國公司為樣本，採用 Basu 模型，以盈餘對好（壞）消息之不對稱反應來衡量會計穩健原則，1993-2012 年間證實隨著權益薪酬比例的增加會降低對穩健原則的需求。本研究進一步將樣本分為四個期間: 1993-2001, 2003-2005, 2006-2008, 2009-2012，其中，2003-2005 及 2006-2008 之實證結果亦符合預期，惟 1993-2001 與 2009-2012，其實證結果之方向雖與預期一致，但不顯著，可能受該期間有關薪酬之會計制度及股票大盤走勢的影響。最後，各期間經敏感性測試所得到的實證結果仍不變。

關鍵字:經理人之權益薪酬;會計穩健原則;不對稱時效性;代理問題

Abstract

This paper examines the relation between executives' equity-based compensation and accounting conservatism. Since both mechanisms may mitigate the agency problems between managers and shareholders, I hypothesize that there is a negative relation between the proportion of equity-based compensation to executives and the level of conservatism. Using a large sample of US firms during the period 1993-2012, I find that the coefficient of interaction on the ratio of executives' equity-based to total compensation and accounting conservatism is negative and significant. Further, I divide the whole sample period into four parts: 1993-2001, 2003-2005, 2006-2008, and 2009-2012. The results of period 2003-2005 and 2006-2008 are consistent with my hypothesis: the asymmetric timeliness of earnings declines with managerial proportion of executives' equity-based compensation. However, the outcomes of period 1993-2001 and 2009-2012 are negative but not significant. The reason might be that accounting standard at that time is associated with adoption and shareholders' understanding of managers' incentives plan. Besides, the trend of stock market may bring about an unobvious effect. The results are robust after controlling for the investment opportunity set and additional tests.

Keywords: executives' equity-based compensation; accounting conservatism; asymmetric timeliness; agency problem

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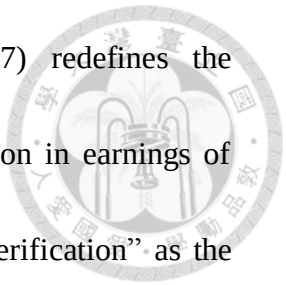
1. Introduction

The purpose of this study is to investigate whether executives' equity-based compensation and the structure of executives' compensation has an effect on firm's accounting conservatism policy. According to prior research, executives' equity-based compensation may help in aligning the interests of managers and shareholders. An incentive compensation system for executives or to give them stock options can be used to partly alleviate the agency problems (Ahmed et al. 2002; Jensen and Meckling 1976). Meanwhile, accounting conservatism is another way to help mitigate the agency costs by asymmetric timeliness of earnings (Watts 2003). Therefore, I predict that equity-based compensation to executives will decrease the need of reducing information asymmetry using conservative accounting.

In this paper, following Murphy (1999) specification, executives' pay packages contain four basic components: a base salary, an annual bonus tied to accounting performance, stock options, and long term incentive plans (including restricted stock plans and multi-year accounting-based performance plans). Generally speaking, executives' compensation can be classified into two types: one is earning-based compensation including basic salary and annual bonus; the other is equity-based compensation including stock options and restricted stock.

Regarding conservatism, accountants traditionally express it by the rule



"anticipate no profits, but recognize all losses". Basu (1997) redefines the conservatism principle in accounting as the more timely recognition in earnings of bad news than good news. Watts (2003) interprets "differential verification" as the greater the conservatism, the greater the difference in degree of verification required for gains versus losses. He further provides alternative explanations for conservatism, namely accounting regulation, taxation, shareholder litigation, and contracting. Under the contracting explanation, conservative accounting is a means of mitigating the agency problems between managers and shareholders. It is a mechanism increases the efficiency of contracts between managers and shareholders. Even more, Iyengar and Zampelli (2010) indicates that conservatism limits earnings management opportunities and ties executive compensation contracts more closely to accounting performance. Even though Watts (2003) reveals that such contracts are a main factor behind the demand for accounting conservatism, there is little empirical research that examines the relation between executives' compensation contracts and accounting conservatism. Most of previous research focuses on debt contracts (Ahmed et al., 2002; Zhang, 2008; Ball et al., 2008; Beatty et al., 2008) or on earning-based compensation contracts. However, the composition of executive pay in the U.S. changes dramatically during the last two decades. The trend toward equity-based pay appears to be spreading to the rest of the developed countries. Consequently, the objective of

this paper is to provide a long term perspective on the relation between executives' equity-based compensation and accounting conservatism.

The remainder of this paper is organized as follows: Section 2 discusses related research and develops the hypothesis. Section 3 describes research design and the measurement of executives' equity-based compensation, accounting conservatism, and variables used. Section 4 outlines the sample selection criteria and reports descriptive statistics for the variables used. Section 5 presents the empirical results of accounting conservatism. Section 6 discusses sensitivity analysis. Section 7 draws conclusion.

2. Related Research and Hypothesis Development

Separation of corporate's ownership and corporate's control at the turn of the twentieth century gives rise to the agency problems between managers and shareholders (Berle and Means 1991). Executives first take into consideration their own goals and personal reputation instead of firm profits. Managers have incentives to transfer wealth to themselves from shareholders due to limited horizons and limited liability. Conflicts of interest between managers and other parties to the firm arise because information asymmetry, managers have more information than the stakeholders and effectively control firms' assets but generally do not have a significant equity stake in their firms. Thus, one solution to the agency problem is linking management compensation and shareholders' equity. During the last two decades, equity-based pay has increasingly become part of the compensation packages. Following Murphy (1999) specification, executives' pay packages contain a base salary, an annual bonus, stock options, and restricted stock. Equity-based compensation in this paper contains stock options and restricted stock:

Stock Options give employees the option of buying company stock at a pre-specified time with the set price that the stock options program grants. Options give executives a greater incentive to act in the interests of shareholders by providing a link between realized compensation and company stock price performance. They

have no value at the time of issue. If the stock price of the corporation rises, stock options holders can make a profit by buying the stock below the fair market price. However, if the company stock price sinks below the option set price, they are essentially worthless to the employee.

There are always some restrictions apply to the stock options. Like employees can't leave the firm before vesting, thus also providing retention incentives. Finally, stock options encourage executives risk taking, which can mitigate problems with risk-averse executives.

Restricted Stock is granted to employees in a process known as vesting rather than buying by employees. Shares earned build up until they reach the vesting period. Restricted stock help increase employee loyalty and encourage employees to stay with the company long enough to reach the vesting.

The purpose of equity-based compensation mentioned above serves to increase employee motivation, improve employee loyalty, and reduce turnover in the workforce. There is also a considerable amount of empirical evidence that suggest equity holdings motivate executives to raise profitability and increase shareholder value. Establishment of an incentive compensation system serves to more closely identify the manager's interests with those of the outside equity holders. (Jensen and Meckling 1976). Effective managers' compensation structure plays a significant role

in protecting shareholders' wealth. Well-designed equity plans better align top executives' interests with shareholders. It strengthens the link between executives' pay and corporate performance and motivates sustainable, or long-run, value creation (Hall 2003). Nagar et al. (2003) find that managers with more equity-based compensation have incentives to mitigate the managerial disclosure agency problem since their interests are more aligned with shareholders'. Armstrong et al. (2010) provide evidence that executives with greater equity incentives may lower frequency of accounting irregularities and reduce improper financial reporting. In sum, those researches are consistent with the notion that equity-based compensation for executives plays a role in mitigating the agency problem between managers and shareholders.

Watts (2003) demonstrates that conservatism can be another method of reducing the information asymmetry between managers and shareholders. Without a verification requirement, executives can overstate future cash flows; maximize their payments under earning-based compensation plans; and possibly lead to negative net present value investments by the firm. LaFond and Watts (2008) imply that information asymmetry generates demands for conservatism. Conservatism can reduce information asymmetry by restricting the manager's ability to manipulate financial reporting through disclosing negative information faster in form of earnings.

As mentioned above, accounting conservatism and equity-based compensation may both help in aligning the interests of managers and shareholders. Therefore, I want to evaluate the influence of equity-based compensation to accounting conservatism policy. Whether the amount or proportion of equity-based compensation given to executives influences the level of conservatism?

Hypothesis: There is a negative relation between the proportion of equity-based compensation to executives and the level of conservatism.

This paper adopts Basu's model to assess accounting conservatism. Conditional conservatism is defined as the imposition of stricter verification standards for recording good news as gains than for recording bad news as losses. Under unconditional conservatism, the book value of net assets is understated because of predetermined aspects of the accounting process(Beaver and Ryan 2005). Ball and Shivakumar (2005) state that "an unconditional bias of unknown magnitude introduces randomness in decisions based on financial information and can only reduce contracting efficiency. In contrast, the conditional form of conservatism can improve contracting efficiency. The agency issues associated with unconditional conservatism are likely to disorder its' relation with executives' equity-based compensation. " Consequently, the test of hypothesis is restricted to the association between equity-based compensation and *conditional* conservatism.

3. Research Design

3.1. The measure of executives' compensation

The sample of executives' compensation is based on Standard & Poor's Execucomp database during the period 1993-2012. In 1992, the Securities and Exchange Commission (SEC) began asking firms to disclose more detailed information on executives' compensation in their proxy statements. Reporting rules on executive compensation do change over time, the FAS123(R) changed the reporting requirements of the SEC DEF14A form in 2005. Companies with fiscal year end after Dec 2005 have to adjust to new reporting requirement. Equity-based compensation has to be expensed and be reflected in the financial statements based on fair value of the awards. Prior to 2006, the variables called "OPTION_AWARDS_BLK_VALUE" and "RSTKGRNT" are used to represent executives' equity-based compensation. The "OPTION_AWARDS_FV" and "STOCK_AWARDS_FV" columns are essentially comparable between the old and new reporting formats after 2006.

3.2. The measure of accounting conservatism

I adopt Basu's model to measure accounting conservatism. Under conservative accounting, earnings capture bad news faster than good news because of the asymmetric standards of verification of losses and gains.

$$EPSBPt1 = \beta_0 + \beta_1 R + \beta_2 D + \beta_3 R*D + \varepsilon$$

where

EPSBPt1 is the earnings per share for firm i in fiscal year t (EPSBit) divided by the price per share at the beginning of the fiscal year (Pit-1).

R is the stock rate of return of the firm, measured by compounding 12 monthly CRSP stock returns ending the last day of fiscal year t.

D is a dummy variable=1 if R < 0, = 0 otherwise.

The coefficient β_3 measures the level of asymmetric timeliness of conservatism and it is expected to be positive and significant

3.3. Empirical model

In order to test hypothesis, I use the following model to investigate the relation between executives' equity-based compensation and accounting conservatism:

$$EPSBPt1 = \beta_0 + \beta_1 R + \beta_2 D + \beta_3 R*D + ECOMP*(\beta_4 + \beta_5 R + \beta_6 D + \beta_7 R*D) + Size*(\beta_8 + \beta_9 R + \beta_{10} D + \beta_{11} R* D) + Leverage*(\beta_{12} + \beta_{13} R + \beta_{14} D + \beta_{15} R*D) + Growth*(\beta_{16} + \beta_{17} R + \beta_{18} D + \beta_{19} R*D) + \varepsilon$$

where

ECOMP is the ratio of top five executives' equity-based compensation, including stock options and restricted stock, to top five executives' total compensation in fiscal year t. Total compensation for the individual year, comprised of the following: salary, bonus, other annual, total value of restricted stock granted, total value of stock options granted, long-term incentive payouts, and all other total. Valuation is based on the grant date fair value reported by company or using standard and poor's Black-Scholes methodology before 2006.

Leverage is total debts divided by total assets at the beginning of the fiscal year t. It's a variable to control conservatism demands of debt holders. Ahmed et al. (2002) find accounting conservatism mitigates conflicts between bondholders and shareholders over dividend policy. Conservatism benefits lenders through a timely signal of default risk.

Growth is the ratio of market value of equity to book value of equity at the beginning of the fiscal year t to control for the effect of beginning composition of equity value on future asymmetric timeliness. The Basu's measure is affected by the beginning composition of equity value. Asymmetric timeliness appears to measure conservatism more efficiently when estimated cumulatively over several periods. (Roychowdhury and Watts, 2007)

Size is natural log of total assets at the beginning of the fiscal year t. The firm's degree of reporting conservatism is affected by firm size. Firm size influencing conservatism is information asymmetries. It is positively correlated with the relative amount of public information which reduces information asymmetry between investors (Givoly et al., 2007; LaFond and Watts, 2008).

The **Appendix A** of this paper provides more detailed definition and items of variables from each database.

The coefficient of ECOMP*R*D (β_7) measures the relation between executives' equity-based compensation and accounting conservatism with regard to bad news. If it is consistent with the prediction of hypothesis, β_7 would be negative.

4. Sample Selection and Descriptive Statistics

The sample of executives' compensation is obtained from S&P ExecuComp database over the period 1993 to 2012. In addition to requiring compensation data, I require firms' accounting data on Compustat and returns data on CRSP to conduct my empirical analyses. Table1 Panel A summarizes my sample selection procedure. I obtain the initial sample of 37,603 observations on ExecuComp database for 1993-2012. Next, I merge Compustat and ExecuComp, excluding companies without complete accounting data or executives' compensation information, and remains in 37,569 observations. Afterward, I combine returns data on CRSP with Compustat and ExecuComp, which result in a sample of 23,328 observations. Finally, after deleting outliers of each variable at 0.5% level to improve the quality of regression, the sample is reduced to 22,302 observations. Panel B reports sample classification by fiscal year and by industry which determined by NAICS (North America Industry Classification System) code. It informs that there are sufficient data in each year, and the firms range over Manufacturing, Finance and Insurance and so on.

Table 1

Panel A: Sample selection

Compustat, ExecuComp and CRSP data over 1993-2012.

		Number of Firms
Firms' executives' compensation on ExecuComp		37,603
Less companies without complete accounting data or executives' compensation information	(34)	
Merge Compustat and ExecuComp		37,569
	(14,241)	
Combine CRSP with Compustat and ExecuComp		23,328
Delete outliers of each variable	(1,026)	
Final number of observations		22,302

Panel B: Samples classified by fiscal year and by industry

Fiscal Year	**N**	**Industry**	**N**
1993	1,278	11 Agriculture, Forestry, Fishing and Hunting	51
1994	1,381	21 Mining, Quarrying, and Oil and Gas Extraction	1,045
1995	1,367	22 Utilities	1,529
1996	1,395	23 Construction	355
1997	1,334	31-33 Manufacturing	10,008
1998	1,302	42 Wholesale Trade	711
1999	1,206	44-45 Retail Trade	1,413
2000	1,096	48-49 Transportation and Warehousing	659
2001	1,055	51 Information	1,254
2002	1,068	52 Finance and Insurance	2,842
2003	1,085	53 Real Estate and Rental and Leasing	400
2004	1,073	54 Professional, Scientific, and Technical Services	584
2005	1,033	56 Administrative and Support and Waste Management and Remediation Services	309
2006	979	61 Educational Services	72
2007	998	62 Health Care and Social Assistance	295
2008	956	71 Arts, Entertainment, and Recreation	68
2009	934	72 Accommodation and Food Services	537
2010	949	81 Other Services (except Public Administration)	103
2011	929	99 Nonclassifiable Establishments	67
2012	884		
Total	22,302	Total	22,302

Table2 reports the descriptive statistics for the variables used in this study. The descriptive statistics in Table2 indicates the mean of fiscal stock returns is 0.146100, which is generally consistent with those of previous studies. The mean and median of logT5EBC and ECOMP are 6.068635, 6.378178 and 0.381032, 0.386873, respectively.

Table 2

Descriptive Statistics

The sample consists of 22,302 firms. Variables are averaged over 1993-2012.

Variable	Median	Mean	Std. Dev.	P10	P25	P75	P90
EPSBPt1	0.052345	0.034458	0.105392	-0.033571	0.024812	0.075790	0.103066
R	0.101258	0.146100	0.438269	-0.33228	-0.116646	0.334380	0.636365
D	0	0.372702	0.483535	0	0	1	1
logT5EBC	6.378178	6.068635	1.205129	3	5.842007	6.817565	7.155828
ECOMP	0.386873	0.381032	0.239362	0	0.193833	0.564376	0.69871
Leverage	0.210086	0.220999	0.167732	0.001595	0.076793	0.333523	0.438545
Growth	2.084703	2.784916	2.462708	1.019236	1.426739	3.261614	5.220283
Size	9.208204	9.261585	0.761314	8.313515	8.692178	9.777021	10.31664

The **Appendix B** of this paper provides descriptive statistics for stock options (using “OPTION_AWARDS_BLK_VALUE” and “OPTION_AWARDS_FV”), restricted stock (using “RSTKGRNT” and “STOCK_AWARDS_FV”), logT5EBC, and ECOMP each year.

Table3 reports the correlation matrix among the variables. It shows that although EPSBPt1 is positively correlated with R (0.2141), it is negatively correlated with D (-0.2247). Those are consistent with Basu's results, indicating that reported earnings reflect at least a portion of the information reflected in returns.

Table 3

Correlation Table

The sample consists of 22,302 firms. Variables are averaged over 1993-2012.

	EPSBPt1	R	D	logT5EBC	ECOMP	Leverage	Growth	Size
EPSBPt1	1.0000							
R	0.2141	1.0000						
D	-0.2247	-0.6704	1.0000					
logT5EBC	0.0101	0.0101	-0.0139	1.0000				
ECOMP	-0.0601	-0.0240	0.0521	0.8045	1.0000			
Leverage	-0.0352	-0.0096	-0.0149	0.0330	-0.0243	1.0000		
Growth	0.0408	-0.0482	0.0557	0.1257	0.2025	-0.0803	1.0000	
Size	0.1108	-0.0641	-0.0525	0.3376	0.1821	0.2608	-0.0754	1.0000

5. Empirical Results

Table4 tests conservatism using Basu's regression. Under the definition, the coefficient of R measures the timeliness of earnings with respect to good news. In contrast, the coefficient of R*D measures the "incremental" timeliness of earnings regarding bad news. Therefore, β3 is predicted to be positive and significant. In this analysis I focus on the coefficient of R*D because it measures the degree of accounting conservatism.

The result is consistent with Basu's model under conservatism. β3 is positive (0.6342652) and significant, which means that earnings reflect "bad news" more quickly than "good news". Besides, the intercepts is positive (0.0335077) which implies that unrealized gains is postponed to future periods.

Table 4

Test of Basu's Model: Fiscal Year Returns

Model: EPSBPt1 = β0 + β1R + β2D + β3R*D

* p<.1, ** p<0.05, *** p<0.01

β0	β1	β2	β3
0.0335077***	0.0176202	0.0821693***	**0.6342652*** **
(3.30)	(1.33)	(4.08)	(11.32)

Table5 tests the relation between proportion of equity-based compensation and accounting conservatism:

$$EPSBPt1 = \beta_0 + \beta_1 R + \beta_2 D + \beta_3 R*D + ECOMP*(\beta_4 + \beta_5 R + \beta_6 D + \beta_7 R*D) + Size*(\beta_8 + \beta_9 R + \beta_{10} D + \beta_{11} R*D) + Leverage*(\beta_{12} + \beta_{13} R + \beta_{14} D + \beta_{15} R*D) + Growth*(\beta_{16} + \beta_{17} R + \beta_{18} D + \beta_{19} R*D) + \varepsilon$$

In the regression, β_1 measures earnings timeliness with respect to good news and β_3 measures the asymmetric timeliness with respect to bad news. β_5, β_9, β_{13}, and β_{17} measure the association of β_1 with ECOMP, Leverage, Growth, and Size, respectively. β_7, β_{11}, β_{15}, and β_{19} measure the association of β_3 with ECOMP, Leverage, Growth, and Size, respectively. The coefficient of ECOMP*R*D (β_7), measuring the relation between proportion of executives' equity-based compensation and accounting conservatism with regard to bad news, is predicted to be negative.

Within the sample period 1993-2012, Table5 represents that coefficient on *R*D* is significantly positive (0.425), and the coefficient on *ECOMP*R*D* is significantly negative (-0.0525). These results suggest that as ratio of executives' equity-based compensation to total compensation declines, earnings become more asymmetrically timely in recognizing bad news.

Turning to control variables, they are in accordance with the theoretical prediction. The coefficient of Leverage*R*D is positive and significant as expected, indicating that firms with greater leverage are more asymmetrically timely in recognizing bad news. The coefficient of Growth*R*D and Size*R*D are both significantly negative which is consistent with extant empirical evidence. There is relatively more public information for larger firms (Banz 1981). Firm size is positively correlated with the relative amount of public information which reduces information asymmetry between investors generating a negative association with conservatism.

Table 5

Test of Hypothesis: There is a negative relation between the proportion of equity-based compensation to executives and the level of conservatism.

Model: EPSBPt1 = β0 + β1R + β2D + β3R*D + ECOMP*(β4 + β5R + β6D + β7R*D) + Size*(β8 + β9R + β10D + β11R*D) + Leverage*(β12 + β13R + β14D + β15R*D) + Growth*(β16 + β17R + β18D + β19R*D)

t statistics in parentheses

* p<.1, ** p<0.05, *** p<0.01, *p*-values are one-tailed when the sign of the coefficient is predicted, two-tailed otherwise.

Independent Variables	Predict Sign	1993-2012
R	+	-0.0211
		(-0.79)
D		-0.0138
		(-0.53)
R*D	+	**0.425*** **
		(5.45)
ECOMP		-0.0314***
		(-6.20)
ECOMP*R		-0.0206**
		(-2.35)
ECOMP*D		-0.00973
		(-1.08)
ECOMP*R*D	-	**-0.0525****
		(-2.04)
Leverage		-0.0130*
		(-1.80)
Leverage*R		-0.0413***
		(-3.24)
Leverage*D		0.0135
		(1.05)
Leverage*R*D	+	**0.271*** **
		(7.39)
Growth		0.000122
		(0.25)
Growth*R		-0.000203

		(-0.26)
Growth*D		-0.0000928
		(-0.11)
Growth*R*D	-	**-0.0297*** **
		(-12.84)
Size		0.0134***
		(8.41)
Size*R		0.00505*
		(1.66)
Size*D		0.00259
		(0.89)
Size*R*D	-	**-0.0165** **
		(-1.87)
_cons		-0.0602***
		(-4.19)
N		22,302
Adj R-squared		0.1553

To provide more specific relation between equity-based compensation and accounting conservatism, I divide the whole sample period into four parts: 1993-2001, 2003-2005, 2006-2008, and 2009-2012 owing to following reasons:

There has been a dramatic change in both the level and composition of executive pay in the U.S. during the last two decades. The level of compensation has increased substantially in 1990s, and the increase was attributed to the grant of stock options. During the early 1990s, stock options became a single largest component of compensation (Murphy 1999). I set the first period from 1993-2001 due to a small decrease in stock options granted to executives since 2002. Corporate accounting scandals including those at Enron, WorldCom and other companies, have been linked

to escalation in option grants. Stock options have been criticized on giving managers a strong incentive to risk chasing investments and misleading shareholders about the true condition of their companies (MaDick 2003). To avoid bias analysis, it is necessary to exclude year 2002 from the sample.

Next period is 2003-2005. As of fiscal year 2006, executive compensation is reported under new filling requirements. Companies with fiscal year end after Dec 2005 have to adjust to new reporting requirement FAS123(R). This statement focuses primarily on accounting for share-based payment transactions exchanging employee services. Equity-based compensation has to be expensed and be reflected in the financial statements based on fair value of the awards. Prior to FASB 123(R), companies could expense options using the intrinsic value method and often recorded no associated expense on their Income Statement. Before 2006 the variable collected from Execucomp called “OPTION_AWARDS_BLK_VALUE” and “RSTKGRNT” are used. The OPTION_AWARDS_FV and STOCK_AWARDS_FV columns are essentially comparable between the old and new reporting formats after 2006. They both represent the value of options/restricted stock that were awarded during the indicated fiscal year. The one difference is that under the old format, the Black Scholes values for options were calculated by S&P (since companies were not required to report them); under the new format, Black Scholes values are reported by

the company. Hall and Murphy (2002) suggest that models of firms' choices of equity compensation methods should include the accounting considerations. Carter et al. (2007) support the assertion that accounting affects the design of executive compensation. On the basis of previous studies, year 2006 might be a watershed for executives' structure of compensation.

The third and fourth periods are 2006-2008 and 2009-2012. Subprime mortgage crisis in 2007 and the collapse of Lehman Brothers and problems of Merrill Lynch, AIG, Freddie Mac, Fannie Mae… in late 2008 almost brought down the world's financial system. The financial crisis is considered by many economists the worst financial crisis since the Great Depression of the 1930s, which might affect the analysis results. Therefore, I divide the year after 2006 into those two parts.

Appendix C reports the descriptive statistics for the variables used in this study of different periods.

Table 6

Test of Hypothesis: There is a negative relation between the proportion of equity-based compensation to executives and the level of conservatism.

Model: EPSBPt1 = β0 + β1R + β2D + β3R*D + ECOMP*(β4 + β5R + β6D + β7R*D) + Size*(β8 + β9R + β10D + β11R*D) + Leverage*(β12 + β13R + β14D + β15R*D) + Growth*(β16 + β17R + β18D + β19R*D)

t statistics in parentheses

* p<.1, ** p<0.05, *** p<0.01, *p*-values are one-tailed when the sign of the coefficient is predicted, two-tailed otherwise.

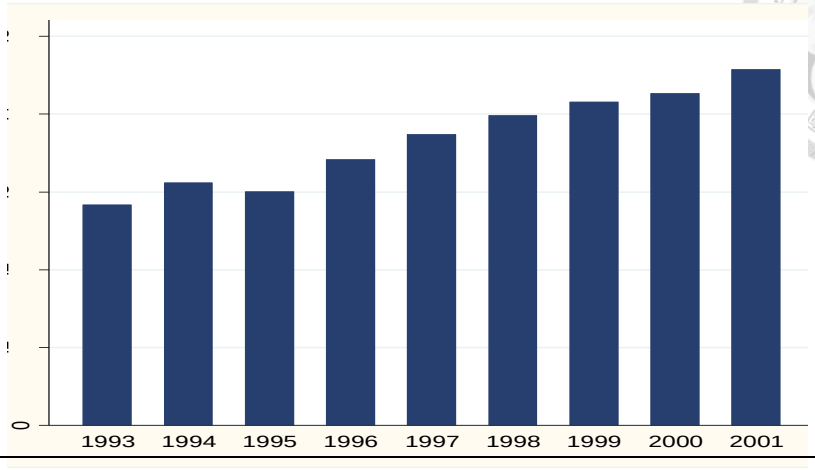
Independent Variables	Predict Sign	1993-2001	2003-2005	2006-2008	2009-2012
R	+	-0.0615**	-0.0916*	-0.106	0.0762
		(-1.94)	(-1.29)	(-0.76)	(0.96)
D		-0.00698	0.152*	-0.0811	0.0465
		(-0.20)	(1.88)	(-0.98)	(0.62)
R*D	+	**0.718*** **	**1.605*** **	**0.327***	**0.929*** **
		(6.59)	**(4.65)**	**(1.47)**	**(3.59)**
ECOMP		-0.0314***	-0.0336***	-0.0285	-0.0203
		(-4.99)	(-2.60)	(-1.60)	(-1.36)
ECOMP*R		-0.0369***	0.0438**	0.0262	-0.0452
		(-3.66)	(1.97)	(0.58)	(-1.57)
ECOMP*D		-0.0233**	0.00706	-0.00877	0.0214
		(-2.04)	(0.25)	(-0.33)	(0.76)
ECOMP*R*D	-	-0.0295	**-0.224** **	**-0.120** **	-0.0249
		(-0.88)	**(-2.12)**	**(-1.66)**	(-0.27)
Leverage		-0.00798	-0.00536	-0.0362	-0.0415**
		(-0.84)	(-0.30)	(-1.31)	(-2.42)
Leverage*R		-0.0142	-0.0968***	0.0439	-0.0767**

		(-0.89)	(-3.11)	(0.57)	(-2.51)
Leverage*D		0.0348**	0.0596	0.0502	-0.0122
		(2.03)	(1.49)	(1.31)	(-0.35)
Leverage*R*D	+	**0.366*** **	**0.765*** **	0.118	**0.511*** **
		(7.48)	**(5.23)**	(1.11)	**(3.94)**
Growth		-0.00158**	-0.000521	0.00181	0.00307**
		(-2.57)	(-0.41)	(0.99)	(2.30)
Growth*R		-0.000505	0.00443*	-0.00477	0.00567*
		(-0.59)	(1.91)	(-1.01)	(1.71)
Growth*D		0.00175	0.00342	-0.00743***	0.00324
		(1.59)	(1.21)	(-2.84)	(1.29)
Growth*R*D	-	**-0.0183*** **	**-0.0377*** **	**-0.0502*** **	**-0.0410*** **
		(-6.38)	**(-3.74)**	**(-7.21)**	**(-4.49)**
Size		0.00823***	0.0164***	0.0118**	0.0219***
		(3.96)	(3.97)	(1.96)	(5.19)
Size*R		0.0106***	0.00793	0.0158	-0.00438
		(2.91)	(0.97)	(0.99)	(-0.49)
Size*D		0.00103	-0.0190**	0.0138	-0.00613
		(0.27)	(-2.10)	(1.52)	(-0.74)
Size*R*D	-	**-0.0619*** **	**-0.136*** **	0.00450	**-0.0712*** **
		(-4.88)	**(-3.40)**	(0.18)	**(-2.51)**
_cons		-0.0103	-0.0856**	-0.0555	-0.149***
		(-0.56)	(-2.27)	(-1.01)	(-3.87)
N		11,414	3,191	2,933	3696
Adj R-squared		0.1475	0.1473	0.2451	0.1648

The coefficient of ECOMP*R*D in period 1993-2001 is negative but not significant. Thanks to Jensen & Murphy (1990) demonstrating that the compensation of top executives is virtually independent of their performance, peoples' understanding of the link between CEO compensation and company performance has improved substantially. They argue that pay-performance sensitivity in managerial compensation contracts is too low to provide executives with incentives to act in the interests of shareholders. The most powerful link between shareholder wealth and executive wealth is direct stock ownership by the CEO. However, CEO holdings as a percentage of corporate value compare to prior decades have declined. Figure1 shows that the mean of ECOMP has grown in the 1990s and reached 40% (the sample mean of ECOMP is 38%) in 1998. Nevertheless, the empirical result is insignificant. I think the first reason might be that equity-based compensation for US executives has just become increasing popular in 1990s. Second, companies generally do not treat options as an expense, either at time of grant or exercise, on company financial statements at that time. In 1992, SEC's new disclosure rules, comprising with firms, would only report "numbers" of option grants. It suggests that shareholders may be difficult to understand manager's compensation policy.

Figure 1

The mean of ECOMP



Period 2003-2005 and 2006-2008 are consistent with my hypothesis that the coefficient of ECOMP*R*D is significantly negative at 0.05 levels. These results suggest that the asymmetric timeliness of earnings declines with managerial proportion of executives' equity-based compensation. Executives' equity-based compensation plays a role in accounting conservatism policy. In 1995, SFAS 123 encourages firms to calculate stock-based compensation expense based on the fair value of options granted, but permits entities to continue using APB 25. Following the financial reporting scandals of firms such as Enron and WorldCom, dozens of firms began to announce their intention to recognize SFAS 123 expense voluntarily. Firms that are more active in the capital markets are more likely to reap benefits from such a signal (Aboody et al. 2004). Executives' compensation structure will change through the time and accounting considerations. Prior to implementation of FAS123(R), firms make decisions based on the perceived costs rather than the economic costs, they

grant more options than they would. It is important to note that firms appear to substitute away from stock options towards other forms of performance-based pay as opposed to salary because of FAS123(R) (Hayes et al 2012). Murphy (2012) also illustrates that the use of restricted shares gradually substitute for stock options to top executives. According to Hall and Murphy (2003), incentives are maximized through granting nontradable restricted stock rather than options, and it also affects managerial incentives to engage in risky investments. Consequently, the trends can support period 2003-2005 and 2006-2008 are consistent with my hypothesis that the coefficient of ECOMP*R*D is significantly negative.

The coefficient of ECOMP*R*D in period 2009-2012 is negative but not significant. Although options accounted for only 20 percent of total pay, while restricted stock had ballooned to 34 percent by 2010 (Murphy 2012), catastrophic corporate failure in late 2008 draws shareholders' attention on options which incentivize managers' excessive risk seeking behavior. On the other hand, benefits of options will backfire in bear market (Hall and Murphy 2003). According to CenFIS reports, the financial crisis in September and October 2008 was accompanied by stunning decreases in stock prices. The S&P 500 fell 48 percent in a little over six months. Executives and employees at many companies hold worthless options in response to financial crisis. The effects mutually may cause the relation between the

proportion of equity-based compensation to executives and the level of conservatism in significant.

Table7 reports the results which replace ECOMP with logT5EBC to assess my results and provide additional insights. The findings are similar to those in Table6.

$$EPSBPt1 = \beta_0 + \beta_1 R + \beta_2 D + \beta_3 R*D + logT5EBC* (\beta_4 + \beta_5 R + \beta_6 D + \beta_7 R*D) + Size*(\beta_8 + \beta_9 R + \beta_{10} D + \beta_{11} R*D) + Leverage*(\beta_{12} + \beta_{13} R + \beta_{14} D + \beta_{15} R*D) + Growth*(\beta_{16} + \beta_{17} R + \beta_{18} D + \beta_{19} R*D) + \varepsilon$$

where

logT5EBC is the log of equity-based compensation, including stock option and restricted stock grants, to top five executives. Valuation is based on the grant date fair value reported by company or using standard and poor's Black-Scholes methodology before 2006.

Table 7

Test of Hypothesis: There is a negative relation between the proportion of equity-based compensation to executives and the level of conservatism.

Model: EPSBPt1 = β0 + β1R + β2D + β3R*D + logT5EBC*(β4 + β5R + β6D + β7R*D) + Size*(β8 + β9R + β10D + β11R*D) + Leverage*(β12 + β13R + β14D + β15R*D) + Growth*(β16 + β17R + β18D + β19R*D)

t statistics in parentheses

* p<.1, ** p<0.05, *** p<0.01, *p*-values are one-tailed when the sign of the coefficient is predicted, two-tailed otherwise.

Independent Variables	Predict Sign	1993-2001	2003-2005	2006-2008	2009-2012
R	+	-0.0599**	-0.104*	-0.116	0.0795
		(-1.84)	(-1.44)	(-0.83)	(1.00)
D		-0.0110	0.153*	-0.0758	0.0394
		(-0.32)	(1.88)	(-0.93)	(0.53)
R*D	+	**0.666*** **	**1.725*** **	**0.369** **	**1.033*** **
		(6.19)	**(5.08)**	**(1.68)**	**(4.01)**
logT5EBC		-0.00326**	-0.00173	-0.000297	-0.000236
		(-2.48)	(-0.64)	(-0.10)	(-0.08)
logT5EBC*R		-0.00564**	0.00998**	-0.00216	-0.00582
		(-2.42)	(1.98)	(-0.28)	(-1.02)
logT5EBC*D		-0.00194	-0.00726	-0.00673	0.00748
		(-0.83)	(-1.20)	(-1.49)	(1.34)
logT5EBC*R*D	-	0.00868	**-0.0680*** **	**-0.0358*** **	-0.00291
		(1.18)	**(-2.99)**	**(-2.66)**	(-0.18)
Leverage		-0.00684	-0.00425	-0.0373	-0.0437**
		(-0.72)	(-0.24)	(-1.35)	(-2.55)
Leverage*R		-0.0124	-0.0915***	0.0406	-0.0721**

		(-0.78)	(-2.98)	(0.53)	(-2.36)
Leverage*D		0.0303*	0.0586	0.0519	-0.0115
		(1.77)	(1.48)	(1.35)	(-0.33)
Leverage*R*D	+	**0.345*** **	**0.748*** **	0.115	**0.520*** **
		(7.13)	**(5.15)**	(1.08)	**(3.99)**
Growth		-0.00205***	-0.00103	0.00160	0.00317**
		(-3.35)	(-0.82)	(0.87)	(2.39)
Growth*R		-0.000886	0.00451**	-0.00473	0.00431
		(-1.04)	(1.96)	(-1.00)	(1.33)
Growth*D		0.00153	0.00434	-0.00735***	0.00291
		(1.41)	(1.54)	(-2.81)	(1.16)
Growth*R*D	-	**-0.0193*** **	**-0.0346*** **	**-0.0490*** **	**-0.0402*** **
		(-7.05)	**(-3.42)**	**(-7.03)**	**(-4.55)**
Size		0.00836***	0.0157***	0.00951	0.0194***
		(3.85)	(3.64)	(1.55)	(4.44)
Size*R		0.0124***	0.00401	0.0194	-0.00242
		(3.28)	(0.48)	(1.20)	(-0.26)
Size*D		0.00190	-0.0144	0.0173*	-0.00946
		(0.48)	(-1.52)	(1.85)	(-1.10)
Size*R*D	-	**-0.0613*** **	**-0.115*** **	0.0187	**-0.0825*** **
		(-4.80)	**(-2.78)**	(0.73)	**(-2.92)**
_cons		-0.00107	-0.0794**	-0.0416	-0.132***
		(-0.06)	(-2.10)	(-0.77)	(-3.50)
N		11,470	3,204	2,923	3,692
Adj R-squared		0.1390	0.1470	0.2468	0.1639

6. Sensitivity Analysis

6.1. The effect of the investment opportunity set (IOS)

Smith and Watts (1992) find that firms' investment opportunity set (IOS), the extent to which firm value is determined by growth options and intangible assets, is related to their financing, dividend, and executive compensation policies. Skinner (1993) also mentions that the structure of management compensation agreements will vary across firms as a function of the IOS. Managers of firms with relatively more growth opportunities are likely to be allowed more decision making discretion because these managers have better information about the firm's investment opportunities than shareholders. Smith and Watts predict that growth firms are more likely to use incentive compensation plan that tie management compensation to measures of firm performance.

Roychowdhury and Watts (2007) provide insights into the link between the IOS and accounting conservatism. US GAAP prohibits upward revaluations of assets, changes in the value of growth options, and capitalization of certain internally generated intangibles. Consequently, subsequent declines in the value of these unrecorded assets are also not recognized. Earnings of firms with high growth options are not very informative, in other words, low observed conservatism when changes in firm value are driven by changes in the value of growth options and intangible assets.

In summary, the IOS has a positive association with managers' equity-based compensation and negative association with accounting conservatism. Thus, it is possible that variation in the IOS induces a negative relation between executives' equity-based compensation and accounting conservatism. I try to control the effect of IOS. As investment opportunities are typically unobservable by outsiders, a common practice is to rely on proxy variables. According to Adam and Goyal (2008), market-to-book assets ratio (MBA ratio) has the highest information content with respect to investment opportunities.

$$EPSBPt1 = \beta_0 + \beta_1 R + \beta_2 D + \beta_3 R*D + ECOMP*(\beta_4 + \beta_5 R + \beta_6 D + \beta_7 R*D) + Size*(\beta_8 + \beta_9 R + \beta_{10} D + \beta_{11} R*D) + Leverage*(\beta_{12} + \beta_{13} R + \beta_{14} D + \beta_{15} R*D) + Growth*(\beta_{16} + \beta_{17} R + \beta_{18} D + \beta_{19} R*D) + MBA*(\beta_{20} + \beta_{21} R + \beta_{22} D + \beta_{23} R*D) + \varepsilon$$

where

MBA ratio is (share price × shares outstanding + preferred stock + debt in current liabilities + long-term debt – deferred taxes and investment tax credit) /book value of assets.

The results are robust after controlling for the investment opportunity set.

Table 8

Sensitivity Analysis (IOS)

Model: EPSBPt1 = β0 + β1R + β2D + β3R*D + ECOMP*(β4 + β5R + β6D + β7R*D) + Size*(β8 + β9R + β10D + β11R*D) + Leverage*(β12 + β13R + β14D + β15R*D) + Growth*(β16 + β17R + β18D + β19R*D) + MBA*(β16 + β17R + β18D + β19R*D)

t statistics in parentheses

* p<.1, ** p<0.05, *** p<0.01, *p*-values are one-tailed when the sign of the coefficient is predicted, two-tailed otherwise.

Independent Variables	Predict Sign	1993-2001	2003-2005	2006-2008	2009-2012
R	+	-0.0549**	-0.139**	-0.120	0.0321
		(-1.67)	(-1.90)	(-0.81)	(0.37)
D		-0.00750	0.127	-0.1000	-0.0247
		(-0.20)	(1.50)	(-1.11)	(-0.30)
R*D	+	**0.805*** **	**1.758*** **	**0.543** **	**0.692*** **
		(6.87)	**(4.98)**	**(2.28)**	**(2.49)**
ECOMP		-0.0309***	-0.0299**	-0.0255	-0.0192
		(-4.83)	(-2.28)	(-1.41)	(-1.26)
ECOMP*R		-0.0329***	0.0335	0.0242	-0.0496*
		(-3.17)	(1.49)	(0.53)	(-1.71)
ECOMP*D		-0.0225*	-0.0000535	-0.0115	0.0133
		(-1.94)	(-0.00)	(-0.43)	(0.47)
ECOMP*R*D	-	-0.0246	**-0.184** **	**-0.103***	-0.0548
		(-0.73)	**(-1.71)**	**(-1.42)**	(-0.59)
Leverage		-0.00908	-0.0145	-0.0443	-0.0410**
		(-0.93)	(-0.78)	(-1.56)	(-2.37)
Leverage*R		-0.0221	-0.0740**	0.0459	-0.0778**
		(-1.33)	(-2.31)	(0.58)	(-2.54)

Leverage*D		0.0318*	0.0752*	0.0554	-0.00382
		(1.82)	(1.78)	(1.41)	(-0.11)
Leverage*R*D	+	**0.342*** **	**0.671*** **	0.0630	**0.554*** **
		(6.71)	**(4.37)**	(0.58)	**(4.25)**
Growth		-0.000304	0.00171	0.00385	0.00401**
		(-0.31)	(0.95)	(1.51)	(2.22)
Growth*R		0.000479	-0.000758	-0.00547	0.000475
		(0.37)	(-0.26)	(-0.90)	(0.10)
Growth*D		0.00185	0.00173	-0.00877**	-0.00397
		(0.97)	(0.40)	(-2.43)	(-1.11)
Growth*R*D	-	**-0.0100****	-0.0125	**-0.0338*****	**-0.0732*****
		(-1.92)	(-0.75)	**(-3.59)**	**(-4.23)**
Size		0.00689***	0.0150***	0.00954	0.0212***
		(3.12)	(3.46)	(1.52)	(4.72)
Size*R		0.0101***	0.0113	0.0171	-0.000108
		(2.69)	(1.37)	(1.05)	(-0.01)
Size*D		0.00105	-0.0174*	0.0154	0.000615
		(0.25)	(-1.87)	(1.60)	(0.07)
Size*R*D	-	**-0.0707*****	**-0.148*****	-0.0144	**-0.04768***
		(-5.27)	**(-3.65)**	(-0.56)	**(-1.58)**
MBA		-0.00310	-0.00904**	-0.00649	-0.00244
		(-1.58)	(-2.02)	(-1.06)	(-0.49)
MBA*R		-0.00255	0.0240***	0.00260	0.0156
		(-0.99)	(2.85)	(0.17)	(1.41)
MBA*D		0.000427	0.00994	0.00463	0.0208**

		(0.12)	(1.03)	(0.55)	(2.40)
MBA*R*D	-	**-0.0165****	**-0.0754****	**-0.0566*****	0.0692**
		(-1.78)	**(-2.12)**	**(-2.49)**	(2.14)
_cons		0.00304	-0.0666	-0.0298	-0.142***
		(0.15)	(-1.64)	(-0.51)	(-3.38)
N		11,414	3,191	2,933	3,696
Adj R-squared		0.1486	0.1502	0.2505	0.1663

6.2. Returns in the two ends of the bell curve

In addition, in robustness check, I use the sample which their economic losses/gains located in less than 25 percentages (Q1) or more than 75 percentages (Q4) to test whether the relation between executives' equity-based compensation and conservatism are more sensitive. I predict that accounting conservatism can be more observable when firms whose returns situated in the two ends of the bell curve are included in the same period. Table9 Panel A expresses return's quartile of four periods. In period 2003-2005, I choose the firms whose returns are less than 0.0111017 or more than 0.3983957. In period 2006-2008, firms whose returns are less than -0.2743965 or more than 0.1802682 are selected. Panel B uses the same regression to test the hypothesis. I find that the result of period 2006-2008 is more significant.

Table 9

Panel A: Return's quartile

Period	N	mean	sd	P25	P50	P75
1993-2001	11,414	0.1710168	0.4632303	-0.1144058	0.109894	0.3714427
2003-2005	3,191	0.2484091	0.4157082	0.0111017	0.1916268	0.3983957
2006-2008	2,933	-0.033205	0.3636098	-0.2743965	-0.0445148	0.1802682
2009-2012	3,696	0.1908009	0.3992147	-0.0315893	0.1449931	0.3420506

Panel B: Sensitivity analysis (returns in the two ends of bell curve)

Model: EPSBPt1 = β0 + β1R + β2D + β3R*D + ECOMP*(β4 + β5R + β6D + β7R*D) + Size*(β8 + β9R + β10D + β11R*D) + Leverage*(β12 + β13R + β14D + β15R*D) + Growth*(β16 + β17R + β18D + β19R*D)

t statistics in parentheses * p<.1, ** p<0.05, *** p<0.01, *p*-values are one-tailed when the sign of the coefficient is predicted, two-tailed otherwise.

Independent Variables	Predict Sign	1993-2001	2003-2005	2006-2008	2009-2012
R	+	-0.0490	-0.0138	0.0414	0.0717
		(-0.87)	(-0.11)	(0.20)	(0.48)
D		-0.00792	0.177	0.0542	0.0616
		(-0.11)	(1.24)	(0.23)	(0.42)
R*D	+	**0.676*** **	**1.528*** **	0.262	**1.082*** **
		(3.70)	**(3.48)**	(0.56)	**(3.03)**
ECOMP		-0.0208	-0.0272	-0.0216	-0.00368
		(-1.30)	(-0.80)	(-0.62)	(-0.09)
ECOMP*R		-0.0446**	0.0382	0.00508	-0.0655
		(-2.55)	(1.00)	(0.07)	(-1.31)
ECOMP*D		-0.0471*	0.000659	-0.222***	0.00364
		(-1.92)	(0.01)	(-2.76)	(0.07)
ECOMP*R*D	-	-0.0631	**-0.218***	**-0.517*** **	-0.00495
		(-1.15)	**(-1.63)**	**(-3.22)**	(-0.04)
Leverage		0.0197	0.0160	0.0474	-0.0776*
		(0.80)	(0.32)	(0.79)	(-1.71)

Leverage*R		-0.0416	-0.105*	-0.107	-0.0392
		(-1.50)	(-1.90)	(-0.84)	(-0.74)
Leverage*D		0.0327	0.0382	-0.0253	0.0407
		(0.89)	(0.57)	(-0.23)	(0.64)
Leverage*R*D	+	**0.446*** **	**0.773*** **	0.261	**0.526*** **
		(5.58)	**(4.16)**	(1.18)	**(2.97)**
Growth		-0.00332**	0.0000143	-0.00237	0.00290
		(-2.32)	(0.00)	(-0.74)	(0.69)
Growth*R		0.00105	0.00361	0.00223	0.00566
		(0.74)	(0.83)	(0.34)	(0.89)
Growth*D		0.00257	0.00288	-0.0190***	0.00251
		(1.21)	(0.55)	(-2.64)	(0.50)
Growth*R*D	-	**-0.0222*** **	**-0.0368*** **	**-0.0857*** **	**-0.0435*** **
		(-5.08)	**(-2.85)**	**(-5.95)**	**(-3.51)**
Size		0.00763	0.0200	0.0187	0.0186
		(1.43)	(1.60)	(1.63)	(1.44)
Size*R		0.00891	-0.00197	0.000982	-0.00475
		(1.35)	(-0.13)	(0.04)	(-0.28)
Size*D		0.00304	-0.0227	0.0237	-0.00827
		(0.35)	(-1.41)	(0.90)	(-0.50)
Size*R*D	-	**-0.0507** **	**-0.126*** **	0.0577	**-0.0862** **
		(-2.35)	**(-2.47)**	(1.08)	**(-2.19)**
_cons		-0.00342	-0.110	-0.125	-0.110
		(-0.07)	(-0.99)	(-1.21)	(-0.95)
N		5,708	1,596	1,468	1,848
Adj R-squared		0.1720	0.1533	0.3205	0.1832

6.3. Results excluding NAICS 22&52, First 6 NAICS without 22&52

Political pressures may constrain top executive pay levels in utilities and finance industry. Therefore, Table10 tries to examine the results after excluding NAICS 22 Utilities and 52 Finance and Insurance. Furthermore, it provides the results are robust of the first 6 biggest NAICS without utilities and finance.

Further, the empirical result is a monotonic function after using $ECOMP^2$ to test.

6.4. Results of stock options

According to Lafond and Roychowdhury (2008), their measures of managerial ownership exclude shares granted in options. They consider shares granted in options have potentially different incentive effects than shares owned. Therefore, I try to examine the results of stock options of my analysis. In Table11, the results are robust after undertaking a similar analysis as in Table 6 but use S as an explanatory variable.

$$EPSBPt1 = \beta_0 + \beta_1 R + \beta_2 D + \beta_3 R*D + S*(\beta_4 + \beta_5 R + \beta_6 D + \beta_7 R*D) + Size*(\beta_8 + \beta_9 R + \beta_{10} D + \beta_{11} R*D) + Leverage*(\beta_{12} + \beta_{13} R + \beta_{14} D + \beta_{15} R*D) + Growth*(\beta_{16} + \beta_{17} R + \beta_{18} D + \beta_{19} R*D) + \varepsilon$$

where

S is the ratio of stock options to top five executives' total compensation in fiscal year t.

Table 10

Empirical results excluding NAICS 22 & 52,First 6 NAICS without 22 & 52

Model: EPSBPt1 = β0 + β1R + β2D + β3R*D + ECOMP*(β4 + β5R + β6D + β7R*D) + Size*(β8 + β9R + β10D + β11R*D) + Leverage*(β12 + β13R + β14D + β15R*D) + Growth*(β16 + β17R + β18D + β19R*D)

t statistics in parentheses

* p<.1, ** p<0.05, *** p<0.01, *p*-values are one-tailed when the sign of the coefficient is predicted, two-tailed otherwise.

Independent	Predict	**NAICS without 22,52**		**First 6 NAICS without 22,52**	
Variables	Sign	2003-2005	2006-2008	2003-2005	2006-2008
R	+	-0.0586	-0.193	-0.139*	-0.212
		(-0.69)	(-1.19)	(-1.45)	(-1.22)
D		0.162	-0.128	0.281**	-0.0450
		(1.60)	(-1.25)	(2.57)	(-0.41)
R*D	+	**1.526*** **	**0.365***	**2.284*** **	**0.714*** **
		(3.75)	**(1.35)**	**(5.15)**	**(2.47)**
ECOMP		-0.0296*	-0.0200	-0.0397**	-0.0103
		(-1.85)	(-0.92)	(-2.23)	(-0.44)
ECOMP*R		0.0442*	0.0165	0.0494*	0.00000518
		(1.75)	(0.32)	(1.78)	(0.00)
ECOMP*D		0.00410	-0.0159	0.00206	-0.0224
		(0.12)	(-0.50)	(0.06)	(-0.64)
ECOMP*R*D	-	**-0.233****	**-0.108***	**-0.309*** **	**-0.118***
		(-1.95)	**(-1.29)**	**(-2.35)**	**(-1.31)**
Leverage		0.00153	-0.0407	-0.0242	-0.0548
		(0.07)	(-1.21)	(-0.90)	(-1.39)
Leverage*R		-0.0970***	0.0424	-0.125***	0.0434
		(-2.66)	(0.48)	(-3.15)	(0.45)

Leverage*D		0.0407	0.0388	0.0758	0.0510
		(0.85)	(0.83)	(1.41)	(0.92)
Leverage*R*D	+	**0.763*** **	0.0545	**0.954*** **	0.168
		(4.64)	(0.43)	**(5.22)**	(1.16)
Growth		-0.0000367	0.00302	0.0000614	0.00308
		(-0.03)	(1.44)	(0.04)	(1.41)
Growth*R		0.00418	-0.00597	0.00320	-0.00668
		(1.62)	(-1.12)	(1.20)	(-1.20)
Growth*D		0.00312	-0.00900***	0.00107	-0.0121***
		(0.95)	(-3.05)	(0.31)	(-3.79)
Growth*R*D	-	**-0.0367*** **	**-0.0536*** **	**-0.0442*** **	**-0.0687*** **
		(-3.22)	**(-6.74)**	**(-3.77)**	**(-7.63)**
Size		0.0153***	0.00478	0.0164***	0.00586
		(2.70)	(0.63)	(2.61)	(0.71)
Size*R		0.00415	0.0268	0.0134	0.0298
		(0.42)	(1.44)	(1.20)	(1.49)
Size*D		-0.0193*	0.0205*	-0.0317**	0.0124
		(-1.65)	(1.76)	(-2.53)	(1.00)
Size*R*D	-	**-0.126*** **	0.00201	**-0.205*** **	-0.0330
		(-2.64)	(0.06)	**(-3.95)**	(-1.00)
_cons		-0.0825*	-0.000789	-0.0856	-0.0124
		(-1.65)	(-0.01)	(-1.55)	(-0.17)
N		2,574	2362	1,959	1,781
Adj R-squared		0.1387	0.2321	0.1673	0.2678

Table 11

Test of Hypothesis: There is a negative relation between the proportion of stock options to executives and the level of conservatism.

Model: EPSBPt1 = β0 + β1R + β2D + β3R*D + S*(β4 + β5R + β6D + β7R*D) + Size*(β8 + β9R + β10D + β11R*D) + Leverage*(β12 + β13R + β14D + β15R*D) + Growth*(β16 + β17R + β18D + β19R*D)

t statistics in parentheses

* p<.1, ** p<0.05, *** p<0.01, *p*-values are one-tailed when the sign of the coefficient is predicted, two-tailed otherwise.

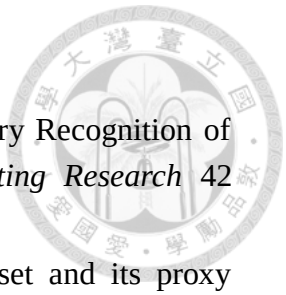
Independent Variables	Predict Sign	1993-2001	2003-2005	2006-2008	2009-2012
R	+	-0.0628**	-0.0923*	-0.103	0.117*
		(-2.02)	(-1.30)	(-0.74)	(1.48)
D		-0.0143	0.152*	-0.0767	0.0402
		(-0.42)	(1.89)	(-0.95)	(0.54)
R*D	+	**0.674*** **	**1.616*** **	**0.371** **	**0.948*** **
		(6.45)	**(4.74)**	**(1.70)**	**(3.72)**
S		-0.0358***	-0.0385***	-0.0287	-0.00187
		(-5.58)	(-2.90)	(-1.26)	(-0.11)
S*R		-0.0281***	0.0163	-0.0178	-0.109***
		(-2.89)	(0.76)	(-0.30)	(-3.21)
S*D		-0.0168	-0.00878	-0.0444	-0.0310
		(-1.43)	(-0.31)	(-1.38)	(-0.93)
S*R*D	-	-0.0280	**-0.321*** **	-0.109	-0.0934
		(-0.85)	**(-3.10)**	(-1.21)	(-0.77)
Leverage		-0.00968	-0.0106	-0.0427	-0.0419**
		(-1.02)	(-0.59)	(-1.55)	(-2.44)
Leverage*R		-0.0127	-0.0982***	0.0429	-0.0814***

		(-0.81)	(-3.16)	(0.56)	(-2.67)
Leverage*D		0.0337**	0.0603	0.0523	-0.0115
		(1.98)	(1.50)	(1.36)	(-0.33)
Leverage*R*D	+	**0.350*** **	**0.742*** **	0.116	**0.513*** **
		(7.23)	**(5.09)**	(1.09)	**(3.98)**
Growth		-0.00162***	-0.000295	0.00217	0.00283**
		(-2.75)	(-0.23)	(1.17)	(2.19)
Growth*R		-0.000410	0.00497**	-0.00513	0.00672**
		(-0.53)	(2.16)	(-1.09)	(2.27)
Growth*D		0.00227**	0.00387	-0.00763***	0.00361
		(2.12)	(1.36)	(-2.91)	(1.46)
Growth*R*D	-	**-0.0159*** **	**-0.0346*** **	**-0.0500*** **	**-0.0417*** **
		(-5.88)	**(-3.44)**	**(-7.18)**	**(-4.77)**
Size		0.00710***	0.0156***	0.0102*	0.0204***
		(3.46)	(3.83)	(1.76)	(5.15)
Size*R		0.0102***	0.00934	0.0169	-0.00888
		(2.85)	(1.16)	(1.08)	(-1.02)
Size*D		0.00138	-0.0185**	0.0138	-0.00407
		(0.36)	(-2.09)	(1.58)	(-0.52)
Size*R*D	-	**-0.0575*** **	**-0.137*** **	-0.00310	**-0.0728*** **
		(-4.75)	**(-3.51)**	(-0.13)	**(-2.66)**
_cons		0.0000831	-0.0809**	-0.0456	-0.143***
		(0.00)	(-2.15)	(-0.85)	(-3.79)
N		11,493	3,199	2,935	3,701
Adj R-squared		0.1459	0.1499	0.2475	0.1671

7. Conclusion

Lafond and Roychowdhury (2008) find that conservatism as measured by the asymmetric timeliness of earnings declines with managerial ownership. They use the percentage of shares held by the CEO (or the top five highest paid executives) in the form of direct ownership at the beginning of the fiscal year. But, the coefficient of shares granted in options separately is insignificant because they consider shares granted in options have potentially different incentive effects than shares directly owned. To extend their research, I try to focus on executives' compensation policy and value of those stock options and restricted stocks on grant date. First, the CEO of a large firm with a tiny fractional ownership but an equity stake worth tens of millions of dollars might worth much than the CEO of a small firm who owns a significant share of company stocks. Dollar holdings are likely to be the more important incentive measure in a wide variety of situations (Baker and Hall 1998). Second, I include the value of share options because I think when the firm grants an incentive plans to managers will presume they can achieve the goals. Third, executives' compensation structure will change through the time and accounting considerations. Changes in accounting standard are associated with adoption or modification of managers' incentives plan. I desire to investigate the effect of executives' compensation policy to firm's accounting conservatism policy in different periods.

My research provides little evidence that proportion of executives' equity-based compensation plays a role in firm's accounting conservatism policy. Period 2003-2005 and 2006-2009 illustrate that the asymmetric timeliness of earnings declines with managerial proportion of executives' equity-based compensation. Yet it doesn't reject the importance of conservative accounting in mitigating agency problems between managers and shareholders. Nevertheless, not every period supports that equity-based compensation to executives decreases the level of accounting conservatism significantly because of accounting standard and the trend of stock market at that time. In the future, I should observe the trends of compensation contracts and add other factors related to accounting quality to find a clearer relation between executives' equity-based compensatin and accounting conservatism.



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Appendix A：Variables definition

Variables	Definition	Database
EPSBPt1	the earnings per share for firm i in fiscal year t(EPSBit) / the price per share at the beginning of the fiscal year(Pit-1) EPSBit → Earnings Per Share (Basic) Including Extraordinary Items This item represents basic earnings per share including all extraordinary items and discontinued operations *as reported* by the company. Pit-1 → Price - Fiscal Year – Close	Compustat →Fundamentals Annual
R	the stock rate of return of the firm, measured by compounding 12 monthly CRSP stock returns ending the last day of fiscal year t R → Holding Period Return If the fiscal year end month is on 3, the return of firm i is from 9 months before fiscal year-end t to 3 months after fiscal year-end t. Ex: [(1+rt-1,4)* (1+rt-1,5)* (1+rt-1,6)* (1+rt-1,7)* (1+rt-1,8)* (1+rt-1,9)* (1+rt-1,10)* (1+rt-1,11)* (1+rt-112)* (1+rt,1)* (1+rt,2)* (1+rt,3)]-1	CRSP →Monthly Stock File
D	A dummy variable=1 if R < 0, = 0 otherwise.	-
logT5EBC	the log of equity-based compensation, , including stock option and restricted stock grants, to top five executives Stock options awarded during the fiscal year: → OPTION_AWARDS_BLK_VALUE (before FAS 123	Execucomp →Annual Compensation

	using standard and poor's Black-Scholes methodology) → OPTION_AWARDS_FV (valuation is based upon the grant-date fair value as detailed in FAS 123 $-as valued by company) Restricted stock awarded during the fiscal year: → RSTKGRNT (before FAS 123 determined as of the date of the grant) → STOCK_AWARDS_FV (valuation is based upon the grant-date fair value as detailed in FAS 123)	
ECOMP	Top5EBC / total compensation to top five executives(TDC1) TDC1 → Total compensation for the individual year, comprised of the following: Salary, Bonus, Other Annual, Total Value of Restricted Stock Granted, Total Value of Stock Options Granted (using Black-Scholes), Long-Term Incentive Payouts, and All Other Total.	Execucomp →Annual Compensation
Leverage	It's a variable to control conservatism demands of debt holders. Leverage is total debt divided by total assets at the beginning of the fiscal year t. total debt → Total Debt in Current Liabilities (DLC)+ Total Long-Term Debt (DLTT)	Compustat →Fundamentals Annual
Growth	Basu coefficient is a better measure of conservatism when estimated cumulatively over several periods. Growth is the ratio of market value of equity to book value	Compustat →Fundamentals Annual

	of equity at the beginning of the fiscal year t. book value of equity → Total Assets (AT)- Total Liabilities(LT) market value of equity → Common Shares Outstanding(CSHO)* Price - Fiscal Year – Close CSHO represents the net number of all common shares outstanding at beginning of year, excluding treasury shares and scrip.	
Size	Firm size influencing conservatism is information asymmetries. Size is natural log of total assets at the beginning of the fiscal year t.	Compustat →Fundamentals Annual

Appendix B: Descriptive statistics of each year

Panel A : Stock options

Year	N	Median	Mean	Std. Dev.	P10	P25	P75	P90
1993	1,278	593,841	1,513,336	3,275,754	0	66,227	1,661,959	3,737,674
1994	1,381	845,184	2,025,333	3,833,886	0	183,973	2,241,715	4,905,662
1995	1,367	793,221	2,062,581	4,471,419	0	165,270	2,097,668	4,847,321
1996	1,395	1,150,401	2,962,902	8,187,012	0	256,714	2,966,962	6,822,172
1997	1,334	1,422,864	4,211,352	14,200,000	0	415,244	3,790,287	9,639,697
1998	1,302	1,702,125	4,111,751	7,388,893	0	502,110	4,586,384	10,200,000
1999	1,206	1,985,059	5,374,742	10,900,000	0	626,034	5,323,194	13,800,000
2000	1,096	2,332,303	6,875,745	14,100,000	99,491	663,305	6,458,961	17,300,000
2001	1,055	2,672,603	6,927,569	11,300,000	16,536	769,195	8,206,310	19,200,000
2002	1,068	2,342,548	5,572,893	9,635,059	0	674,703	6,441,467	15,100,000
2003	1,085	1,871,453	4,200,725	6,444,359	0	463,613	5,298,880	10,500,000
2004	1,073	1,975,005	4,451,293	7,459,979	0	425,276	5,454,923	11,600,000
2005	1,033	1,780,040	4,255,061	7,910,808	0	292,845	4,863,130	10,600,000
2006	979	487,878	2,775,054	5,878,336	0	0	3,144,960	8,033,794
2007	998	1,298,056	3,230,353	6,698,032	0	0	3,812,936	8,754,810
2008	956	1,118,600	3,280,365	8,473,868	0	0	4,008,171	8,237,790
2009	934	973,672	2,616,647	6,216,765	0	0	3,164,100	7,020,000
2010	949	1,052,000	2,777,753	8,406,292	0	0	3,360,165	6,863,176
2011	929	1,071,770	2,509,684	3,835,679	0	0	3,674,981	7,105,521
2012	884	909,994	2,260,365	3,478,161	0	0	3,201,370	6,245,536
Total	22,302	1,333,732	3,683,497	8,430,842	0	159,691	3,943,205	9,034,818

Panel B : restricted stock

Year	N	Median	Mean	Std. Dev.	P10	P25	P75	P90
1993	1,278	0	377,765	1,851,216	0	0	0	753,194
1994	1,381	0	385,008	1,511,721	0	0	22,500	897,000
1995	1,367	0	442,178	1,542,177	0	0	74,298	1,174,419
1996	1,395	0	545,974	2,020,204	0	0	160,000	1,242,580
1997	1,334	0	719,324	2,569,284	0	0	190,875	1,669,744
1998	1,302	0	828,539	3,390,335	0	0	234,045	1,747,500
1999	1,206	0	901,336	3,626,775	0	0	262,021	1,925,000
2000	1,096	0	1,130,751	4,005,403	0	0	396,906	2,614,637
2001	1,055	0	1,094,025	3,835,333	0	0	464,037	2,856,187
2002	1,068	0	1,380,924	5,989,611	0	0	547,833	3,182,088
2003	1,085	0	1,595,779	4,424,902	0	0	1,203,000	4,579,688

2004	1,073	36,763	2,056,726	4,817,119	0	0	2,102,800	6,079,200
2005	1,033	500,000	2,396,834	5,145,514	0	0	2,615,550	6,579,939
2006	979	629,186	3,282,775	6,135,454	0	0	3,864,696	10,100,000
2007	998	1,617,595	4,272,766	7,003,894	0	0	5,487,325	11,600,000
2008	956	1,959,722	4,326,967	7,005,250	0	0	5,437,275	11,300,000
2009	934	1,757,147	3,957,418	6,044,864	0	23,916	4,902,387	10,300,000
2010	949	2,538,925	4,856,506	7,812,305	0	535,526	6,143,280	11,700,000
2011	929	2,940,660	5,340,624	8,231,042	0	718,500	6,828,575	13,300,000
2012	884	3,490,326	5,966,018	7,797,910	0	1,084,523	8,049,899	14,700,000
Total	22,302	0	2,060,064	5,232,219	0	0	1,718,560	6,200,140

Panel C : logT5EBC

Year	N	Median	Mean	Std. Dev.	P10	P25	P75	P90
1993	1,276	5.887109	5.483185	1.254263	3	5.243446	6.306457	6.673738
1994	1,381	6.029342	5.64143	1.241791	3	5.434283	6.442857	6.760721
1995	1,367	6.020518	5.652746	1.219342	3	5.449546	6.405043	6.798226
1996	1,392	6.146038	5.850204	1.142546	3	5.621	6.549789	6.92396
1997	1,330	6.236927	5.997243	1.123119	4.60138	5.769647	6.662501	7.044779
1998	1,299	6.288618	6.068698	1.109059	4.867143	5.847891	6.743027	7.067608
1999	1,197	6.357623	6.120969	1.130503	4.814101	5.914923	6.78444	7.170611
2000	1,085	6.443976	6.233267	1.070918	5.2675	5.940244	6.866219	7.273769
2001	1,050	6.500583	6.268544	1.121313	5.166303	6.01637	6.972925	7.329808
2002	1,064	6.479708	6.201087	1.145687	4.82866	5.999852	6.878849	7.215387
2003	1,084	6.427482	6.153717	1.147855	4.710473	5.968341	6.835519	7.194904
2004	1,071	6.51489	6.237313	1.126517	5.09691	6.056779	6.916246	7.217528
2005	1,028	6.547553	6.234218	1.134498	5.073058	6.071214	6.884443	7.195867
2006	970	6.419667	5.660255	1.678623	3	3	6.884504	7.240687
2007	994	6.613389	6.283401	1.188539	4.843594	6.148839	6.978538	7.245722
2008	953	6.615924	6.328969	1.122484	5.383248	6.146703	6.988119	7.250432
2009	933	6.565381	6.244043	1.177062	4.848189	6.134129	6.942938	7.212212
2010	947	6.672938	6.373788	1.098112	5.506367	6.225794	6.994303	7.2384
2011	928	6.707076	6.454548	1.021756	5.630428	6.307469	7.018879	7.267787
2012	884	6.738719	6.513254	0.980468	5.852027	6.344318	7.025265	7.293204
Total	22,232	6.378178	6.068635	1.205129	3	5.842007	6.817565	7.155828

Panel D : Stock options / Total compensation

Year	N	Median	Mean	Std. Dev.	P10	P25	P75	P90
1993	1,278	0.184976	0.236529	0.22408	0	0.029952	0.372879	0.578382
1994	1,381	0.233816	0.268444	0.225513	0	0.072515	0.418698	0.593396
1995	1,367	0.211921	0.251207	0.220354	0	0.064718	0.380075	0.591401

1996	1,395	0.249571	0.291517	0.236128	0	0.098175	0.441964	0.650017
1997	1,334	0.282475	0.322589	0.246334	0	0.12061	0.498352	0.696084
1998	1,302	0.324064	0.34273	0.242492	0	0.153584	0.5204	0.688314
1999	1,206	0.345352	0.358687	0.239452	0	0.172596	0.53304	0.697433
2000	1,096	0.351233	0.369624	0.247078	0.028367	0.167146	0.55076	0.715477
2001	1,055	0.397496	0.401211	0.257349	0.003972	0.196063	0.600009	0.765267
2002	1,068	0.354406	0.358711	0.245999	0	0.16428	0.539957	0.707346
2003	1,085	0.277218	0.299738	0.231105	0	0.106649	0.456021	0.631092
2004	1,073	0.252995	0.283673	0.22765	0	0.102234	0.441184	0.601711
2005	1,033	0.223591	0.25395	0.217086	0	0.05768	0.405529	0.564018
2006	979	0.071428	0.1497	0.184931	0	0	0.265828	0.420951
2007	998	0.1499	0.181955	0.187287	0	0	0.303657	0.455967
2008	956	0.142203	0.182363	0.189667	0	0	0.294155	0.461118
2009	934	0.12579	0.162978	0.175089	0	0	0.274066	0.412146
2010	949	0.116367	0.147813	0.160418	0	0	0.245423	0.381899
2011	929	0.111924	0.1468	0.163077	0	0	0.245997	0.368637
2012	884	0.101934	0.134599	0.15635	0	0	0.228495	0.351019
Total	22,302	0.223879	0.263921	0.23344	0	0.048708	0.416448	0.613867

Panel E : Restricted stock / Total compensation

Year	N	Median	Mean	Std. Dev.	P10	P25	P75	P90
1993	1,278	0	0.043233	0.107315	0	0	0	0.175715
1994	1,381	0	0.041963	0.101979	0	0	0.004574	0.167991
1995	1,367	0	0.046319	0.103649	0	0	0.015689	0.190657
1996	1,395	0	0.049356	0.109805	0	0	0.031852	0.190539
1997	1,334	0	0.05121	0.115095	0	0	0.028595	0.201384
1998	1,302	0	0.054425	0.115862	0	0	0.041889	0.209841
1999	1,206	0	0.051723	0.112648	0	0	0.040083	0.188476
2000	1,096	0	0.0542	0.113312	0	0	0.046537	0.218107
2001	1,055	0	0.057927	0.11529	0	0	0.051333	0.227763
2002	1,068	0	0.066432	0.130557	0	0	0.074962	0.256476
2003	1,085	0	0.091481	0.150114	0	0	0.148648	0.319063
2004	1,073	0.003658	0.117901	0.161748	0	0	0.207397	0.368273
2005	1,033	0.067548	0.136123	0.168878	0	0	0.238642	0.384365
2006	979	0.091545	0.1705	0.202326	0	0	0.309364	0.480772
2007	998	0.199793	0.220411	0.20649	0	0	0.355316	0.523137
2008	956	0.215268	0.237617	0.209259	0	0	0.392753	0.530695
2009	934	0.218367	0.232079	0.200859	0	0.009591	0.375707	0.511059
2010	949	0.243648	0.253956	0.196673	0	0.088201	0.391096	0.523769

2011	929	0.278685	0.280805	0.20603	0	0.11268	0.430014	0.55843
2012	884	0.307142	0.310362	0.211559	0	0.150912	0.459808	0.58621
Total	22,302	0	0.117111	0.175644	0	0	0.204751	0.394345

Panel F : ECOMP

Year	N	Median	Mean	Std. Dev.	P10	P25	P75	P90
1993	1,278	0.247628	0.279763	0.230882	0	0.086107	0.427238	0.630257
1994	1,381	0.29333	0.310405	0.23299	0	0.114753	0.47672	0.642373
1995	1,367	0.268389	0.297518	0.230738	0	0.10159	0.454548	0.639307
1996	1,395	0.326108	0.34087	0.241049	0	0.14215	0.514287	0.690963
1997	1,334	0.360449	0.373792	0.248304	0.019345	0.169228	0.564347	0.727384
1998	1,302	0.389137	0.397141	0.24604	0.032392	0.20411	0.590436	0.741631
1999	1,206	0.411657	0.410377	0.243826	0.033609	0.229159	0.599051	0.749834
2000	1,096	0.425447	0.423839	0.25081	0.080942	0.224075	0.622661	0.754879
2001	1,055	0.482543	0.459129	0.261236	0.065614	0.254718	0.666518	0.797631
2002	1,068	0.442164	0.425158	0.248147	0.032902	0.244758	0.614696	0.744428
2003	1,085	0.399097	0.391246	0.237244	0.022582	0.211078	0.575902	0.704636
2004	1,073	0.418556	0.401564	0.233748	0.033492	0.231311	0.572694	0.694187
2005	1,033	0.408743	0.390073	0.227407	0.022719	0.220916	0.54902	0.694077
2006	979	0.345007	0.320211	0.253935	0	0	0.529078	0.653359
2007	998	0.422913	0.40237	0.217643	0.027373	0.262165	0.567725	0.663167
2008	956	0.444758	0.419998	0.222518	0.077192	0.263012	0.590645	0.695247
2009	934	0.41647	0.395054	0.214635	0.025586	0.262165	0.552545	0.660507
2010	949	0.420334	0.401788	0.20231	0.086199	0.273959	0.548328	0.649551
2011	929	0.453974	0.427594	0.202981	0.11889	0.295841	0.57941	0.675502
2012	884	0.473442	0.444954	0.199719	0.149868	0.320504	0.591672	0.683261
Total	22,302	0.386873	0.381032	0.239362	0	0.193833	0.564376	0.69871

Appendix C: Descriptive statistics of four periods

Panel A : 1993-2001

Variable	Mean	Std. Dev.	P10	P25	Median	P75	P90
EPSBPt1	0.037361	0.096467	-0.0262	0.023765	0.051309	0.076226	0.104381
R	0.171017	0.46323	-0.32227	-0.11441	0.109894	0.371443	0.698341
D	0.369283	0.482632	0	0	0	1	1
logT5EBC	5.905738	1.190239	3	5.669824	6.198003	6.635385	7.021418
ECOMP	0.361658	0.248977	0	0.15828	0.345945	0.553151	0.717289
Leverage	0.223606	0.168169	0.004477	0.07879	0.213165	0.33951	0.437192
Growth	2.952867	2.601502	1.067278	1.486467	2.197695	3.433618	5.633652
Size	9.099947	0.753314	8.189636	8.534917	9.015716	9.605647	10.15082

Panel B : 2003-2005

Variable	Mean	Std. Dev.	P10	P25	Median	P75	P90
EPSBPt1	0.035664	0.108	-0.02551	0.029068	0.0525	0.075328	0.101803
R	0.248409	0.415708	-0.16719	0.011102	0.191627	0.398396	0.705129
D	0.235976	0.424674	0	0	0	0	1
logT5EBC	6.207844	1.136705	5.005601	6.02481	6.495572	6.879449	7.202683
ECOMP	0.394336	0.232904	0.023951	0.218039	0.411763	0.568473	0.697697
Leverage	0.220468	0.165752	0	0.069636	0.216913	0.334306	0.43311
Growth	2.69652	2.286704	1.076622	1.463184	2.06145	3.186819	4.899058
Size	9.351747	0.729842	8.450345	8.8146	9.303372	9.854804	10.37968

Panel C : 2006-2008

Variable	Mean	Std. Dev.	P10	P25	Median	P75	P90
EPSBPt1	0.027512	0.115403	-0.04011	0.028075	0.051754	0.069857	0.093104
R	-0.03321	0.36361	-0.48777	-0.2744	-0.04451	0.180268	0.381429
D	0.551313	0.497445	0	0	1	1	1
logT5EBC	6.091071	1.386218	3	6.01086	6.559595	6.951908	7.245473
ECOMP	0.380692	0.235858	0	0.204534	0.409592	0.564735	0.670213
Leverage	0.210834	0.162458	0	0.073937	0.197978	0.310855	0.431865
Growth	2.856884	2.307491	1.198055	1.586515	2.217848	3.365441	5.095553
Size	9.460336	0.721323	8.546212	8.925954	9.432137	9.967782	10.44123

Panel D : 2009-2012

Variable	Mean	Std. Dev.	P10	P25	Median	P75	P90
EPSBPt1	0.037164	0.113927	-0.04762	0.028827	0.059633	0.081466	0.113402
R	0.190801	0.399215	-0.21649	-0.03159	0.144993	0.342051	0.614906
D	0.290584	0.454094	0	0	0	1	1
logT5EBC	6.394693	1.077585	5.554649	6.24556	6.66865	6.996971	7.250828

ECOMP	0.416897	0.205935	0.088503	0.288343	0.440829	0.5701	0.66948
Leverage	0.216673	0.170231	3.69E-05	0.076884	0.198255	0.320243	0.443942
Growth	2.259762	2.196819	0.794917	1.143302	1.685125	2.617112	4.154488
Size	9.514608	0.729854	8.574071	8.979109	9.493964	10.00242	10.49147