Earnings Management and Executive Compensation: Evidence from Banking Industry

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This paper suggests that fraudulent companies share characteristics with companies engaged in earnings management. Thus, a mechanism could exist to detect fraudulent activities, using the Fraud Triangle in SAS 99. Empirically, I examine the association between bank executives' incentives and earnings management, and find that stock options of bank executives are significantly and positively associated with the earnings management of their banks. In addition, larger, poorer performing banks with a lower number of outside blockholders manipulate their financial reports more through provision-for-loan-loss accounts. Overall, the findings might lead to new regulatory changes in the banking industry for early fraud detection.

1. Introduction

Following the global crisis, a great deal of discussion has occurred on the subject of executive compensation and earnings management in the banking sector reflecting concerns over fraudulent activities and accounting scandals. Such an environment could be a great opportunity for examining the link between earnings management and fraud. In this paper, I suggest that the banks that are accused of fraud could have started their actions through some degree of earnings management. Therefore, fraudulent firms might share characteristics with firms that have just started or have been dealing with earnings management, but have not reached or managed not to reach, the level of fraud yet. If such a relation exists, it could provide regulators with a mechanism to detect fraudulent activities. In this context, I examine the banking industry for whether the fraudulent banks share characteristics with banks engaged in earnings management. Specifically, I examine the association between bank executives' incentives and earnings management. For this purpose, I use the provision-for-loan-loss (PLL) and the reserve-for-loan-loss (RLL) accounts.

The empirical analysis provides evidence that the characteristics of fraud could appear in those banks engaged in earning management. The findings suggest that the stock options of bank executives are significantly and positively associated with the earnings management of their banks. This association is stronger for manipulations done with PLL accounts than those through RLL accounts. Moreover, an evaluation of the total PLL account instead of just the discretionary adjustments does not alter this positive association.

This paper contributes to the literature in many ways. First, the paper provides a deeper understanding of the impact of executive compensation on earnings management by examining the main components of compensation packages: salary, bonus, and stock options. Secondly, the paper uncovers the role of the individual executive's incentives on the earnings management decisions in the banking industry by disaggregating the executives into three different categories: chief executive officers (CEOs), chief financial officers (CFOs), and others. From policy perspective, the findings of this paper could provide insights about new regulatory changes in the banking industry for early fraud detection, along with the opportunity to limit the consequences and contagion effects of fraud. In the following, the paper is presented in five sections. Section 2 provides a brief discussion on the

regulatory framework for dealing with fraud. Section 3 presents the literature review, aimed at deriving theoretical insights and empirical perspectives from previous studies on the subject. Section 4 outlines the hypotheses and methodology adopted for empirical analysis. Section 5 provides descriptive statistics. Empirical findings are discussed in Section 6 followed by a reflection on the study's limitations. Section 7 concludes the study.

2. Regulatory Background

Statements on Auditing Standards (SAS) 99 consider fraud in financial statement audits. The Auditing Standards Board of the American Institute of Certified Public Accountants (AICPA) issued the statement in October 2002. The SAS 99 supersedes SAS 82 and was partly in response to various accounting scandals, including Enron, WorldCom, and others. This new standard became effective for audits of financial statements beginning on or after December 15, 2002 (AICPA 2002).

One of the key components of SAS 99 is that the standard describes fraud and its characteristics. The standard's description of fraud is an intentional act with an outcome of a material misstatement of financial statements. There are two types of fraud considered in SAS 99; one is the misstatements arising from fraudulent financial reporting, and the other is the misstatements arising from the misappropriation of assets. The focus of this paper is on the first set of misstatements. The critical contribution of the standard is the way it provides organized categories of the risk factors that can lead to fraudulent activities. More specifically, SAS 99 defines a *Fraud Triangle* that comprises three main risk factors. The first point of the triangle is the *Incentive Factor.* This factor argues that the management or other employees can have incentives or be under pressures that motivate them to commit fraud. The following is one of the examples the AICPA provides: "Management or the board of directors' personal financial situation is threatened by the entity's financial performance arising from significant portions of their compensation, significant financial interest in the entity or personal guarantees of debts of the entity." (AICPA, 2002)

The second factor in the Fraud Triangle is the *Opportunity Factor*. This factor states that circumstances exist that provide an opportunity for fraud to be perpetrated; some of which can be the absence of controls, ineffective controls, or the ability of management to override controls (Ramos, 2003). The last factor of the Fraud Triangle is the *Rationalization/Attitude Factor*. This factor is the most subjective of the three. Basically, the factor warns the auditors that the managers involved in a fraud are able to rationalize a fraudulent act as being consistent with their personal code of ethics; and some individuals possess an attitude, character, or set of ethical values that let them commit this fraud intentionally (Ramos, 2003).

In this paper, I apply SAS 99 to the earnings management of banks because the banks that are accused of fraud often start their actions through managing their earnings and providing misstated financial reports. Therefore, the characteristics that appear in fraudulent banks should also appear in the banks that have just started or have been dealing with earnings management, but have not reached or managed not to reach, the level of fraud yet. If this association is possible, then a way, even a mechanism, might exist to detect these banks before they convert their earnings management actions into fraudulent activities; thus creating the opportunity to limit the consequences of fraud and all of the losses and contagion effects fraud can release into the market. I use the Fraud Triangle to inspect whether the characteristics of the fraud banks, listed in SAS 99, are shared by the banks that actually do earnings management.

The information about the banks and their executives needs to be gathered through the disclosures the banks include in their financial reports. The Securities and Exchange Commission (SEC) issued a rule, effective on December 22, 2006 that changes the Executive Compensation Disclosure Requirements. The new rule amends the disclosure requirements for executive and director compensation, related-party transactions, director independence and other corporate governance matters, and security ownership of officers and directors. The SEC noted that the proposed amendments were intended to make proxy statements, reports, and registration statements easier to understand. And the amended rule provides investors with a clearer and more

complete picture of the compensation earned by an issuer's chief executive officer, chief financial officer, other high-paid executive officers, and members of its board of directors. The consequences of this new SEC rule disclose the characteristics of banks that manage their earnings and provide misstated financial reports (SEC, 2006).

3. Theoretical Background

According to the literature, income smoothing can be referred to as earnings management because these two terms are used interchangeably throughout the literature. Earnings management could occur when managers use judgment in financial reporting and in the structuring of transactions to alter financial reports to either mislead some stakeholders about the underlying economic performance of the bank or to influence contractual outcomes, which depend on reported accounting numbers (Healy and Wahlen, 1999).

Beneish (2001) puts together all the definitions that exist in the literature. According to the study managers, provided that they have the discretion and the incentive, can play with numbers to reach a preferred level in the bank's financial reports. As long as these actions fall within the limits of generally accepted accounting rules, they are not illegal. However, in the end, these actions are dishonest because the investors have been deceived.

In the banking industry, the earnings management is done through specific balance sheet items: provision-for-loan losses (PLL) and reserve-for-loan losses (RLL). These items are initially intended to be used to protect the banks from the credit risk they have to bear in very high degrees because of their structure. Banks survive by lending and then investing the proceeds, and the only way they can survive is by creating a guarantee for this credit risk. At first glance, the PLL and RLL accounts make sense. Banks put some money aside to use in tough times. However, things do not go that way. Banks use these accounts for their own benefit, not just credit risk protection.

The literature lists three main incentives for banks to use PLL and RLL accounts: income smoothing, capital management, and signaling. Earnings management parallels the income smoothing incentive of the banks. The literature extensively covers the association between earnings management and the PLL account. Greenawalt and Sinkey (1988) and Collins et al. (1995) find evidence of a positive association between PLLs and earnings management that is consistent with the idea of the usage of PLLs for income smoothing purposes. Kim and Santomero (1993) argue that bank managers have the discretion to determine the level of PLLs that offers the opportunity for income smoothing. Joyce (2002) provides evidence that PLLs are used for earnings management because of the incentives of managers. On the other hand, there are some studies that do not find the above association, because they attribute the PLL usage to some other reasons (Beatty et al., 1995 and Ahmed et al., 1999).

The studies that focus on more specific areas of the banking industry also provide similar results. Ma (1988) used data from US commercial banks and provided evidence of earnings manipulation. Even after allowing for different risk levels for loan portfolios, he did not find strong association between PLLs and loan portfolios, implying that PLLs did not fully serve their original intentions. Chandar and Bricker (2002) examined closed-end mutual funds to study the earnings management in the valuation of restricted securities. Their results provided strong evidence that fund managers used accounting discretion to manage fund returns around a passive benchmark.

Other than PLLs, bank managers rely on RLLs for discretionary purposes. Beaver et al. (2003) argue that RLLs are managed across all earnings levels. Most income-increasing reserve adjustments are reported by low-profit banks, and most income-decreasing reserve adjustments are reported by high-earnings banks. This is totally consistent with the income smoothing process.

3.1. Executive Compensation

The agency problem and its associated cost are well explained in the literature, but no solution exists as of yet. Jensen and Meckling (1976), Fama and Jensen (1983), Jensen (1986), and Fama (1980),

explain the problem by referring to the separation of ownership. Holmstrom (1979, 1982) suggest that one way of mitigating these agency costs is effectively constructed compensation contracts.

A great deal of research exists on executive compensation. However, an important portion of this research only aims to make a connection with the firm's performance. The research shows that the compensation plan which the firm applies to the mostly top-level employees has an effect on its performance, because of the way the effect aligns the firm's interest with that of the shareholders. Studies show satisfactory results to make us believe that the compensation for the top-level management has something to do with the level of a firm's performance. In this context, the research tries to point out the factors that effect this relation and attempts to give optimal compensation contract advice to the market. Jensen and Murphy (1990) argue that the optimal compensation contracts must reflect the trade-off between the goals of providing efficient risk sharing and providing the CEO with the incentives to take appropriate actions. They also show that the total compensation contract can be analyzed item by item, and the marginal impacts of these items on the performance of the firm can be examined.

For instance, one of their findings is that the largest incentives for CEOs come from ownership of their banks' stock. Gibbons and Murphy (1992) also study these optimal incentive contracts. Using the career concerns of the employees, they figure that the way to form the optimal contract is to have a balance between explicit contractual incentives and career concern incentives. Baber et al. (1996) argue that the interaction between compensation and the firm's performance is stronger when the firm has greater investment opportunities. They come to this finding by examining stock-option values, restricted stock, and long-term incentive payments. These are just a few of the studies focused on CEO compensation. However, Aggarwal and Samwick (2003) take the idea of the relation between the firm's performance and the compensation contracts to deeper levels of the firm. Aggarwal and Samwick (2003) argue that the focus on CEOs ignores the other important issues in the internal organization of the firm. They categorize managers of the firm into four different groups and discuss the strength of the linkage between performance and compensation for each level of managers.

More recent work on this area shows that the executives can and actually do use their incentives for their own benefits. Bebchuk et al. (2002) argue that executives have the power to influence their own pay, and they use this power for rent extraction. Further, Bar-Gill and Bebchuk (2003) provide evidence that this executive power can lead to misreporting. Jensen (2003) asserts that the nonlinearity in pay-for-performance systems induces managers to lie, and that such lying is so pervasive that firms are better off adopting solely linear pay-for-performance systems.

3.2. Earnings Management and Executive Compensation

Healy and Wahlen (1999) argue that earnings management studies should adopt two critical steps for research designs. First, a study should identify managers' reporting incentives. Second, the study should measure the effects of managers' use of discretion on unexpected accruals. In other words, the association between the managers' incentives and the earnings management going on in their banks should be examined.

Beneish (2001) lists the sources of managerial incentives for earnings management. One of the important factors listed in the study is executive compensation agreements. The compensation packages that the managers receive consist of some items that tie the managers' wealth to the stock values. Specifically, stock options make managers more concerned about the investors' reactions to the financial reports. Thus, managers try to keep the stock prices up, because the stock options are very important portions of their wealth.

There have been studies in the literature that try to explore the association between executive compensation and the earnings management in banks. Joyce (2002) finds a statistically significant relation between PLLs and executive compensation, which supports the hypothesis that PLLs at banks are at least partly manipulated so that bank managers can maximize their total monetary compensation. Holthausen et al. (1995) find no evidence that executives manipulate earnings

downward when earnings fall below the minimum necessary to receive a bonus. This finding supports the idea that managers use PLL accounts to gain maximum benefits for their compensation packages.

The literature mostly consists of studies that focus on the bonus component of compensation policies (Guidry et al., 1999; Healy, 1985; Holthausen et al., 1995). In addition, more recent studies start to disaggregate the executives and focus on their individual impact on the earnings management of their banks. For example, Burns and Kedia (2006) and Carter et al. (2007) examine CEOs' compensation.

With the passage of the Sarbanes-Oxley Act (SOX) and the recent fraudulent scandals, regulators, the public, and academics, became more aware of the fact that CEOs are not alone in the decision making for their companies. There are also the CFOs who are responsible for the financial decisions of the firms. In 2002, the SEC and the SOX required the CEOs and the CFOs to certify the financial statements of their firms. Carter et al. (2005) studied the discretionary accruals and executive compensation relation in a different way than others. They examined the impacts of CEOs' and CFOs' incentives on the earnings management of the firms by taking executive bonus compensation into account.

The missing part in the literature that relates the executive compensation and earnings management in the banking industry is the following: First, the literature lacks a study that uses the main components of the compensation packages in the banking industry together. This paper uses salary, bonus, and stock options at the same time to get the best information about this association. Secondly, none of the present studies examine the role of individual executives' incentives on the earnings management decision in the banking industry. I disaggregate the executives into three different categories as CEOs, CFOs, and others. Then, I evaluate the association between these individual incentives and the earnings management. Moreover, the analysis of this association should be supported with relevant controlling variables. I include some proxies for firm performance, governance, and financial distress while evaluating the executive compensation impact on earnings management.

4. Empirical Framework

As stated in Section 3, the incentives of the executives are one of the factors in the Fraud Triangle. The characteristics of fraudulent activities can be used to detect earnings management in companies. The components of the compensation contracts for executives, especially the ones that tie the executives' wealth to the bank's share prices, create incentives for those executives to manage the earnings of their banks. In this way, executives can choose to manipulate the financial reports and present their banks to the investors in a better light than they actually are. Therefore, those executives with more incentive-based compensation manage their banks' earnings more. Deriving from this perspective, this study builds the following hypotheses for empirical validation.

Hypothesis 1 *The incentive-based compensation of executives and the earnings management of their banks have a positive association.*

As individual executives, the CEO and CFO have the most impact on the earnings manipulations of their bank because of their ability to affect the decision making process of the bank, and the degree of incentives they have compared to the other executives.

Hypothesis 2 *The incentive-based compensation of CEOs, CFOs, and Other Executives and the earnings management of their banks have a positive association.*

In order to be able to manage the earnings, executives should be in an environment where such a behavior is possible. The Opportunity Factors in the Fraud Triangle can be applied to earnings management. The high level of monitoring over the executives coming from the board of directors or outside blockholders can limit the degree of discretion the executives use on the accrual adjustments. As a result, the degree of earnings management is lower when the executives are monitored well.

Hypothesis 3 *The degree of monitoring over the executives and the earnings management of their banks has a negative association, and this association does not alter the executives' incentives to pursue earnings management.*

4.1. The Model and Variables

This study relies on PLLs and RLLs accounts as proxies for the earnings management of the banks. Three different measures for the earnings manipulations are used. The first measure, which is called EM1, depends directly on the literature. I use the PLL account value to represent the earnings manipulations in the banks. The second measure, which is called EM2, is based on Beaver and Engel (1996). In their study, they divide the PLLs into two categories: discretionary and nondiscretionary. The argument is that PLLs should be determined by a set of variables that comprises nonperforming loans, changes in nonperforming loans, and changes in loans for one period. The portion that cannot be explained by these variables should be the discretionary part. The total PLLs are regressed on these variables, and the fitted values of this model represent the Nondiscretionary PLLs (NPLLs). The difference between Total PLLs and NPLLs, that is, the residuals of the model, represent the discretionary PLLs (DPLLs). The calculation of Total PLLs uses Beaver and Engel's (1996) model and is applied in the study by Kanagaretnam et al. (2003). Their model is specified as follows:

$$Total\ PLLs_{it} = \alpha_0 + \alpha_1 \cdot NPL_{it-1} + \alpha_2 \cdot CHGNPL_{it} + \alpha_3 \cdot CHGLOANS_{it} + \varepsilon_{it} \tag{1}$$

where *Total PLLs$_{it}$* is the provision for loan losses, *NPL$_{it-1}$* is the beginning period of nonperforming loans, *CHGNPL$_{it}$* is the change in the value of the nonperforming loans, and *CHGLOANS$_{it}$* is the change in the value of loans. All of the variables are deflated by the *NPLit-1*. The study refers to this model as EM1.

The fitted values of Model 2 are the NPLLs:

$$NPLLs_{it} = \hat{\alpha}_0 + \hat{\alpha}_1 \cdot NPL_{it-1} + \hat{\alpha}_2 \cdot CHGNPL_{it} + \hat{\alpha}_3 \cdot CHGLOANS_{it} \tag{2}$$

The second earnings manipulation measure can now be calculated as the difference between Model 1 and Model 2. This measure is called EM2 throughout the study.

The last measure of the discretion that the executives use on the earnings management of their banks (EM3) derives from Beaver et al. (2003) and calculated with the RLL account as follows:

$$CHGRES_{it} = \frac{RLLs_{it+1} - RLLs_{it}}{Assets_{it}} \tag{3}$$

The earnings management variables, EM1, EM2, and EM3, are explained through variables identified from the Fraud Triangle's risk factors as mentioned earlier. And, the model has a set of control variables.

$$\frac{EM}{proxies} = \left(\frac{Incentive}{Factors}\right) + \left(\frac{Opportunity}{Factors}\right) + \left(\frac{Attribute}{Factors}\right) + \left(\frac{Control}{Variables}\right) \tag{4}$$

4.2. Fraud Triangle Risk Factors

4.2.1. Incentives

One of the most important incentive factors listed by AICPA is the compensation contracts of the executives. The more an executive has a compensation contract tied to the value of the bank, the more incentive he or she has to make adjustments in the accruals, that is, to manage the earnings. Under the title of the Incentive Factors, I use the salary, bonus, and the stock options included in the compensation contracts as the proxies for the incentives of executives. The salary and bonus are the dollar values given each year to each executive. The stock options are the Black-Scholes values of the options of the executives. I use these proxies in two different ways. First, I add them directly to the model. Second, I adjust them by the total compensation value so that each proxy represents a percentage of the total compensation. For each compensation component, a positive association should exist with the earnings management proxies.

As a further step in the analysis, I disaggregate the top executives' compensation contracts. When evaluating the compensation values of the top management team of the banks, the aggregation masks the impact of each individual executive on the earnings management decision. I separately add the compensation components of CEOs and CFOs of the companies into the model. I also add the executives other than the CEO and the CFO under the name of OTHERS.[1] This disaggregation allows me to analyze the discretion and incentive of each executive on the earnings manipulation activities of the banks.

Figure I represents the compensation structure of the bank executives for the relevant years. The bar chart shows the percentages of the salary, bonus, and stock options. The percentage of the stock options in each executive category is almost half of the total compensation package. Therefore, quite reasonably stock options might affect the executives' decisions because of the options' impact on their wealth.

Figure I
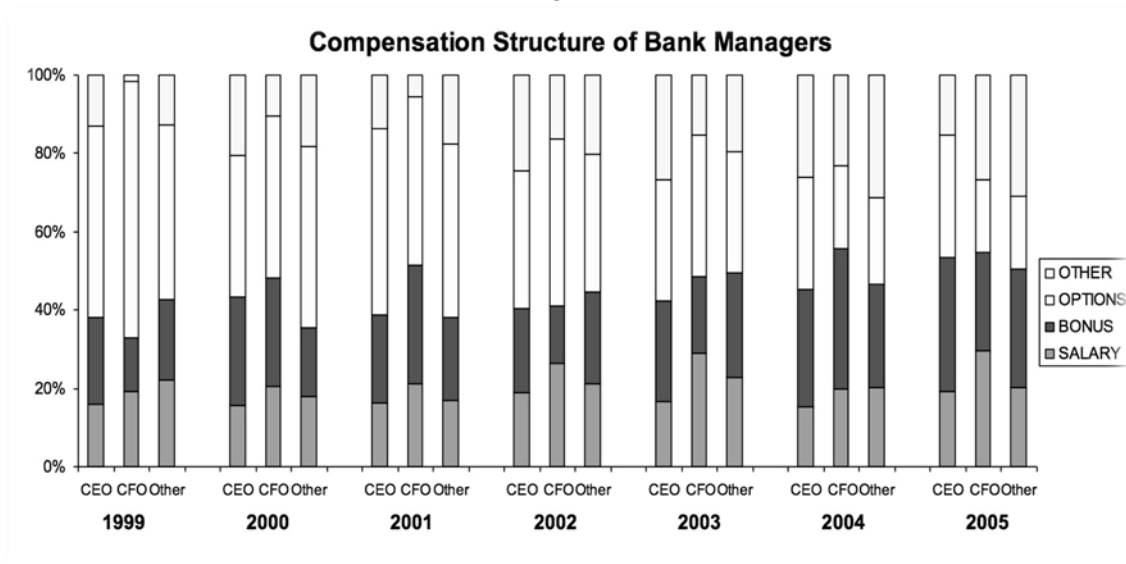
Executive compensation structure of CEOs, CFOs, and other executives for years 1999–2005

4.2.2. Opportunity Factors

Most of the opportunity factors consist of the governance proxies. As stated by the AICPA, the opportunity for fraud, and the opportunity for earnings management in this case, increases when the bank exists in an environment with weak monitoring or control. Farber (2005) and Klein (2002) examine the governance mechanisms and provide evidence that poor governance lets executives manage their earnings more easily.

The first governance variable included in the model is the number of meetings. The reasoning is that the more meetings the board of directors have, the more monitoring they have over the top executives. Thus, this variable displays the degree of control of the board over the CEO and the other top executives. Vafeas (2005) finds that the likelihood of reporting a small earnings increase decreases as the number of committee meetings increases, which is a sign of an increased degree of governance. Erickson et al. (2006) also use the number of meetings and find similar results. This

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[1] The disaggregation of the executives is done according to the value of the Title variable from ExecuComp. I searched for the keywords "CEO", "chief executive officer," and some combinations to detect CEOs; "CFO", "chief financial officer," and some combinations to detect CFOs; and the rest become the OTHERS group. I also hand-check the data to be sure there are no mistakes.

variable should have a negative association with the earnings management proxies.

Another aspect of the monitoring is the outside blockholders of the bank. Outside blockholders provide increased monitoring and control over the executives. This is an example of improved governance. For example, Dechow et al. (1996) find that banks manipulating earnings are less likely to have an outside blockholder. Therefore, the percentage of shares held by outsiders and the number of outsider blockholders are used in my model.

4.2.3. Attribute Factors

As stated in the initial section, attribute factors are the most subjective and finding a quantitative variable that can be a proxy is difficult. Analyzing the code of ethics of each bank and calculating the degree that the code allows opportunistic behavior might be possible, or using surveys to get the opinions of the executives might disclose the degree of rationalization the executive might use. However, all of these options are too subjective; and for the purposes of this paper, I leave this approach to future research.

4.3. Control Variables

The first control variable in the model is size. This variable is calculated by taking the natural logarithm of the asset size of the bank. The impact of this variable on earnings management is questionable. A larger firm can have a better organized monitoring system or a stronger capital structure, which limits the executives' discretion on the accruals. On the other hand, the executives of large banks can get more benefits from manipulation because of its impact on the share prices. Therefore, the direction of the association between earnings management proxies and size is unknown at this point. Kanagaretnam et al. (2003) use the size variable and report a positive association, suggesting that larger banks pursue more manipulation in their financial reports.

The performance of the bank also has an impact on the executives' discretion on the accruals of the bank. If the bank performs poorly, there is more need for accrual adjustments because the executives try to put their banks in a better light for the public. Fudenberg and Tirole (1995) and Joyce (2002) add performance to their analyses. I use the ROA in my model and expect to see a negative association with the earnings management proxies.

The last two control variables are financial distress and growth. Collins et al. (1995) use these two variables in their study on earnings. Following their study, I add the book value to the market value as a proxy for financial distress. This proxy captures the financial stresses from the bank's approach to earnings manipulations. The growth variable is calculated as the change in total liabilities. Collins et al. (1995) argue that the change in total liabilities should be a reasonable proxy for growth because banks typically finance over 90% of their assets with debt. This variable also allows the model to produce unbiased coefficients while also including the size variable.

Models 5 and 6 present all of the variables: Model 5 has the dollar values of the incentive proxies, Model 6 has the ratios of the incentive proxies. The earnings management proxies (the EM proxies) are the EM1, EM2, and EM3 explained in the previous section. The list of the variables, the relevant databases, and their calculations are provided as an appendix.

$$
\begin{aligned}
EM_{proxies} &= \alpha + \beta_1(Salary) + \beta_2(Bonus) + \beta_3(Options) + \lambda_1\binom{No.of}{Meetings} + \lambda_2(SUMOUT) \\
&+ \lambda_3(NUMOUT) + \omega_1(SIZE) + \omega_2(ROA) + \omega_3(GROWTH) + \omega_4(DISTRESS) + \varepsilon
\end{aligned} \tag{5}
$$

$$
\begin{aligned}
EM_{proxies} &= \alpha + \beta_1(ratio\_Salary) + \beta_2(ratio\_Bonus) + \beta_3(ratio\_Options) + \lambda_1\binom{No.of}{Meetings} \\
&+ \lambda_2(SUMOUT) + \lambda_3(NUMOUT) + \omega_1(SIZE) + \omega_2(ROA) + \omega_3(GROWTH) + \omega_4(DISTRESS) + \varepsilon
\end{aligned} \tag{6}
$$

4.4. Data

I gather the data on the firm characteristics for commercial banks and savings institutions by using the three-digit SIC codes of 602 and 603 that have data for the years 1998–2003 in the Compustat Industrial Database.[2] The initial sample consists of 6,206 firm-year observations. The executive compensation data comes from the ExecuComp database for the relevant years. And the data on bank loans comes from the Compustat bank database. However, the addition of the compensation-type data and the loan data cause a decline in the sample, because not all of the banks with data in Compustat Industrial have data in the Execucomp and Compustat bank databases. Therefore, after collecting the data from all of the databases, I put them together and end up with 998 firm-year observations. I call this the main sample.

Table 1
Sample Selection Process

Firms for years 1998-2003 in ExecuComp	6206 firm-years observations
Elimination of firms with missing data in Compustat Bank	1130 firm-years observations
Elimination of firm with missing data in ExecuComp	4078 firm-years observations
Main Sample	998 firm-years observations
Elimination of firms without blockholders data for years 1998-2001 in Compustat Blockholders	755 firm-years observations
Blockholders Sample	243 firm-years observations

There is one adjustment to the sample. Instead of examining the proxy statement of each firm to get the blockholder information, I use the Blockholders Database, which is a new and improved section of the Compustat Database. I gather the blockholder data for the years 1998 and 2001 for the banks that are already in my sample. Hence, I create a subsample that has 243 firm-year observations. I call this sample the blockholder sample. This sample is used to analyze the blockholder variables. Table 1 details the sample selection process.

5. Descriptive Statistics

The analysis starts with the descriptive statistics. In order to see how the variables differ between banks with high or low levels of earnings management, I first rank the banks based on their EM proxy values. This process is repeated for each of the EM1, EM2, and EM3 variables. Next, I divide the sample into ten groups that contain equal numbers of observations and then pick the banks that fall into the first and the last groups. The banks from the first group are called *High-EM Banks*, and the banks from the last group are called *Low-EM Banks*. The next step is to compare the mean values of the variables.

First, I start with the comparisons of the banks using the aggregate executive compensation data. Table 2 presents the descriptive statistics and the mean difference comparisons. For the main sample, when EM1 is used as the earnings management proxy, the High-EM banks have significantly larger values for the options. These values suit Hypothesis 1 that executives with more incentive-based compensation manage the earnings of their banks. The salary and bonus values are also significantly different from each other in dollar values. When the ratios of the compensation components are used, salary and bonus differences remain significantly different. In addition, the options component is also significantly higher for the High-EM banks. When the EM2 is used to rank the banks, only the option component remains significantly different and higher for the banks with high levels of earnings management. This finding supports Hypothesis 1. The last EM proxy, which depends on the RLLs, also reports a similar result. Almost all of the compensation variables are significantly higher for the High-EM banks.

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[2] The sample covers the period before SAS 99 took effect. The purpose is to capture how firms were behaving before the new rule. Data after 2003 is left for future studies.

Table 2
Mean Differences between Low-EM and High-EM Banks

Panel A: Main Sample

	By EM1			**by EM2**			**by EM3**		
	High EM	**Low EM**	**Δ (t-stat)**	**High EM**	**Low EM**	**Δ (t-stat)**	**High EM**	**Low EM**	**Δ (t-stat)**
Salary	533.92	340.40	193.53 ***	375.00	387.65	-12.65	274.25	378.18	-103.90 ***
Bonus	1671.80	301.53	1370.30 ***	669.02	472.06	196.96	341.25	742.74	-401.50 ***
Options	2190.60	459.04	1731.60 ***	1041.00	419.65	621.38 ***	526.39	514.84	11.55
Ratio_Salary	0.16	0.36	-0.20 ***	0.33	0.34	-0.01	0.38	0.31	0.06 **
Ratio_Bonus	0.27	0.20	0.06 ***	0.23	0.22	0.01	0.21	0.26	-0.05 **
Ratio_Options	0.37	0.24	0.13 ***	0.31	0.21	0.10 ***	0.26	0.22	0.04
Nummtgs	7.70	10.72	-3.02 ***	7.94	9.85	-1.91 ***	9.71	8.87	0.93 **
Size	12.36	9.30	3.05 ***	10.21	10.10	0.10	9.38	10.05	-0.66 ***
ROA	1.24	1.22	0.02	1.17	1.18	-0.01	0.93	1.32	-0.38 ***
Growth	43213.00	888.77	42324.00 ***	13727.00	5966.60	7760.40 **	12032.00	6843.50	5188.70
BM	6.27	5.36	0.90 ***	5.79	6.30	-0.55	5.93	5.44	0.49

Panel B: Blockholders Sample

	by EM1			**by EM2**			**by EM3**		
	High EM	**Low EM**	**Δ (t-stat)**	**High EM**	**Low EM**	**Δ (t-stat)**	**High EM**	**Low EM**	**Δ (t-stat)**
Sumout	12.09	15.15	-3.06	15.84	18.21	-2.37	17.92	5.48	12.44 ***
Numout	0.40	1.52	-1.12 ***	1.40	2.40	-1.00 ***	1.60	0.84	0.76 **

Notes:Panel A uses the main sample and Panel B uses the blockholder sample. Panel B has just the results of the control variables, because the rest of the results are similar to those in Panel A. The values in the parentheses are t-statistics. The ***, **, and * represent significance at the 0.01, 0.05, and 0.10 levels respectively.

Table 3
Descriptive Statistics and Mean Difference Comparison of the Disaggregated Compensation Data

Panel A: Dollar values of Compensation Components

		By EM1			by EM2			by EM3		
		High EM	**Low EM**	**Δ**	**High EM**	**Low EM**	**Δ**	**High EM**	**Low EM**	**Δ**
CEO	Salary	610.13	440.08	170.05 **	504.68	520.38	-15.70	444.35	476.79	-32.45
	Bonus	1436.80	441.53	995.26 **	668.25	1199.30	-531.10	507.01	613.59	-106.60
	Options	2853.90	515.81	2338.10 ***	1601.70	587.15	1014.50 **	1979.00	424.37	1554.70 ***
CFO	Salary	457.70	269.41	188.29 ***	313.99	391.61	-77.62	272.00	307.16	-35.17
	Bonus	934.69	227.38	707.31 **	419.95	236.89	183.05	381.69	572.56	-190.90
	Options	1617.10	315.78	1301.30 ***	825.55	413.21	412.34	945.25	276.83	668.42 *
Others	Salary	663.81	403.01	260.81 ***	295.23	356.47	-61.24	228.80	336.94	-108.10 **
	Bonus	2843.60	465.46	2378.20 ***	339.78	502.22	-162.40	271.11	306.18	-35.06
	Options	3119.60	396.02	2723.60 ***	683.31	578.24	105.08	580.04	324.11	255.93

Panel B: Ratios of Compensation Components

		By EM1			by EM2			by EM3		
		High EM	**Low EM**	**Δ**	**High EM**	**Low EM**	**Δ**	**High EM**	**Low EM**	**Δ**
CEO	Ratio_Salary	0.1549	0.3027	-0.1480 **	0.2941	0.2838	0.0104	0.2935	0.3119	-0.0180
	Ratio_Bonus	0.2337	0.2053	0.0284	0.1994	0.3007	-0.1010	0.1011	0.2937	-0.1930 ***
	Ratio_Options	0.4936	0.2820	0.2117 **	0.4051	0.2150	0.1901 **	0.4879	0.1975	0.2900 ***
CFO	Ratio_Salary	0.1555	0.3692	-0.2140 ***	0.3761	0.3159	0.0602	0.3207	0.3912	-0.0700
	Ratio_Bonus	0.2253	0.2054	0.0199	0.2237	0.1396	0.0841 *	0.1944	0.2516	-0.0570
	Ratio_Options	0.3816	0.2385	0.1431	0.2730	0.2911	-0.0180	0.3295	0.1668	0.1620 **
Others	Ratio_Salary	0.0771	0.2288	-0.1520 ***	0.2577	0.2413	0.0164	0.3021	0.3424	-0.0400
	Ratio_Bonus	0.3144	0.2208	0.0936 **	0.2344	0.2962	-0.0620	0.2380	0.2897	-0.0520
	Ratio_Options	0.3418	0.1729	0.1690 **	0.2802	0.3021	-0.0220	0.2926	0.1856	0.1070

Notes: Panel A uses the dollar values of the compensation variables. Panel B uses the ratios of the compensation variables to the total compensation. For both panels, only the mean comparisons of the compensation variables are reported. The comparison of the control variables is generally similar to those in Table 2. The ***, **, and * represent significance at the 0.01, 0.05, and 0.10 levels respectively.

The preliminary results for the control variables are in general as expected. For the main sample, the High-EM banks are the larger and poorly performing banks. Also high growth banks have a higher degree of earnings management. The result for the financial distress is not clear, because it provides conflicting results. For the blockholder data, SUMOUT and NUMOUT are the additional variables. The SUMOUT variable, which represents the total percentage of shares held by all outsiders, is significantly lower for High-EM banks compared to the Low-EM banks when using the EM3. This finding supports Hypothesis 3 that more monitored executives engage in less earnings management, because outside blockholders are strong monitors.

An additional univariate analysis deals with the disaggregated compensation data. In this analysis, I compare the mean values of the compensation components of each group of executives. The CEOs, CFOs, and OTHERS are examined in terms of their compensation packages. As explained above, I again divide the sample by EM values as either High-EM or Low-EM banks for each executive group. The descriptive statistics and the mean differences are presented in Table 3.

While examining the compensation components by their dollar values, all of the compensation items for all of the individual executive groups are significantly higher for High-EM compared to Low-EM banks when I use the EM1. When using the EM2, the only significantly different and higher variable is the CEO options, which supports Hypothesis 2. The EM3 reports that the CEO and CFO options are the significantly higher variables. The ratios for the compensation components provide somewhat similar results. The EM1 provides almost every executive's total compensation package as significantly higher for High-EM banks. However, under the EM2, only the CEO option is significantly different and higher. The EM3 provides the CEO and CFO option components as significant and higher for High-EM compared to Low-EM banks.

All together, the descriptive statistics provide preliminary results that the incentive-based components of the compensation packages are higher for the banks that have high degrees of earnings management. Moreover, this difference persists for CEOs in all cases and for CFOs and OTHERS for some cases. This initial result suggests that individual executives are responsible for the earnings management of banks, because they all have the necessary incentives in their own compensation contracts that lead them down that road.

6. Empirical Findings

After the univariate analysis, a multivariate analysis is necessary to examine the data further. First, I use an ordinary least squares to analyze the determinants of the earnings management for all of the executives and also for each executive group. Afterwards, I use a fixed effects model to observe the year effects on the earnings management and compensation relation.

6.1. Ordinary Least Squares Results

The first regression uses the EM1, EM2, or EM3 as the dependent variables, and the compensation components are in their dollar values.

Table 4 presents the regression results. When the main sample is used, salary is the significant cash compensation variable. The bonus variable does not have a significant impact on the EM variables. The coefficient for salary is negative, consistent with Gao and Shrieves's (2002) idea that the salary component of the compensation creates a disincentive for managers to apply earnings management because of its cost. The important incentive factor, stock options, shows itself in the regression with a strong significance for the first two EM measures. The coefficient of the options variable is positive, which suggests that an executive with higher stock-option ownership is more intent on managing the earnings of the bank. This significance disappears with the use of the EM3, which suggests that the options might not have an impact on the adjustments of the RLLs for the purpose of earnings management, at least not as significantly as they do on the PLL adjustments.

When considering the control variables, the regression reports that the larger and poorer performing banks engage in earnings management. The results for the number of director meetings conflict; for some cases the number has a positive association with the EM proxies, but sometimes it

has a negative association. This conflict prevents the reaching of a conclusion for this specific variable. The growth variable provides positive and significant coefficients that suggest high growth banks pursue more earnings management. This is consistent with the literature. The value of the book-to-market variable gives negative and significant coefficients, which is consistent with the initial expectation that financially distressed banks manage their earnings to higher degrees.

Table 4
Ordinary Least Squares Results

Panel A: Main Sample

	$ values of Incentive variables			Ratios of Incentive variable		
	EM1	EM2	EM3	EM1	EM2	EM3
Intercept	-1093.400 ***	2624.140 **	3159.750 ***	-1591.750 ***	25.110	3335.630 ***
Salary	-0.337 ***	-1.210	-1.267 ***	-	-	-
Bonus	0.188 ***	0.302	-0.115	-	-	-
Options	0.056 ***	0.404 ***	0.044	-	-	-
Ratio_Salary	-	-	-	109.380	1858.820 **	681.510 *
Ratio_Bonus	-	-	-	301.690 ***	3227.810 ***	962.170 **
Ratio_Options	-	-	-	140.720	3864.700 ***	1439.370 ***
Nummtgs	-6.590 *	-130.960 ***	31.171 ***	-4.527	-117.510 ***	30.730 **
Size	131.270 ***	27.210	-40.140	168.570 ***	61.090	-189.160 ***
ROA	-30.790	-575.200	-1307.050 ***	-42.390	-679.820 *	-1336.000 ***
Growth	0.004 ***	0.008	0.007 ***	0.007 ***	0.016 ***	0.007 ***
BM	13.360 **	-177.890 ***	-84.489 ***	6.090	-212.680 ***	-78.087 ***

Panel B: Blockholders Sample

	$ values of Incentive variables			Ratios of Incentive variable		
	EM1	EM2	EM3	EM1	EM2	EM3
Sumout	4.950 ***	68.850 **	33.850 ***	4.890 ***	67.500 **	34.910 ***
Numout	-75.950 ***	-837.290 **	-263.280 **	-79.430 ***	-582.480	-309.780 **

Notes:Panel A uses the main sample and Panel B uses the blockholder sample. Panel B uses the results for the control variables because the rest of the results are similar to those in Panel A. The values in the parentheses are t-statistics. The ***, **, and * represent significance at the 0.01, 0.05, and 0.10 levels respectively.

The second regression uses the EM proxies as dependent variables once again along with the ratios of the compensation components as the incentive variables. This time the results are more significant. From the compensation components, the bonus and the options are the significant incentive variables, while the ratio of the salary appears to have a positive association with the EM proxies. These finding conflicts with the results stated above. The control variables show similar results to those above.

The blockholder sample adds the outside holdings information to the model. All of the EM proxies provide very significant results. The NUMOUT has a negative and significant association with the EM proxies that suggest the higher the number of outside blockholders, the less earnings management a bank has. This is consistent with Hypothesis 3. On the other hand, the total percentage held by of the outside blockholders has a significantly positive relation to the EM proxies. This relation can be explained as when the percentage held by outside blockholders increases, and then they lose their monitoring ability. Such a situation makes them like insiders, which causes these blockholders to provide a lower degree of monitoring.

Table 5
Ordinary Least Squares Results with Disaggregated Executives' Data

Panel A: Main Sample

	$ values of Incentive variables			Ratios of Incentive variable		
	EM1	**EM2**	**EM3**	**EM1**	**EM2**	**EM3**
Intercept	-1327.400 ***	2361.400 **	3762.200 ***	-1524.600 ***	2371.820 **	4012.600 ***
CEO Salary	-0.254 **	0.352	-0.435	-	-	-
CFO Salary	-0.174	-2.896 *	-1.530 **	-	-	-
OTHERS Salary	-0.143 ***	-0.312 **	0.040	-	-	-
CEO Bonus	-0.010	-0.988 **	-0.343 *	-	-	-
CFO Bonus	0.016	0.556	0.145	-	-	-
OTHERS Bonus	0.221 ***	0.504 ***	-0.051	-	-	-
CEO Options	0.059 *	0.956 ***	0.344 ***	-	-	-
CFO Options	-0.041	0.689	0.457 **	-	-	-
OTHERS Options	-0.035 ***	-0.085 **	0.005	-	-	-
CEO Ratio_Salary	-	-	-	-82.620	692.470	206.830
CFO Ratio_Salary	-	-	-	43.160	-634.290	-830.810 *
OTHERS Ratio_Salary	-	-	-	-117.860 **	-705.220	-201.970
CEO Ratio_Bonus	-	-	-	-429.240 **	-3437.270 **	-2383.700 ***
CFO Ratio_Bonus	-	-	-	61.240	1111.840	566.070
OTHERS Ratio_Bonus	-	-	-	182.120 ***	1128.830 *	328.880
CEO Ratio_Options	-	-	-	-66.980	3409.140 ***	1317.670 ***
CFO Ratio_Options	-	-	-	-247.320 *	-1036.280	34.410
OTHERS Ratio_Options	-	-	-	-28.960 **	-188.410 *	-55.880
Nummtgs	-4.540	-124.360 ***	27.090 **	-4.450	-122.910 ***	27.380 **
Size	156.890 ***	33.230	-163.600 ***	178.020 ***	49.320	-185.730 ***
ROA	-30.560	-497.060	-1222.000 ***	-25.010	-533.260	-1211.700 ***
Growth	0.005 ***	0.011 ***	0.007 ***	0.006 ***	0.015 ***	0.006 ***
BM	5.194	-191.850 ***	-63.830 ***	6.520	-204.980 ***	-70.050 ***

Panel B: Blockholders Sample

	$ values of Incentive variables			Ratios of Incentive variable		
	EM1	**EM2**	**EM3**	**EM1**	**EM2**	**EM3**
Sumout	6.330 ***	55.390 *	36.120 ***	5.730 ***	32.420	24.210 *
Numout	-93.980 ***	-670.200 *	-276.530 **	-89.480 ***	-403.340	-121.860

Notes: Panel A uses the main sample; Panel B uses the blockholder sample. Panel B uses the results for the control variables because the rest of the results are similar to those in Panel A. The t-statistic values are suppressed due to the limitations of space. The ***, **, and * represent significance at the 0.01, 0.05, and 0.10 levels respectively.

Table 5 provides results from the analysis on individual executives. Salary is significant and negative for almost all of the executives, which supports the OLS results. The stock options variable is the most significant incentive for the executives. The CEO options variable has a significant and positive association with all of the EM proxies. This association suggests that in the decision-making process on earnings management, the CEOs' impact on this process is influenced by their incentives from those options. The EM3 provides a positive and significant option variable for the CFOs, while the EM1 and EM2 do so for the OTHERS. This is consistent with the idea that CEOs are not alone in

making the earnings management decisions. The CFOs and other top executives also have an impact on this decision-making process. These results remain significant with the control variables. The results derived from control variables are similar to those stated above. Larger, poorer performing, high growth banks pursue higher levels of earnings management. The variables for the number of meetings and size have interesting results. For the EM1 and EM2, which depend on PLLs, a lower number of meetings in larger banks go together with more manipulation of the PLL accounts. This finding is reasonable because a lower number of meetings provide a lower degree of monitoring, and this impact is higher in larger banks. On the other hand, the EM3, which depends on the RLLs, reports positive coefficients for the number of meetings and negative coefficients for size, all are significant. This finding suggests that when adjusting RLLs, smaller banks with more meetings are better off. This result is very interesting in of itself because the result suggests that executives in small banks manipulate the RLL accounts to higher degrees. And, if the number of meetings is also higher, the degree of this manipulation increases. The only explanation is that in such a small bank, executives might all behave opportunistically together, and more meetings might provide them a better environment in which they can discuss what and how to do the manipulations. The blockholder sample provides similar results for the additional governance control variables. The SUMOUT and NUMOUT variables are still significant, but the SUMOUT is positively and the NUMOUT is negatively associated with the EM proxies, which is consistent with the explanation provided above.

These results provide stronger evidence that the earnings management decisions of the banks are not just affected by the CEOs' incentives. There are the CFOs who have an important role on the firm's financial decisions, and also other top executives who influence these decisions from time to time. All of these executives' incentives cannot be ignored in this process. The significant incentive variables in the earnings management models dictate this conclusion.

6.2. Fixed Effects Model Analysis

I use a fixed effects model because of the possibility that there are some omitted variables in the model, and that these variables could derive different results. The year effects dummy variables reflect these unobserved variables that change from year to year, and they capture their impact on the earnings management and the incentive variables. Table 6 has the results of the fixed effects model.

All of the year effects dummy variables are significant. The EM1 produces significant compensation variables that have a negative association with salary and a positive association with bonus and stock options. This is consistent with the idea that incentive-based compensation induces executives to manipulate the earnings of their banks. The stock options remain significant for the EM1 and EM2, which suggests that options make executives adjust their PLL accounts. This significance does not continue when the earnings management proxy is EM3. The executives might prefer PLLs to RLLs for manipulations, and this preference might be the reason for such a result. However, when the compensation components are used as ratios to the total compensation, things are a little different. Stock options, used as a ratio, have a significantly positive association with both the EM2 and the EM3. This association implies that some connection exists between the RLLs and the options, but the connection is not as significant as the one between the PLLs and the options. The control variables display similar results as above. The larger, poorer performing, high-growth banks with financial distress are the kind of banks that engage in earnings management through adjustments to their PLL accounts. At the same time, small banks prefer using the RLLs for earnings manipulation. This use is consistent with the results above. These results suggest that the incentives of the executives, especially the options they receive, are still the significant factors for the earnings management of the banks.

Parallel findings occur when the fixed effects model is applied to the analysis of the individual executives. Table 7 provides the results of this analysis. The year effects dummy variables are all significant. The salary and bonus results do not have a consistent pattern. However, the stock

options variable does give more meaningful results. The CEO options are significant and positive in the EM measures for both the PLLs and the RLLs. The significance level of the CFO options decreases below the conventional levels with the fixed effect model. The options of the other executives appear to have a negative association in some cases, a positive association in others. The results are not conclusive for the OTHERS category.

Table 6
Fixed Effects Model Results

Panel A: Main Sample

	$ values of Incentive variables			Ratios of Incentive variable		
	EM1	**EM2**	**EM3**	**EM1**	**EM2**	**EM3**
Year 1999 Dummy	-1070.900 ***	4124.900 ***	3730.900 ***	-1500.300 ***	1718.900	3907.800 ***
Year 2000 Dummy	-1070.100 ***	4101.900 ***	3822.400 ***	-1496.600 ***	1783.400	4037.800 ***
Year 2001 Dummy	-897.420 ***	5038.100 ***	3781.600 ***	-1321.400 ***	2662.400 *	3963.100 ***
Year 2002 Dummy	-959.470 ***	4711.600 ***	3729.800 ***	-1406.100 ***	2374.890	3042.600 ***
Year 2003 Dummy	-1006.300 ***	3191.700 **	3253.900 ***	-1456.400 ***	822.040	3466.600 ***
Year 2004 Dummy	-1128.100 ***	2213.900 *	2997.700 ***	-1598.100 ***	-167.600	3235.600 ***
Year 2005 Dummy	-1101.600 ***	2841.070 **	3073.400 ***	-1552.100 ***	578.400	3324.700 ***
Salary	-0.305 ***	-0.457	-0.950 **	-	-	-
Bonus	0.191 ***	0.370 **	-0.080	-	-	-
Options	0.047 ***	0.218 **	-0.028	-	-	-
Ratio_Salary	-	-	-	55.280	1428.500	539.960
Ratio_Bonus	-	-	-	288.830 **	3144.900 ***	932.640 **
Ratio_Options	-	-	-	37.820	2594.700 ***	971.040 ***
Nummtgs	-4.870	-109.380 ***	36.280	-2.990	-97.670 ***	35.230 ***
Size	127.460 ***	-8.860	-48.260	165.790 ***	69.120	-176.420 ***
ROA	-54.230	-935.740 **	-1416.100 ***	-58.290	-1028.830 ***	-1436.190 ***
Growth	0.005 ***	0.014 ***	0.009 ***	0.007 ***	0.020 ***	0.008 ***
BM	8.991	-287.790 ***	-120.300 ***	1.034	-320.900 ***	-112.040 ***

Panel B: Blockholders Sample

	$ values of Incentive variables			Ratios of Incentive variable		
	EM1	**EM2**	**EM3**	**EM1**	**EM2**	**EM3**
Sumout	4.890	65.960 **	33.610 ***	4.840 ***	66.430 *	34.790 ***
Numout	-74.890 ***	-812.270 **	-262.280 **	-77.950 ***	-562.920	-310.630 **

Notes: Panel A uses the main sample; Panel B uses the blockholder sample. Panel B uses the results for the control variables because the rest of the results are similar to those in Panel A. The values in the parentheses are t-statistics. The ***, **, and * represent significance at the 0.01, 0.05, and 0.10 levels respectively.

6.3. Limitations and Future Work

The data sets in this study come directly from the databases mentioned and their arrangement is in accordance with the purposes of this study. These data sets could be expanded by the examination of the proxy statements and the SEC filings of the banks. Moreover, instead of using two different samples, which happened due to the unavailable data; a larger, wider data set could have been used with more detailed data. Such expansions of the data sets might improve the significance of the results and bring even more interesting contributions to the literature. This is left for future research.

Table 7
Fixed Effects Model Results with Disaggregated Executives' Data

Panel A: Main Sample

	$ values of Incentive variables						Ratios of Incentive variable					
	EM1		EM2		EM3		EM1		EM2		EM3	
Year 1999 Dummy	-1190.500	***	3783.700	***	4223.900	***	-1459.100	***	3923.100	***	4525.800	***
Year 2000 Dummy	-1197.300	***	3972.200	***	4420.700	***	-1455.800	***	4092.300	***	4699.200	***
Year 2001 Dummy	-1148.300	***	4866.700	***	4349.500	***	-1285.500	***	5032.900	***	4641.300	***
Year 2002 Dummy	-1034.300	**	4475.300	***	4322.700	***	-1372.700	***	4561.100	***	4583.200	***
Year 2003 Dummy	-997.200	**	2961.700	**	3868.800	***	-1423.400	***	3028.600	**	4110.900	***
Year 2004 Dummy	-986.700	**	2029.500	*	3626.500	***	-1556.600	***	2003.400	*	3847.500	***
Year 2005 Dummy	-1023.200	**	2582.900	**	3664.800	***	-1524.300	***	2683.600	**	3913.700	***
CEO Salary	-0.253	**	0.429		-0.421		-		-		-	
CFO Salary	-0.091		-1.763		-1.129	*	-		-		-	
OTHERS Salary	-0.149	***	-0.381	**	0.009		-		-		-	
CEO Bonus	0.003		-0.814	**	-0.296		-		-		-	
CFO Bonus	0.014		0.533		0.145		-		-		-	
OTHERS Bonus	0.229	***	0.607	**	-0.005		-		-		-	
CEO Options	0.053	*	0.851	***	0.313	***	-		-		-	
CFO Options	-0.067		0.283		0.301		-		-		-	
OTHERS Options	-0.036	*	-0.101	*	-0.001		-		-		-	
CEO Ratio_Salary	-		-		-		-108.740		369.840		86.740	
CFO Ratio_Salary	-		-		-		53.920		-432.970		-754.700	
OTHERS Ratio_Salary	-		-		-		-138.850	***	-932.400	**	-279.100	*
CEO Ratio_Bonus	-		-		-		-386.860	**	-3049.800	*	-2281.400	***
CFO Ratio_Bonus	-		-		-		115.970		2031.500		949.800	
OTHERS Ratio_Bonus	-		-		-		214.090	***	1470.400	*	444.440	*
CEO Ratio_Options	-		-		-		-76.050		3313.900	***	1258.350	***
CFO Ratio_Options	-		-		-		-297.040	*	-1945.600		-314.470	
OTHERS Ratio_Options	-		-		-		-33.890	*	-239.940	*	-73.260	*
Nummtgs	-2.573		-101.030	***	33.190	**	-2.680		-100.560	***	33.110	**
Size	152.810	***	-3.440		-168.700	***	172.780	***	9.590		-189.480	***
ROA	-45.830		-820.900	**	-1315.000	***	-39.680		-858.920	**	-1308.700	***
Growth	0.005	***	0.015	***	0.008	***	0.007	***	0.019	***	0.007	***
BM	0.279		-291.500	***	-94.660	***	2.097		-302.490	***	-100.600	***

Panel B: Blockholders Sample

	$ values of Incentive variables						Ratios of Incentive variable					
	EM1		EM2		EM3		EM1		EM2		EM3	
Sumout	6.279	***	51.550	*	35.280	***	5.680	***	28.020		23.880	*
Numout	-92.980	***	-636.010		-270.620	*	-87.930	***	-349.100		-118.300	

Notes: Panel A uses the main sample; Panel B uses the blockholder sample. Panel B uses the results for the control variables because the rest of the results are similar to those in Panel A. The t-statistic values are suppressed due to the limitations of space. The ***, **, and * represent significance at the 0.01, 0.05, and 0.10 levels respectively.

An argument can be made that an association exists between CEO and CFO compensation structures, at least to some degree. Because the compensation package mostly creates the executives' incentives to engage in earnings management, some influence from CEOs might exist on CFOs, or the other way around. This study analyzes the individual impacts of the executives on the banks' earnings management proxies; however, this study does not consider the possible association between them. A future study might add this association and create a way to reflect it in the model. Such a study might capture additional information on the two most influential executives and the impact they have on each other's decisions.

7. Conclusion

This study attempted an empirical analysis of the nexus between earning management and executive compensation in the banking sector. The empirical investigation brought to the fore various useful insights and perspectives for policy purpose. Firstly, the stock options of executives showed a significantly positive association with the earnings management of the banks. This association was stronger for manipulations done through PLL accounts and relatively weaker for adjustments made through RLL accounts. The PLLs were evaluated for both the total account and the discretionary adjustments, and the positive association with executive incentives remained significant in both cases. As the level of stock options that each top executive receives increases, their incentives to manage earnings increases. This finding exists because of the increased connection between the executives' wealth and the bank's stock prices. The role of the individual executives in the earnings management should not be ignored, and more attention and responsibility should be put on each of these executives.

Secondly, larger, poorer performing and high growth banks with a lower number of outside blockholders could make more manipulations to their financial reports, especially through their PLL accounts. On the other hand, the same type of banks, but smaller in size, could prefer using RLL accounts to do this manipulation.

Third, the analysis of the compensation contract components of the executives and the further examination at the individual executive level disclose that stock options create the connection between these executives' incentives and the earnings management going on in their banks. This kind of decision in a bank is not made alone by CEOs. Actually, because this is a relatively important financial decision, CFOs are also responsible. The rest of the top executives contribute to this decision-making process in most cases. The compensation structure of CFOs and other top executives is not different from that of CEOs. The main component is again the stock options, and this component still ties the CFOs' and other executives' wealth to the stock values of their banks. This connection is enough to create the incentive for these executives to do anything they can to put the bank in a better light and keep the stock prices up. However, this is managing earnings and at the same time deceiving investors.

Finally, from policy perspective, our empirical findings suggest that the Fraud Triangle, stated in SAS 99, can be used as a detection mechanism for earnings management in the banks. The factors included in this triangle, the incentive factors and the opportunity factors, have strong associations with the earnings management of the banks. These associations are meaningful when thinking of fraud as the extreme point of earnings management. Therefore, the market can monitor the banks while they are managing their earnings before reaching the extreme point of actually committing fraudulent activities. This prevention can be possible by using the bank's characteristics and the risk factors that are originally associated with fraud, namely the Fraud Triangle.

One of the important factors in the triangle is the incentive factors, which brings the executive compensation packages to attention. The disclosed information about the compensation structures has to be truthful and honest, so that the association of these components with earnings management can be assessed. The new SEC rule about more detailed disclosure requirements for executive compensation information promises a better understanding of the compensation structure of the bank. The proxy statements and the report should be clearer and more detailed. This

transparency creates an environment in which much more additional information on the incentive factors that might lead to earnings management is available. The association of executive incentives created through their compensation contracts and their companies' earnings management decisions can then be evaluated in a more advanced way. This kind of a research might prevent the banks from nearing fraud by limiting the degree of earnings management they follow. This limitation results because all of the necessary information is available to investors to put together. Once the information is gathered, the investors will realize that the banks are actually managing their earnings and presenting dishonest numbers to them.

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Appendix

List of variables, definitions, and data sources

Variables	Definition and data source
Earnings Management Proxies calculation variables	
PLLs	Provision for Loan Losses (Compustat #342)
NPLs	Beginning value of Nonperforming Loans; NPL_{t-1} (Compustat #341)
CHGNPLs	Change in value of Nonperforming Loans; NPL_t-NPL_{t-1} (Compustat #341)
CHGLOANS	Change in value of Loans; $LOANS_t$-$LOANS_{t-1}$ (Compustat Bank #23)
RLLs	Reserve for Loan Losses (Compustat #343)
LOANS	Beginning value of Loans; $LOANS_{t-1}$, (Compustat Bank #23)
Incentive proxies in the model	
SALARY	Salary; SALARY (ExecuComp)
BONUS	Bonus; BONUS (ExecuComp)
OPTIONS	Stock Options; BLK_VALUE (ExecuComp)
TOTAL COMPENSATION	TDC1 (ExecuComp)
ratio_SALARY	Salary / Total Compensation
ratio_BONUS	Bonus / Total Compensation
ratio_OPTIONS	Options / Total Compensation
Governance proxies in the model	
NUMMTGS	Number of Director Meetings ; NUMMTGS (ExecuComp)
SUMOUT	Percentage held by all outside blockholders; SUMOUT (Blockholders Database)
NUMOUT	Number of outside blockholders; NUMOUT (Blockholders Database)
Control Variables in the model	
SIZE	Assets, natural logaritm (Compustat #6)
ROA	Return on Assets; ROA (ExecuComp)
GROWTH	Change in Total Liabilities; $LIABS_t$-$LIABS_{t-1}$ (Compustat # 181)
BM	Book to Market Value; Assets (Compustat #6) / [Price (Compustat #24)*Common Shares Outstdng(Compustat#25)]