THE ASSOCIATION BETWEEN CEO COMPENSATION AND EARNINGS FOR BAILOUT BANK RECIPIENTS

By

EDWARD A BENNETT

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Approved by:

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Mark A. Trombley
Accounting Department, Eller College of Management

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The Association Between CEO Compensation and Earnings for Bailout Bank Recipients

Abstract

I examine the association between CEO compensation and earnings for bailout bank recipients. During the financial downturn of 2008 over 100 national commercial banks accepted government funds to maintain solvency. My research seeks to find an incremental pay-for-performance relationship between earnings and CEO compensation for bailout banks over non-bailout banks. Furthermore, I expect to find an incremental relationship for bailout banks to meet or beat annual benchmarks over non-bailout banks. The incremental relationships for bailout banks over non-bailout banks may suggest that bailout banks took on excess risk in an attempt to boost CEO compensation through pay-for-performance or meeting or beating an annual benchmark. Regression analysis is used to test these hypotheses, and I find insignificant results for all incremental relationships for bailout banks over non-bailout banks. From my results, it appears that bailout banks had no incentive to take on excess risk in an attempt to boost CEO compensation through pay-for-performance or meeting or beating an annual benchmark. Finally, this research extends the accounting literature in that it is the first to explore the pay-for-performance relationship in the banking industry.

The Association Between CEO Compensation and Earnings for Bailout Bank Recipients

1. INTRODUCTION

CEO compensation has received much negative attention recently. With the present state of the economy and many U.S. banks failing and requiring government funding, taxpayers have become increasingly aware of the current problems with bank CEO compensation. Since it is taxpayers' money bailing banks out, taxpayers want to know how their money is being spent. According to a Reuters' poll, U.S. bank CEOs receive substantially more compensation than their international competitors (Reuters, 2009). JP Morgan, the largest bank by market capitalization in the U.S., compensated their CEO nearly $20 million. However, the highest compensated CEO from an international bank having a larger market capitalization than JP Morgan received only $2.8 million. This gap in compensation suggests that U.S. banks dramatically over-compensate their CEOs.

Some of the largest U.S. banks reported substantial losses due to excessive risk taking. The U.S. government bailed out these failing financial institutions by lending them extensive amounts of capital. Due to the irresponsible actions and the irresponsible spending of the banking industry CEOs, many Americans lost trust in the banking system (Obama, 2009). With the increased public awareness of bank CEOs' actions, these CEOs were accused of causing our economic downturn due to their negligent decisions (WSJ, Paletta and Enrich, 2009). Furthermore, since these banks were failing, one might assume their CEOs should not have been compensated so highly; thus, an improved method for compensating CEOs needs to be

adopted, one that does not entice a CEO to take on additional risk at the stockholders and U.S. taxpayers' expense.

1.1 Research Questions

If these financial institutions were failing, then why did their CEOs receive such substantial bonuses? In this paper, I research whether bank CEO compensation is positively related to earnings, following a pay-for-performance model. Furthermore, I research if there is an incremental positive association between CEO compensation and earnings for bailout banks. This may indicate if bailout bank compensation provides additional incentives to assume risk. I also examine if bank CEO compensation is higher when the bank meets an annual benchmark. This may indicate which benchmarks are included in the contracts for specific CEOs since their contracts are not public.

1.2 Motivations for Study

This research provides several contributions to accounting literature as well as suggesting policy change. Specifically, this research is the first to explore the relationship between bailout bank CEO compensation and their bank's performance. Prior literature suggests a pay-for-performance relationship between CEO compensation and earnings (Lambert and Larcker, 1987; Burgstahler and Dichev, 1997; Gaver and Gaver , 1998; Sloan, 1992). I will extend this research to the banking industry. I will also extend prior research on CEOs striving to meet benchmarks to the banking sector.

This research may provide assistance to policy makers. The current incentives of CEOs and stockholders are misaligned. Current CEO compensation contracts provide incentives for CEOs to take on additional risk at the stockholders' expense. Thus, if the bank produces poor

results on risky investments made by an overaggressive CEO, the CEO will not be punished financially, however, the shareholders lose their invested capital (Gaver and Gaver, 1998). In addition, since it is the stockholders, not the CEO who owns the company, shareholders should have the right to pay their CEO accordingly. The U.S. may be considering adopting a policy similar to the "Say on Pay" policy for Canadian banks so stockholders have the ability to vote on their CEO's annual salary and bonus structure, providing a possible fix to the current misalignment of incentives between CEO and stockholder (Felice and Surat, 2009).

2. BACKGROUND

In 2003, the Federal Reserve wanted to raise consumer spending by distributing additional capital to banks so the banks could relax credit lending standards for consumers (Ryan, 2008). Since more people could obtain loans, the demand for housing greatly increased, which drove the price of housing up. In addition, many investors tried to buy as many houses as possible in an attempt to turn a profit when they "flipped" the houses. However, income levels did not increase as quickly as housing prices. With the prices of housing increasing faster than income levels, many homeowners entered into contracts they could not afford. In 2006, there began to be an oversupply of houses and not enough buyers. This oversupply forced the price of houses to decrease. With the lack of demand, the investors who intended to "flip" the houses could not find potential buyers. As the prices dropped and demand remained low, the houses became "under water" where the balance of mortgages were higher than the value of the houses (Larson, 2009). In 2008, one in four borrowers was "under water" (Simon and Hagerty, 2009). Borrowers began to default on their mortgages since they could not meet their

payments and the value of their houses was concurrently dropping. This spurred a dramatic

economic downturn, one not felt since the Great Depression (Obama, 2009).

As consumers were defaulting on their mortgages, banks were losing capital from their

mortgage-backed securities investments. These securities were funds that incorporated

mortgages from consumers with both high and poor credit.   Banks considered real estate a

safe investment, purchasing substantial shares of mortgage-backed securities (Ryan, 2008). As

more and more consumers defaulted on their mortgages, these mortgage-backed securities

became worthless. This caused many banks to sell other assets in order to regain capital.

Further, banks that issued a significant number of loans to consumers with poor credit

experienced defaults. Consumers that could not afford their mortgages went bankrupt or

chose to abandon their houses and stopped paying their monthly mortgage payments. With

banks losing capital from lending to poor credit consumers as well as losing from their

investment in mortgage-backed securities, capital began to fall below mandated minimums for

many banks.

With many of the largest U.S. banks taking extensive losses, the federal government

took action in an attempt to ease the burden on these financial institutions. On October 3,

2008, Congress passed the Emergency Economic Stability Act (EESA) in response to the severe

financial crisis facing our country. This act allowed the Treasury Department to implement the

Troubled Asset Relief Program (TARP) in an attempt to bailout the banks, distributing $700

billion to these failing banks and other institutions (Larson, 2009). The Treasury Department

used the TARP fund to invest in equity interests, loans, and asset guarantees in exchange for

stocks, debt, warrants, and additional notes from the bailed-out banks (US Department of

Treasury, 2010). Banks full of new capital and insured for their "toxic assets" can now recover

and become profitable once again.

Banks were now under close watch by both the federal government and U.S. taxpayers.

Banks were required to use bailout funds specifically for financial recovery. However, during

this time several bailout bank CEOs continued to receive lavish compensation packages nearing

$20 million annually (Reuters, 2009). This amount of compensation raised many questions

from U.S. taxpayers as well as the federal government. Outraged taxpayers protested that

troubled banks should not use government funds to continue to compensate their CEOs while

their firms are financially challenged (Obama, 2009). Bank representives replied that this high

level of compensation is customary within the banking industry; however, due to the recent

financial crisis, many banks may be reconfiguring their CEO compensation contracts (Paletta

and Enrich, 2009).

3. HYPOTHESIS DEVELOPMENT

There has been significant research conducted on the pay-for-performance relationship

between CEO cash compensation (annual salary plus annual bonus) and reported earnings

(Lambert and Larcker, 1987; Burgstahler and Dichev, 1997; Gaver and Gaver, 1998; Sloan,

1992). Lambert and Larcker (1987) find that CEO cash compensation has a strong positive

relationship with a firm's accounting performance. This suggests that when a company reports

higher earnings, the company's CEO will receive a higher cash bonus. This pay-for-performance

relationship provides the CEO with an incentive to produce larger earnings in order to receive a

larger annual bonus. Furthermore, the pay-for-performance relationship demonstrates an

agency theory paradox. Agency theory proposes an incentive alignment problem between a

principal and an agent. In this case the principal is the stockholders and the agent is the CEO.

The principal delegates decision-making tasks to the agent on the principal's behalf. The

agent's output (possibly measured by accounting earnings), is a measure of his effort. When a

CEO puts forth more effort, accounting earnings are higher; when accounting earnings are

higher the CEO is rewarded with higher cash compensation. However, since the principal has

no definitive way to measure the amount of effort an agent puts forth, they must rely upon

imperfect numbers such as accounting earnings to evaluate the agent's performance.

Burgstahler and Dichev (1997) found that CEOs may engage in earnings management in

an effort to meet certain benchmarks. Their study found an unusually high number of firms

reporting earnings just above zero while only a minimum number of firms report earnings at

zero or below zero. Since the public is not authorized to view the exact contracting mechanism

of the CEO's contract, this is an important study because it suggests that CEOs are engaged in

earnings management so their company can report a profit which reflects positively on the

CEO, leading to a higher bonus for the CEO. In addition, they find there are also a significantly

high number of firms that just meet or exceed previously reported earnings, avoiding earning

decreases. Also, Burgstahler and Dichev find that firms that break a pattern of earnings growth

will have an average 14% negative stock return in the year the pattern is broken. This

consequence makes earnings management even more appealing to companies that make it

their goal to maintain a steady growth in earnings. Interestingly, the Burgstahler and Dichev

study excluded banks from their research, while my tests focus specifically on banks.

There have been few studies conducted on the pay-for-performance relationship within

the banking industry. In 1994 Bank of America CEO Richard Rosenberg indicated a pay-for-

performance relationship for his bank, stating "Increasing earnings per share was our most important objective this year" (Burgstahler and Dichev, 1997). This suggests managers try to maintain a pattern of growth. Thus, given such pressure to maintain growth provides incentives to manage earnings, I hypothesize banks that received bailout money were actually in trouble for a long time and were manipulating their numbers in order to maintain an image of growth and prosperity. Since my sample contains large failed financial institutions that historically reported a pattern of earning growth with the world's most highly compensated CEOs, I expect to see a more dramatic association between earnings and compensation for bailout banks since these bailout banks were under pressure to report a pattern of growth. A significant amount of bailout banks in my research provided their CEOs with extremely large compensation packages. There has been a substantial public outcry against the bailout banks and their obscenely hefty compensation packages. President Barack Obama (2009) stated that there must be an end to the "customary lavish bonuses" CEOs receive due to their "reckless behavior that has wreaked havoc in our financial system" and that we must "rein in the executives that exploited the credit crunch hit."

Gaver and Gaver (1998) document a significant positive correlation between CEO cash compensation and positive earnings, excluding earnings from extraordinary items and discontinued operations. However, they find if there is a loss, CEO cash compensation is not affected. This relationship indicates that CEO cash compensation is primarily rewarded from positive accounting performances while compensation is shielded from losses, producing an asymmetric relationship. Gaver and Gaver also suggest that CEOs inflate earnings as much as possible to increase their personal wealth. Agency theory suggests when a CEO is acting in his

or her own best interests, a company may suffer. Since CEO compensation is shielded from losses, CEOs may take on additional risk such as issuing loans to poor credit borrowers. This is the key factor that causes banks to take on excess risk. Furthermore, this factor is positively related to pay-for-performance.

Sloan (1992) finds that a firm's accounting earnings is a direct measure of CEO performance. Sloan's findings suggest CEO compensation is contracted from accounting earnings, which is an incentive alignment tool between stockholders and CEOs to produce larger earnings. Sloan suggests that accounting performance measures are used in CEO compensation contracts to shield executives from market fluctuations in firm value which are beyond their control. This suggests that accounting earnings, not market value is the best measure for the pay-for-performance relationship.

Prior literature (Lambert and Larcker, 1987; Burgstahler and Dichev, 1997; Gaver and Gaver, 1998; Sloan, 1992) establishes a significant and positive pay-for-performance relationship between CEOs and reported accounting earnings. However, all of the authors have excluded banks in their research. Motivated by recent bank failures, I extend this prior research to the banking sector. Hypothesis 1 follows:

H1: There is a positive association between CEO compensation and earnings

H1 predicts a positive relationship between CEO compensation and earnings for banks.

My study focuses on banks that received government bailout money and I examine the pay-for-performance relationship between bailout bank CEOs and accounting earnings. The pay-for-performance relationship will be measured during the profitable period during 2000 to 2005 since compensation is not sensitive to performance during loss periods. Bailout banks

include some of the largest banks in the world. These banks offered substantial compensation

packages to their CEOs. Since there is a high pay-for-performance sensitivity between CEO

compensation and earnings, CEOs are encouraged to engage in risky behavior. This risky

behavior is favorable for the CEO for two reasons. First, if the CEO obtains high gains for the

bank due to their risky behavior, the CEO will be highly compensated; second, if the CEO's risky

behavior yields a loss, the CEO's compensation is shielded. Furthermore, if there is an

economic recession, the CEO's risky behavior may result in dramatic losses for the bank; thus,

the bank then needs to be bailed out. Therefore, I expect to find an incremental positive

relationship for bailout banks and CEO cash bonuses over non bailout banks since there is a

direct association between high pay-for-performance sensitivity and the likelihood of the bank

needing to be bailed out. In addition, bailout banks include firms with the largest earnings and

the highest cash compensation, further indicating a possible incremental pay-for-performance

association between CEO compensation and earnings for bailout banks. My study tests

Obama's claim that bailout banks engaged in "reckless spending" and "lax corporate

governance standards" (Obama, 2009). Hypothesis 2 follows:

H2: There is an incremental positive association with CEO compensation and earnings for

bailout banks compared to non-bailout banks

Research has shown that CEOs strive to meet certain benchmarks. Park and Matsunaga

(2001) found that CEOs are penalized for missing three specific benchmarks. These benchmarks

include avoiding reporting a loss, meeting or beating last reporting period's earnings, and

meeting or beating analysts' forecasts. When CEOs miss these benchmarks their cash

compensation decreases. These findings suggest CEO bonuses provide CEOs with economic

incentives to meet or beat these three benchmarks; however, the Park and Matsunaga study excluded banks.

I examine CEO cash compensation and banks meeting specific benchmarks. I compare whether bailout banks have an incremental association between CEO compensation and meeting a given benchmark. CEOs have economic incentives to meet benchmarks; their reward is higher pay. I examine two benchmarks. Following prior literature, the benchmarks I examine are meeting or beating last reporting period's earnings and meeting or beating analysts' forecasts (Park and Matsunaga, 2001)[1]. Park and Matsunaga found that firms use these benchmarks when rewarding the CEO with bonus pay. I extend their research to the financial sector. Prior research suggests CEOs knowingly take on excess risk in order to maximize cash compensation by meeting specified benchmarks. This reckless behavior preceded a downward spiral of the US economy and an eventual public outcry to reconfigure CEO compensation contracts. Therefore the following hypothesis examines the impact of three documented benchmarks:

H3a: Bank CEO compensation is higher when a bank meets an annual benchmark

The hypothesis predicts a positive association on CEO compensation and meeting a given benchmark.

H3b: There is an incremental positive association between CEO compensation and meeting an annual benchmark for *bailout banks* compared to non-bailout banks

The hypothesis predicts an incremental positive association on bailout bank CEO compensation and meeting a given benchmark.

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[1] Since only one bailout bank reported negative earnings in 2007, I excluded the zero earnings benchmark from my test.

4. RESEARCH DESIGN

For H1, I predict that β_1 will be greater than 0 in the following regressions, suggesting a positive pay-for-performance association for banks for the years 2000 to 2005.

$$\Delta COMP_{it} = \beta_0 + \beta_1 \Delta ROA_{it} + \beta_2 RET_{it} + e_1 ;$$

$$\Delta COMP_{it} = \beta_0 + \beta_1 \Delta ROE_{it} + \beta_2 RET_{it} + e_1 ;$$

$$\Delta COMP_{it} = \beta_0 + \beta_1 \Delta E_{it} + \beta_2 RET_{it} + e_1;$$

where for each firm i and year t:

$\Delta COMP$ = change in CEO's bonus deflated by prior year salary;

ΔROA = annual change in return on assets, defined as the ratio of earnings before interest and taxes to average assets;

ΔROE = change in return on equity, defined as earnings before extraordinary items and discontinued operations divided by the average common shareholders' equity (This measure frequently appears as an explicit accounting performance measure in bonus contracts disclosed in proxy statements);

ΔE = annual change in earnings before extraordinary items and the results from discontinued operations;

RET = annual return measured as the monthly stock returns compounded over the 12-month fiscal year.

For H2, I interact three different measures of earnings with bailout banks to test for an incremental positive association on CEO compensation and bailout banks. Therefore, I predict that γ_4 will be positive in the following regressions:

$$\Delta COMP_{it} = \gamma_0 + \gamma_1 \Delta ROA_{it} + \gamma_2 RET_{it} + \gamma_3 BAILOUT_{it} + \gamma_4 \Delta ROA_{it} \text{ x } BAILOUT_{it} + e_1;$$

$$\Delta COMP_{it} = \gamma_0 + \gamma_1 \Delta ROE_{it} + \gamma_2 RET_{it} + \gamma_3 BAILOUT_{it} + \gamma_4 \Delta ROE_{it} \text{ x } BAILOUT_{it} + e_1 ;$$

$$\Delta COMP_{it} = \gamma_0 + \gamma_1 \Delta E_{it} + \gamma_2 RET_{it} + \gamma_3 BAILOUT_{it} + \gamma_4 \Delta E_{it} \text{ x } BAILOUT_{it} + e_1;$$

where for each firm i and year t:

BAILOUT = 1 for the financial institutions that received Troubled Asset Relief Program (TARP) funds from the federal government, 0 otherwise.

For H3, I interact each benchmark with bailout banks to test for an incremental positive association on CEO compensation when bailout banks met benchmarks. Therefore, I predict α_5 will be greater than 0 in following regressions:

$\Delta COMP_{it} = \alpha_1 POSFE_{it} + \alpha_2 \Delta ROA_{it} + \alpha_3 RET_{it} + \alpha_4 BAILOUT_{it} + \alpha_5 POSFE \times BAILOUT_{it} + e_1$;

$\Delta COMP_{it} = \alpha_1 INCREASE_{it} + \alpha_2 \Delta ROA_{it} + \alpha_3 RET_{it} + \alpha_4 BAILOUT_{it} + \alpha_5 INCREASE \times BAILOUT_{it} + e_1$;

where for each firm i and year t:

POSFE =1 if earnings were met or above the consensus analyst forecast (negative forecast error) and 0 if otherwise;
INCREASE = 1 if earnings were met or above earnings for the previous year (positive change in yearly earnings) and 0 if otherwise.

4.1 Sample and Data

Table 1 displays the sample selection for my research. My sample includes data from subscription data sources available at the University of Arizona, including Standard and Poor's ExecuComp, Institutional Brokerage Estimate Stytem (IBES), Standard and Poor's Compustat, Center for Research in Security Prices (CRSP), and the bailout recipient databases. ExecuComp is used to obtain compensation data and IBES is used to obtain the annual earnings forecasts. Compustat is used for my control variables indicating firm-specific financial data and CRSP is used to obtain data for RET. My sample includes the years 2002 to 2007. During these years the overall economy was profitable. Prior research suggests (Gaver and Gaver, 1998) the sensitivity for pay-for-performance is asymmetric; thus, a CEO is more likely to receive a larger bonus for positive performance than be penalized for poor performance. A CEO is more likely to perform positively in a strong economy, therefore, I use years when the economy was strong. I use the SIC code 6021-6028, with a sample consisting of national commercial banks. I require that CEOs hold their position for the full fiscal year, deleting partial year CEOs. Panel A

is comprised of non-bailout national commercial banks broken-down by year. Out of the total

sample selection of 290 firm year observations, there are 164 (57%) firm year observations for

non-bailout banks. Panel B displays the national commercial bailout banks broken-down by

year. There are a total of 126 firm year observations for bailout banks, comprising of 43% of my

sample.

5.   RESULTS AND LIMITATIONS

In this section I report the results of the tests of my three hypotheses. First, I report the

results of the association between CEO compensation and earnings. Second, I report the

results of the association between CEO compensation and earnings for bailout banks. Lastly, I

report the results for bank CEO compensation and meeting an annual benchmark and whether

there is an incremental positive association between CEO compensation when bailout firms

met an annual benchmark.

5.1 Primary Results

My study's results for H1 appear in Table 2. The table displays the possible pay-for-

performance model within the banking industry. Table 2 shows that change in ROA has a

significantly positive relationship with changes in CEO compensation. This relationship is

expected as prior literature (Lambert and Larcker, 1987; Burgstahler and Dichev, 1997; Gaver

and Gaver , 1998; Sloan, 1992) has shown that there is a significant positive relationship

between change in ROA and CEO compensation. My results now extend this relationship to the

banking industry. Furthermore, changes in ROE have a significantly positive association with

changes in compensation. Prior literature has also found this association, therefore suggesting

that this relationship extends to the banking industry. I expected both variables to be

significant. However, I also expected changes in earnings to be significant. My results also

show that changes in earnings do not have a significant relationship with changes in CEO

compensation. Prior literature has shown a significant positive association with changes in

earnings and changes in CEO compensation. The banking industry may not rely on earnings for

an indicator of CEO performance; therefore, earnings may not be a performance indicator in

bank CEOs' compensation contracts.

Results for H2 are displayed in Table 3. Interacting each earnings variable with the

BAILOUT variable produced negative results for all three tests, indicating a lower pay-for-

performance relationship for bailout banks than for non-bailout banks. However, all results

were insignificant. Since insignificant results were produced, bailout banks possibly weigh

earnings the same as non-bailout banks as an indicator for CEO performance. I expected a

significant incremental positive pay-for-performance association between earnings and CEO

compensation for bailout banks over non-bailout banks. The incremental positive association

may indicate that bailout banks take on additional risk in an attempt to boost CEO

compensation through large short-term gains in earnings. However, it appears CEOs for bailout

banks do not have an incremental incentive to take on additional risk in an attempt to boost

earnings. Further studies may consider different earnings variables for banks such as the

number of loans approved. This earnings variable may indicate that bailout banks took on

additional risk through approving loans to customers with subpar credit.

Displayed in Table 4 are my results for H3. Bank CEO compensation has a significant

relationship with meeting or beating analysts' forecasts (t-stat 2.09). Meeting or beating

analysts' forecasts may indicate that CEOs take on additional risk to boost earnings, thus

increasing their compensation. I found a strong positive relationship, although not significant

(t-stat 1.93 < 2.0) between bank CEO compensation and beating prior year earnings. This may

be logical benchmark set for CEOs to beat since the benchmark is internally generated. Thus, it

is reasonable to believe CEO compensation will increase with an increase in earnings compared

to the prior year.

Interacting the two benchmarks with the BAILOUT variable produce all negative results,

however the results are all insignificant. Therefore, bailout banks do not have an incremental

relationship between CEO compensation and meeting an annual benchmark over non-bailout

banks. The lack of significant results may indicate that bank CEOs may not take on additional

risk to meet or beat the two selected benchmarks. A possible reason for the insignificant

results is that there may be other benchmarks in bank CEO contracts. A possible benchmark for

a bank CEO may be an increase in the number of loans the bank approves compared to the

prior year.

5.2 Limitations to Research

My results showed that banks, including bailout banks, follow the pay-for-performance

relationship between earnings and CEO compensation. However, my results did not show an

incremental pay-for-performance relationship over non-bailout banks. A possible reason for

this may be that Demsetz and Saidenberg (1999) find that CEO compensation from large banks

consists of a combination of annual bonus, long-term compensation, and option-based

compensation as opposed to smaller banks who offer high base pay and less incentive

compensation. Since large banks received the largest compensation, I could weigh their

compensation heavier than the bonuses from smaller banks. This may yield more balanced

results. Since there were roughly 13 large banks such as Bank of America, Citibank, JP Morgan Chase, and Wells Fargo that paid their CEOs lucrative bonuses (all over $1 million in 2007), I could weigh their bonuses heavier than a bailout bank such as East West Bancorp Inc. who did not pay their CEO compensation in 2007.

Furthermore, Clinch and Magliolo (1992) find that a component common in many bank CEO contracts is the amount of loans approved for the bank, which in turn generates revenue for the bank. Their study found that the recurrent interest revenue (operating earnings) from loans is a factor within bank CEO compensation contracts. In addition, an article from *The Wall Street Journal* indicates that the amount of loans a bank issues are incorporated in CEO compensation contracts, "The financial crisis of the past few years spawned many examples of excessive risk-taking encouraged by compensation, such as executives who earned lucrative bonuses churning out thousands of low-quality loans that later went bad" (Paletta and Hilsenrath, 2009). Therefore, further research may test whether there is a positive association between number of loans a bank approves and CEO bonus. This test may suggest that CEOs of bailout banks took on excessive risk by issuing loans to individuals with poor credit. However, this possible earnings indicator would affect the behavior of lower-level executives rather than CEOs, so this relationship would not be captured in my research design.

A final limitation to my study is banks change their SIC code from year-to-year. This made it difficult for me to keep my samples narrowed to nationally commercial banks. I intentionally left out financial service firms such as Goldman Sachs and GMAC, as well as mortgage firms such as Fannie Mae and Freddie Mac; however, nationally commercial banks on occasion switch to the financial service and mortgage issuer SICs, forcing me to exclude those

years for that bank. A possible reason for this switch is to better represent to current year's most dominant business structure for the bank, whether it is issuing more loans in a particular year or providing more financial services another. A possible solution for the exclusion is to broaden the SIC codes in further studies, therefore including these sectors in the sample selection.

6. CONCLUSION

In this paper I examine whether bailout banks have an incremental pay-for-performance relationship between earnings and CEO compensation. I use this theory to generate three hypotheses. The first hypothesis tests for a pay-for-performance relationship between earnings and CEO compensation for banks. The second hypothesis tests for an incremental association between earnings and CEO compensation for bailout banks. Finally, my third hypothesis tests whether bank CEO compensation is higher when a bank meets an annual benchmark and whether there is an incremental association between compensation and meeting a benchmark for bailout banks.

I find that banks follow a pay-for-performance relationship between earnings and CEO compensation based on changes in ROA and ROE but not earnings. My findings extend results of prior research (Lambert and Larcker, 1987; Burgstahler and Dichev, 1997; Gaver and Gaver , 1998; Sloan, 1992) that find a pay-for-performance relationship between earnings and CEO compensation for firms outside of the banking industry. These studies explicitly exclude banks in their samples; therefore, my research shows that banks follow the same pay-for-performance models as firms outside of the banking industry.

However, I do not find an incremental association between earnings and CEO compensation for bailout banks. When interacting BAILOUT with changes in ROA, ROE, and earnings, I find all insignificant results. This suggests that bailout bank CEOs did not have an incremental incentive to take on excess risk to boost earnings over non-bailout banks, increasing CEO compensation.

When testing to see if CEO compensation is higher when meeting an annual benchmark, I find significant results for meeting or beating analysts' forecasts. In addition, I found a strong positive relationship, although not significant, for the benchmark of beating last year's earnings and CEO compensation. This may suggest that CEOs want to develop a pattern of growth and will be compensated for maintaining that pattern. Park and Matsunaga (2001) find the same relationship for firms outside of the banking industry; my research therefore extends their results. When testing to find an incremental association for CEO compensation and meeting an annual benchmark for bailout banks, I find all insignificant results. Thus, bailout bank CEOs may not have an incremental incentive to take on additional risk to meet the two benchmarks over non-bailout banks.

I find that banks follow a pay-for-performance relationship. However, bailout banks do not appear to exhibit an incremental pay-for-performance relationship based on earnings or meeting or beating annual benchmarks. Further research may extend the tests in this study by examining earnings based on the interest generated from recurring loans and the benchmark of approving a specified number of loans. Examining these two variables may indicate that bailout banks had an incentive to take on additional risk by boosting earnings or meeting a benchmark through issuing loans to customers with subpar credit. In addition, these variables may explain

why banks needed bailout funds and provide insight on underlying causes for the 2008 financial

downturn.

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Table 1. *Sample Selection*

TABLE 1
Sample Selection

Panel A: Non-bailout banks

Year	Number of Observations	Percentage of Total Sample
2002	26	9%
2003	26	9%
2004	30	10%
2005	31	11%
2006	24	8%
2007	27	9%
Total	164	57%

Panel B: Bailout banks

Year	Number of Observations	Percentage of Total Sample
2002	19	7%
2003	19	7%
2004	26	9%
2005	21	7%
2006	22	8%
2007	19	7%
Total	126	43%
Total	290	100%

Table 2. *The Effects of Earnings on the Change in CEO Compensation*

TABLE 2
The Effects of Earnings on the Change in CEO Compensation

Regression Models:

$\Delta COMP_{it} = \beta_0 + \beta_1 \Delta ROA_{it} + \beta_2 RET_{it} + e_1$

$\Delta COMP_{it} = \beta_0 + \beta_1 \Delta ROE_{it} + \beta_2 RET_{it} + e_1$

$\Delta COMP_{it} = \beta_0 + \beta_1 \Delta E_{it} + \beta_2 RET_{it} + e_1$

Estimated Coefficient (t-statistic)

Variable Name[a]	ΔROA	ΔROE	ΔE
Intercept	-0.1143	-0.0983	-0.1249
	(-1.5832)	(-1.3434)	(-1.6909)
ΔROA	45.7539		
	(2.5757)		
ΔROE		4.1641	
		(2.4488)	
ΔE			-0.00004
			(-0.4035)
RET	-0.7814	-0.53619	0.2195
	(-0.5529)	(-0.3842)	(0.1590)
Adj. R^2	0.0158	0.0137	-0.0063

n = 290 firm-year observations

[a] Variable Definitions:

$\Delta COMP$ = change in CEO's bonus deflated by prior year salary;

ΔROA = annual change in return on assets, defined as the ration of earnings before interest and taxes to average assets;

ΔROE = change in return on equity, defined as earnings before extraordinary items discontinued operations divided by the average common shareholders' equity (This measure frequently appears as an explicit accounting performance measure in bonus contracts disclosed in proxy statements);

ΔE = annual change in earnings before extraordinary items and the results from discontinued operations;

RET = annual return measured as the monthly stock returns compounded over the 12-month fiscal year.

Table 3. *The Effects of Earnings on the Change in CEO Compensation in Bailout Banks*

TABLE 3
The Effects of Earnings on the Change in CEO Compensation in Bailout Banks

Regression Models:

$$\Delta COMP_{it} = \gamma_0 + \gamma_1 \Delta ROA_{it} + \gamma_2 RET_{it} + \gamma_3 BAILOUT_{it} + \gamma_4 \Delta ROA_{it} \times BAILOUT_{it} + e_1$$

$$\Delta COMP_{it} = \gamma_0 + \gamma_1 \Delta ROE_{it} + \gamma_2 RET_{it} + \gamma_3 BAILOUT_{it} + \gamma_4 \Delta ROE_{it} \times BAILOUT_{it} + e_1$$

$$\Delta COMP_{it} = \gamma_0 + \gamma_1 \Delta E_{it} + \gamma_2 RET_{it} + \gamma_3 BAILOUT_{it} + \gamma_4 \Delta E_{it} \times BAILOUT_{it} + e_1$$

Estimated Coefficient (t-statistic)

Variable Name[a]	ΔROA	ΔROE	ΔE
Intercept	-0.1220	-0.0905	-0.1718
	(-1.2650)	(-0.9216)	(-1.7074)
ΔROA	66.8560		
	(2.9021)		
ΔROE		5.2823	
		(2.5480)	
ΔE			0.0005
			(1.4980)
RET	-0.8950	-0.5888	-0.0674
	(-0.6274)	(-0.4180)	(-0.0483)
BAILOUT	0.0088	-0.0202	0.0647
	(0.0601)	(-0.1361)	(0.4306)
ΔROA x BAILOUT	-49.5882		
	(-1.4255)		
ΔROE x BAILOUT		-3.3596	
		(-0.9471)	
ΔE x BAILOUT			-0.0006
			(-1.7804)
Adj. R^2	0.0161	0.0099	-0.0022

n = 290 firm-year observations

[a] Variable Definitions:

ΔCOMP = change in CEO's bonus deflated by prior year salary;

ΔROA = annual change in return on assets, defined as the ration of earnings before interest and taxes to average assets;

ΔROE = change in return on equity, defined as earnings before extraordinary items discontinued operations divided by the average common shareholders' equity (This measure frequently appears as an explicit accounting performance measure in bonus contracts disclosed in proxy statements);

RET = annual return measured as the monthly stock returns compounded over the 12-month fiscal year;

ΔE = annual change in earnings before extraordinary items and the results from discontinued operations;

BAILOUT = financial institutions that received Troubled Asset Relief Program (TARP) funds from the federal government.

Table 4. *The Effects of Meeting Annual Benchmarks on the Change in CEO Compensation*

TABLE 4
The Effects of Meeting Annual Benchmarks on the Change in CEO Compensation

Regression Models:

$\Delta COMP_{it} = \alpha_1 POSFE_{it} + \alpha_2 \Delta ROA_{it} + \alpha_3 RET_{it} + \alpha_4 BAILOUT_{it} + \alpha_5 POSFE \times BAILOUT_{it} + e_1$

$\Delta COMP_{it} = \alpha_1 INCREASE_{it} + \alpha_2 \Delta ROA_{it} + \alpha_3 RET_{it} + \alpha_4 BAILOUT_{it} + \alpha_5 INCREASE \times BAILOUT_{it} + e_1$

$\Delta COMP_{it} = \alpha_1 ZERO_{it} + \alpha_2 \Delta ROA_{it} + \alpha_3 RET_{it} + \alpha_4 BAILOUT_{it} + \alpha_5 ZERO \times BAILOUT_{it} + e_1$

	Estimated Coefficient (t-statistic)	
Variable Name[a]	Analyst Forecast	Prior Year
Intercept	-0.1272	-0.4742
	(-1.1613)	(-2.3275)
POSFE	0.0301	
	(0.1641)	
INCREASE		0.4445
		(1.9349)
ZERO		
ΔROA	40.5565	23.2514
	(2.0971)	(1.0976)
RET	-1.5383	-1.6161
	(-1.2122)	(-1.2956)
BAILOUT	0.0490	0.2565
	(0.2880)	(0.8318)
POSFE x BAILOUT	-0.0620	
	(-0.2271)	
INCREASE x BAILOUT		-0.2900
		(-0.8518)
ZERO x BAILOUT		
Adj. R^2	0.0003	0.0099

n = 182 firm-year observations

[a] Variable Definitions:

ΔCOMP = change in CEO's bonus deflated by prior year salary;

ΔROA = annual change in return on assets, defined as the ration of earnings before interest and taxes to average assets;

RET = annual return measured as the monthly stock returns compounded over the 12-month fiscal year;

BAILOUT = financial institutions that received Troubled Asset Relief Program (TARP) funds from the federal government;

POSFE = 1 if earnings were met or above the consensus analyst forecast (negative forecast error) and 0 if otherwise;

INCREASE = if earnings were met or above earnings for the previous year (positive change in yearly earnings) and 0 if otherwise.