

Does “Long-Term Compensation” Make CEOs Think Long-Term? A Study of CEO Compensation in the Commercial Banking Industry

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Abstract

The issue of CEO compensation has become a controversial staple of media dialogue and academic pondering, especially after a crisis such as the 2007 mortgage market meltdown. CEOs, through stock options, stock grants, and cash bonuses, are supposedly paid to maximize long-term shareholder value. This desired result, however, often fails to come to fruition. In this study, from a sample of twenty-seven US commercial banks, I look for a correlation between the share of a CEO’s compensation that is designated “long-term” and two metrics of effective long-term strategy. I find no statistically significant evidence to suggest that the long-term portion of a CEO’s pay is correlated with the percentage change in either a bank’s net income or its allowance for loan losses, taken as a percentage of total loans. Nevertheless, I do find some evidence that long-term compensation plans that incorporate preset performance goals may improve the chances of long-term stability.

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I. Introduction

Executive compensation never fails to make headlines in a time of crisis. Since 2007, in the wake of the mortgage market meltdown, pay packages in the financial industry have come under increased fire. President Obama called Wall Street bonuses “the height of irresponsibility” and described them as “shameful”.² Missouri Senator Claire McCaskill introduced legislation to cap executive compensation at firms that accepted federal bailout money.³ When performance sinks, the public, employees, and shareholders want to see it reflected in the top spot’s paycheck.

Is this criticism justified, though? Most of the condemnation focuses on the dollar amount of CEO pay. However, as Jensen and Murphy point out, the amount of payment is not nearly as important as the method.⁴ Shareholders presumably want their managers to guide their firm to long-term health and success. The compensation mechanisms currently in place are intended to ensure just that. JPMorgan Chase, for example, describes the principles behind its executive compensation plan as “an acute focus on performance, alignment with shareholder interests, a sensitivity to the relevant market place and a *long-term orientation*” (emphasis added).⁵

Shareholders want to pay their chief executives for long-term performance, and their boards reflect this sentiment in proxy statements and press releases. Yet, as this paper questions, “do compensation plans aimed at incentivizing long-term performance actually work?” Do they yield better long-term strategies and long-term performance?

To address these questions, I have chosen commercial banks weathering the mortgage crisis to serve as my population. I believe the mortgage market meltdown, which began in the second half of 2007, provides an unusual opportunity to study long-term versus short-term thinking. Some banks maintained conservative lending standards and have navigated the crisis fairly well to this point, while others completely miscalculated their position and have faltered. This discrepancy reveals differences in management’s time orientation that would otherwise be difficult to ascertain.

Applying regression analysis to a sample of 27 of the 50 largest U.S. commercial banks, and using percent change in the fraction of loans allowed for losses as a proxy measure for long-term thinking, I find no evidence to suggest that a relationship between long-term pay and long-term thinking ex-

2 Paletta, Damien, Jonathan Weisman, and Deborah Solomon. “U.S. Eyes Two-Part Bailout for Banks.” *Wall Street Journal*, January 30, 2009: A1.

3 Wall Street Journal. “‘Idiots’ Indeed.” *Wall Street Journal*, January 31, 2009: Opinion.

4 Jensen, Michael C, and Kevin J Murphy. “CEO Incentives-It’s Not How Much You Pay, But How.” *Harvard Business Review*, May-June 1990: 138-149.

5 JPMorgan Chase & Co. *Definitive Proxy Statement*. New York: JPMorgan Chase & Co., 2007.

ists. Nevertheless, further study might reveal a difference between the effects of performance goal-based compensation and non-goal-based compensation whose performance component depends on market fluctuations. Both of these findings deserve to be studied with larger samples and with greater detail. Still, the following analysis shows that firms should at least question the assumption that their CEO's "long-term compensation" does what its name advertises.

In Section II of this paper, I will discuss the visible causes of the present credit crisis and the role commercial bank CEOs may have played in its emergence. In Section III, I discuss the existing literature covering the relationship between executive compensation and performance. Section IV contains a short description of the components of bank CEO compensation. Section V and VI present my test's hypothesis and results, respectively. Finally, in Section VII, I conclude the paper with some final thoughts on my findings.

II. Causes of the Crisis: Government Incentives and Management Near-Sightedness

In his book, *The Banker's Life*, former Citibank president George S. Moore writes, "Speaking from a perspective of sixty years in banking and in business, I have to say that banking is the surest, safest, easiest business I have seen or known....If you're not actually stupid or dishonest it's hard not to make money in banking."⁶ In light of the recent credit crisis, which hovers over the mortgage market, this statement might prompt a conscientious observer to ask, "So, which was it, stupidity or dishonesty?" Which human fault explains the reckless lending behavior that is now causing the undoing of the financial industry?

As the crisis enters its second year, the evidence unfolding seems to point to a combination of the two. Operating on the assumption that markets respond to incentives, and that short-term incentives are more clearly observed than long-term ones, one can conclude the problem resulted not from stupidity and dishonesty, but from myopia and personal evasion. The federal government, the government-sponsored enterprises and the Federal Reserve, among others, created perverse incentives for excessive lending. Many banks followed those incentives, ignoring the long-term implications of their actions, while others refrained. This paper poses a possible explanation for this discrepancy.

What follows is a brief summary of some of the major causes of the 21st century mortgage mania and its subsequent crash. The summary outlines the "short-term" incentives prevalent in the market, which successfully diverted managerial attention away from the long-term health of their firms.

6 Moore, George S. *The Banker's Life*. New York: Norton, 1987.

GSEs and the Federal Government's CRA Agenda

Fannie Mae and Freddie Mac's excessive lending activity is the most visible cause of the mortgage crisis. The federal government and the firms' management teams used the government-sponsored enterprises to further social goals, which enlarged the mortgage market beyond sustainable levels, elevated home prices by lowering borrowing costs and set up the market for a crash. Economist Russell Roberts notes, "For 1996, the Department of Housing and Urban Development (HUD) gave Fannie and Freddie an explicit target -- 42% of their mortgage financing had to go to borrowers with income below the median in their area. The target increased to 50% in 2000 and 52% in 2005."⁷ Fannie and Freddie, until their federal government seizure in September of 2008, were government-sponsored enterprises that generated shareholder profit, while purportedly serving a public purpose to "provide liquidity and stability to the U.S. housing and mortgage markets."⁸ Irony aside, it is easy to see how such entities could be manipulated to serve policy makers' political ends. As Manhattan Institute senior fellow Steven Malanga notes,

In order to push banks to lend more to minority borrowers, advocates like the Boston Fed put forward an entire new set of lending standards and explained to the industry just why loans based on these slacker standards were somehow safer than the industry previously thought. These justifications became the basis for a whole new set of values... as no-down payment loans and loans to people with poor credit history or to those who were already loaded up with debt became more common throughout the entire industry.⁹

In order to affect lending standards to their liking, policy makers utilized the Community Reinvestment Act (CRA) of 1977. The act intended to "encourage depository institutions to help meet the credit needs of the communities in which they operate, including *low-and moderate-income* neighborhoods, consistent with safe and sound banking operations" (emphasis added).¹⁰ While this law has existed for over thirty years, Roberts notes, "The CRA was 'strengthened' in 1995, causing an increase of 80% in the number of

7 Roberts, Russell. "How Government Stoked the Mania." *The Wall Street Journal*, October 3, 2008.

8 Fannie Mae. *About Fannie Mae*. October 7, 2008. <http://www.fanniemae.com/aboutfm> (accessed November 1, 2008).

9 Malanga, Steven. *The Long Road to Slack Lending Standards*. October 1, 2008. http://www.realclearmarkets.com/articles/2008/10/the_long_road_to_slack_lending.html (accessed November 2, 2008).

10 Federal Financial Institutions Examination Council. *Background and Purpose*. July 2, 2007. <http://www.ffiec.gov/cra/history.htm> (accessed November 2, 2008).

bank loans going to low- and moderate-income families.”¹¹ Shortly after this strengthening, the private sector got involved, and the wheels began to spin:

In 1997, Bear Stearns did the first securitization of CRA loans, a \$384 million offering guaranteed by Freddie Mac. Over the next 10 months, Bear Stearns issued \$1.9 billion of CRA mortgages backed by Fannie or Freddie. Between 2000 and 2002 Fannie Mae securitized \$394 billion in CRA loans with \$20 billion going to securitized mortgages.¹²

While the provisions of the CRA were unavoidable, Fannie and Freddie’s loose lending standards were not. Some banks readily accepted financing for any loans they could write, repackage, and sell. Others, however, avoided the temptation of quick GSE cash, fearing the credit risk associated with increased non-prime mortgage investment. With this paper, I intend to discover a possible explanation for this discrepancy.

Interest Rates

The Federal Reserve’s interest rate policy in the first years of this decade also contributed to the poor management decisions that led to the present crisis. After the dot-com bubble ruptured, the Fed steadily lowered the target Federal Funds rate. The target decreased from a high of 6.5% in 2000 to a low of 1% in June of 2003 before rising 25 basis points a year later.¹³ This prolonged period of low interest rates resulted in a *negative* real interest rate between 2003 and 2004.¹⁴

Low interest rates, in addition to low borrowing costs, increased the incentive for high-risk borrowers to take out loans. Low interest rates also invited banks to issue riskier loans in their search for higher returns. For instance, in the years leading up to the beginning of the credit crisis, risk spreads on corporate and treasury bonds diminished greatly, reflecting investors’ desire for higher yields.¹⁵

The issue of disappearing risk spreads directly relates to the problem of risky mortgage-backed securities, the mispricing of which can also be traced to faulty credit ratings.

11 Roberts, *Ibid.*

12 *Ibid.*

13 The Federal Reserve Board. *Open Market Operations*. October 29, 2008. <http://www.federalreserve.gov/fomc/fundsrate.htm> (accessed November 7, 2008).

14 *Ibid.*, Bureau of Labor Statistics. Consumer Price Index. October 16, 2008. <ftp://ftp.bls.gov/pub/special.requests/cpi/cpi.txt> (accessed November 7, 2008).

15 International Monetary Fund. *Global Financial Stability Report*. Washington DC: International Monetary Fund, April 2008.

Faulty Credit Ratings

The last major contributing factor is the lack of accuracy in mortgage-backed securities' credit ratings. The nationally recognized statistical ratings organizations (NRSROs) routinely rated MBSs and associated financial institutions highly, assuming a relatively low risk of default. In the months since the housing market began its descent, the agencies have had to reduce their MBS assessments drastically.¹⁶ In the search for a cause, much attention has been focused on the revenue model the NRSROs employ, which is "issuer-pays." This means that the firm seeking a bond rating pays the agency for said rating, creating a potential conflict of interest.¹⁷ In a recent *Times* of London article, Jerome Fons, a former managing director of Fitch's credit policy division, is quoted as saying,

A drive to maintain or expand market share made the ratings agencies willing participants in this shopping [for higher ratings]. It was also relatively easy for the major banks to play the agencies off one another because of the opacity of the structured transactions and the high potential fees earned by the winning agency.¹⁸

Normally, one would assume that investors and honest bond issuers would spurn such practices and seek out more reliable ratings elsewhere in the market, eventually forcing the major players to change their models or lose business. This, however, could not happen because NRSROs are government-protected enterprises. The SEC officially sanctions the NRSROs' decisions, and many investors, including money-market mutual funds, are legally obligated to heed their ratings.¹⁹ The barriers to entry in the rating industry prevented competition from forcing unseemly practices out of the market.

III. Existing Literature on Executive Compensation and Its Relationship with Performance

Executive compensation has interested social scientists for decades because of the assumed agency costs that arise from the separation of ownership and control. Jensen and Meckling define the agency relationship as "a contract under which one or more persons (the principal(s)) engage another person (the agent) to perform some service on their behalf, which involves

16 Morgenson, Gretchen. "Credit Rating Agency Heads Grilled by Lawmakers." *The New York Times*, October 23, 2008: B1.

17 Bawden, Tom. "Credit Rating Agencies Admit Ranking Many Mortgage-Related Securities Too High." *The Times*, October 23, 2008.

18 Ibid.

19 White, Lawrence J. "A New Law for the Bond Rating Industry." *Regulation*, 2007: 48-53.

delegating some decision-making authority to the agent.”²⁰ As agency theory is an economic theory at its base, it assumes that individuals are atomistic and rationally self-interested, maximizing their own utility. So, as Jensen and Meckling state, “If both parties to the relationship are utility maximizers, there is good reason to believe that the agent will not always act in the best interests of the principal.”²¹ In a corporation, shareholders entrust managers with their capital and expect the managers to act in the shareholders’ interests (e.g. maximize return on equity). Agency theory forces the assumption, then, that managers might act in their own interests at the expense of shareholders if incentives to do so prevail.

Since principals are aware of the risk that agents’ interests will deviate from their own, they incur certain costs in order to limit the loss from an agency relationship. These costs are referred to as agency costs. The loss in the principal’s welfare that results from any remaining deviation in the principal and agent’s interests is also considered an agency cost.²² One type of agency cost is the cost of monitoring an executive’s behavior. The cost that concerns this paper is that related to CEO compensation. There are various methods shareholders can employ to compensate CEOs for maximizing shareholder value, all operating on the agency assumption that, “The principal can limit divergences from his interest by establishing appropriate incentives for the agent.”²³ Stock options, stock grants, annual cash bonuses, and deferred compensation are some of the incentives corporations use. Again, these methods incorporate the agency theory assumption that one must incentivize managers to act in the interests of shareholders. A competing theory, the stewardship theory, takes the opposite position: managers are motivated by non-monetary concerns as well as monetary ones, and genuinely want to act in the shareholders’ interests solely for the sense of achievement and purpose.²⁴ This theory, though, is more difficult to test, and most executive compensation research incorporates an agency theory approach.

One ubiquitously cited agency-based study is Jensen and Murphy’s analysis of pay-performance sensitivity. Their results showed that for every \$1000 change in shareholder wealth, CEO wealth changed \$3.25 on average.²⁵ They drew data from over 1,000 corporations from 1974-1986, analyzing the com-

20 Jensen, Michael C, and William H Meckling. “Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure.” *Journal of Financial Economics*, October 1976: 305-360.

21 Ibid.

22 Ibid.

23 Ibid.

24 Davis, James H, F. David Schoorman, and Lex Donaldson. “Toward a Stewardship Theory of Management.” *Academy of Management Review*, 1997: 20-47.

25 Jensen, Michael C, and Kevin J Murphy. “Performance Pay and Top-Management Incentives.” *Journal of Political Economy*, April 1990: 225-264.

compensation of over 1,600 executives. They found CEO pay in small firms to be far more sensitive to performance than in large firms. Specifically, in the top half of their sample by market value, CEO wealth changed by just \$1.85 for every \$1,000 change in shareholder wealth. In the bottom half, the change was \$8.05. Jensen and Murphy find these results inconsistent with the implications of agency theory, namely that proper incentives would be required to align managers' interests with shareholders'. They suggest that political forces in the compensation process, such as public disapproval of high rewards or the threat of explicit regulation "implicitly regulate executive compensation by constraining the type of contracts that can be written between management and shareholders."²⁶ This fits the data, as larger corporations would be at higher risk of public disapproval since their CEOs would be paid more than smaller firms' CEOs if pay were linked to performance. The data also showed that pay-performance sensitivity decreased over time, with pay levels declining between the 1930s and 1980s. It is important to note, however, that Jensen and Murphy conducted this study prior to the tech boom of the 1990s, the surge in CEO stock options that accompanied it, and the cap on tax deductibility of CEO salaries above \$1 million. These changes may have altered the pay-performance relationship in later years.

More recently, Tosi, et al. conducted a meta-analysis of CEO compensation studies in 2000. They found that firm size affects CEO pay levels far more than does firm performance.²⁷ As with Jensen and Murphy, they treat CEO pay as the dependent variable, and they use both firm performance and size as independent variables. Their results show that firm size exhibits a much greater influence on the level of CEO pay than does performance:

In our judgment, the results are consistent with those theoretical explanations that emphasize organizational size as an important determinant of total CEO pay; that is, indicators of firm size, taken together, explain almost nine times the amount of variance in total CEO pay than the most highly correlated performance measure.²⁸

The meta-analysis shows firm size accounting for more than 40% of the variance in CEO pay levels, with firm performance accounting for less than 5%. Similar to Jensen and Murphy's observation about performance sensitiv-

26 Jensen, Michael C, and Kevin J Murphy. "Performance Pay and Top-Management Incentives." *Journal of Political Economy*, April 1990: 225-264.

27 Tosi, Henry L, Steve Werner, Jeffrey P Katz, and Luis R Gomez-Mejia. "How Much Does Performance Matter? A Meta-Analysis of CEO Pay Studies." *Journal of Management*, 2000: 301-339.

28 Ibid.

ity in small firms versus large ones, Tosi, et al. also note that many studies have shown that firm size affects CEO pay in management-controlled firms but not in owner-controlled firms. As owner-controlled firms tend to be smaller, this complements the earlier evidence that smaller firms' CEO pay is more performance sensitive. Agency theory supports this claim, but the evidence is troubling from a shareholder value perspective. If firm size wields such a large influence over CEO pay in large firms, which presumably experience the biggest agency costs, then one would expect CEOs to choose to build the organization as much as possible, sacrificing return on shareholder wealth if necessary. It is important, however, not to hastily conclude that CEO compensation plans fail to serve their purpose. Tosi, et al. suggest that the problem might be in the research method used to study the pay-performance relationship:

We suggest that there is a distinct possibility that perhaps the archival performance criteria may be deficient because they typically tap only a small portion of the CEO's job performance requirements, and therefore contain a large amount of noise, making unambiguous causal attributions for observed results very difficult.²⁹

Both of these papers analyze compensation as the dependent variable, but other studies, including this one, seek to analyze the causal effects of CEO pay on future firm performance. In his 1990 paper, Abowd looks at whether performance sensitivity of compensation in one year leads to higher firm performance in the subsequent year.³⁰ His test included performance-based compensation for multiple levels of management, not just CEO, but his research still holds value for the purposes of this paper. He states the following:

This study suggests that pay-for-performance systems based on after-tax gross economic return and total shareholder return may be effective [at improving performance], since I find evidence that increasing the sensitivity of compensation to either of these measures may be associated with better performance on that measure in the future.³¹

Accounting performance measures, by contrast, showed weak results in this study. The author writes that this outcome is surprising, given that many compensation plans incorporate accounting-based performance measures.

29 Ibid.

30 Abowd, John M. "Does Performance-Based Managerial Compensation Affect Corporate Performance?" *Industrial and Labor Relations Review*, February 1990: 52-73.

31 Ibid.

To explain this phenomenon, the author suggests that “most corporate performance plans explicitly using accounting data are multiyear plans, which I excluded from my data.”³² This constitutes a crucial omission, because not only do many contracts assume a multiyear focus, but also because shareholders wish to incentivize managers to plan for long-term growth and success. Unfortunately, attempting to show a relationship between compensation today and performance next year is difficult enough without adding in additional years. It is for this reason, among others, that I believe 2007 marks an opportune time for drawing the sample for this paper. The rapid reversal in many banks’ performance from 2006 to 2007 as a result of the credit crisis provides an opportunity to see which banks maintained a long-term focus through the credit mania, and which banks bought into the hype.

The above cases are only a few of the hundreds of studies conducted on the relationship between CEO compensation and firm performance, but they show that evidence has led researchers to conclude that supposed performance-based compensation is not as effective as shareholders and boards of directors might like to believe. Jensen and Murphy even go so far as to claim that “whatever the metric, CEO compensation is independent of business performance.”³³

Still, as Daily, et al. comment, “With over 300 studies on this topic published, there remains little consensus regarding the relationship between CEO compensation configurations and firm performance.”³⁴ This holds, they note, whether performance is measured as the dependent variable or as the independent variable. Clearly, while past research is helpful in guiding future endeavors, establishing any kind of relationship or even explaining its absence will require much more discovery. With this paper, I hope to contribute to that process.

IV. Discussion of Bank CEO Compensation in 2006

Prior to analyzing data on commercial bank CEO compensation, it would be prudent to review the typical components of compensation packages in 2006. The first is base salary. Base salaries in my sample range from \$0 to \$2,867,700. Many of the salaries hover around \$1 million, as that is the cap on tax deductibility. Base pay constitutes a small percentage of total compensation for most CEOs in the sample, with smaller banks like Colonial and Manufacturers and Trader proving the exception. According to agency theory,

32 Ibid.

33 Jensen, Michael C, and Kevin J Murphy. “CEO Incentives-It’s Not How Much You Pay, But How.” *Harvard Business Review*, May-June 1990: 138-149.

34 Daily, Catherine M, Dan R Dalton, and Nandini Rajagopalan. “Governance Through Ownership: Centuries of Practice, Decades of Research.” *Academy of Management Journal*, 2003: 151-158.

agents are risk-averse, and base salary is the most obvious compensation-related evidence in support of this claim.

Next is the annual bonus or incentive. Boards use cash incentives to reward executives for good results at the end of each year. Wells Fargo provides a typical explanation for their annual incentive: “to reward achievement of Company, business group, and individual performance results for each fiscal year.”³⁵ This category of payment is almost always made in cash because it is considered an incentive for one year only and because stock grants or options would be considered longer term, as I will explain.

Stock awards or grants are shares of stock that the CEO receives from the firm as compensation. Sometimes they are restricted, in that the CEO may only access them after a certain amount of time has passed and/or the firm has achieved certain objectives. The main purpose of time-vesting restricted grants is to retain the executive, and the stated purpose of incorporating objectives into the vesting criteria is to align the CEO’s interests with shareholders’.

Stock options are another equity-based compensation method. The CEO is awarded a number of call options on the firm’s stock, not to be exercised for a period of time. The distant exercise date is meant to foster long-term stock price appreciation, as the CEO would presumably want to raise the price of equity as high as possible within that period in order to gain more on the call.

Both stock grants and options are considered “long-term compensation” due to their vesting period and the assumed long-term incentives inherent in equity ownership. As stated in Countrywide Financial’s proxy statement:

Our equity incentive compensation is intended to ensure the retention of our executives throughout the vesting period and term of the award. In addition, our equity plans are designed to promote a performance-based culture and align the interests of our executives with those of our shareholders through equity ownership.³⁶

“Performance-based” is the predominant theme of most of the compensation packages featured in this paper. With options and grants constituting the vast majority of long-term incentive pay (see Table 1), I shall focus considerable attention on their efficacy in fostering long-term planning and positive firm performance.

The final component of the sampled pay packages is “performance-based grants.” Normally, firms make these grants in the form of cash, but some also

35 Wells Fargo & Co. *Definitive Proxy Statement*. San Francisco: Wells Fargo & Co., 2007.

36 Countrywide Financial Corporation. *Definitive Notice and Proxy Statement*. Calabasas, CA: Countrywide Financial Corporation, 2007.

use equity. The grants are used to provide added incentive for the CEO to focus on long-term success, rewarding him or her for achieving or exceeding preset long-term goals. These goals can be either specific benchmarks or relative ones based on the firm's performance against its competitors. This form of compensation provides the benefit of making firm performance a *measurable* element of the CEO's evaluation and pay, as opposed to its treatment with stock options. With stock options, the firm relies on the market to recognize firm performance. According to BB&T's proxy statement:

The objective of the LTIP (Long-Term Incentive Plan) is to motivate and reward financial performance over a mid-term period of three years. While options are generally held until the latter part of their ten-year term, and the short-term incentive plan measures one year performance, the LTIP was designed to measure internal (and relative) performance over a three-year period.³⁷

The "mid-term period" allows for considerably more measurability than indefinite long-term compensation such as stock options and grants. Of course, it also increases the risk of the firm focusing the CEO's goals too narrowly, blinding him or her to possible opportunities that the market might otherwise reward.

V. Hypothesis

Taking previous research into account, this study tests the hypothesis that, so-called "long-term compensation" fails to increase the likelihood of a Chief Executive Officer planning and acting for long-term success. Specifically, I hypothesize that there is no relationship between the long-term portion of a CEO's at-risk compensation in one year and the next year's percentage change in either the firm's net income or its allowance for loan losses taken as a percentage of total loans. Statistically, my test is:

$$\begin{aligned} H_0: \beta_1 &= 0 \\ H_a: \beta_1 &\neq 0 \end{aligned}$$

For two relationships:

$$\% \Delta \left(\frac{\text{Allowance for Loan Losses}_1}{\text{Total Loans}_1} \right) = \beta_1 * \frac{\text{Long-term Compensation}_0}{\text{Total At-Risk Compensation}_0} + \beta_0$$

³⁷ BB&T Corporation. *Definitive Proxy Statement*. Winston-Salem, NC: BB&T Corporation, 2007.

and

$$\% \Delta \text{Net Income}_1 = \beta_1 * \frac{\text{Long-term Compensation}_0}{\text{Total At-Risk Compensation}_0} + \beta_0$$

I have chosen the percent change in allowance for loan losses from 2006 to 2007 as a metric of long-term planning because, as an accounting estimate, it reveals a portion of management's expectations of its loan portfolio's future performance. The mortgage meltdown of 2007 offers an unusual opportunity to isolate widespread management myopia, and to look for specific failures within that context. I contend that a wide swing in a firm's allowance for loan losses between these two years signals a lack of long-term planning and foresight in 2006 and a rush to compensate for it the next year.

I have also chosen percent change in net income from 2006 to 2007 as a corroborating dependent variable. This is less a metric of long-term thinking as it is a straightforward performance metric, ubiquitous in goal-based compensation plans. Also, these two metrics exhibit a negative correlation³⁸, which suggests a relationship between a bank's future financial performance and the accuracy of its previous loan loss estimates.

Finally, if the data support the hypothesis, I will further analyze the results and consider possible explanations. While this will not involve a thorough statistical test, it may provide some insight into more effective methods of compensation.

VI. Results

Methodology

I drew my sample from the FDIC's list of the 50 largest commercial banks by deposits as of June 30, 2007.³⁹ From this group, I discarded those banks owned by the same holding company and those owned by foreign firms. The remaining 27 banks provided a good sample for study. Banks owned by the same holding company needed to be discarded for the same reason as foreign-owned banks, namely that the principal-agent problem inherent in our discussion of CEO compensation is different in such firms. If the chief executive of a subsidiary reports to a superior executive, the superior executive has better monitoring capabilities than shareholders or even a board of directors. This changes the agency relationship. The remaining 27 CEOs are the most senior

38 Excluding one major outlier, the data showed a correlation significance level of 0.0001 between the two variables.

39 FDIC. June 30, 2007. <http://www2.fdic.gov/sod/sodSumReport.asp?sInfoAsOf=2007&sAreas=&barItem=3> (accessed June 1, 2008).

executives at their respective firms and are directly responsible to their shareholders.

The data in Table 1 were compiled from each bank's 2006 proxy statement, accessed through the SEC's EDGAR database. Those at-risk payments designated as "goal-based" consist of payments contingent (at least in part) on achievement of preset performance goals (i.e. ROE, ROI, earnings growth, etc.).

The data in Table 2 were compiled from each bank's 2007 annual report, also accessed through EDGAR. "Total At-Risk Compensation" is the sum of all long-term compensation from Table 1 as well as annual incentives.

To test my hypothesis, I performed a linear regression analysis on the data, with Long-term Compensation as a Percent of Total At-Risk Compensation as my independent variable, and Percent Change in Net Income and Allowance for Loan Losses as my two dependent variables. I chose to take my independent variable as a percentage of At-Risk Compensation to avoid confounding influence from other compensation components. Since the purpose of this study is to examine the effect of pay on long-term versus short-term managerial focus, it makes sense to limit the independent variable to just those forms of compensation that vary with either short-term or long-term performance. Theoretically, the agent should respond to the greater incentive, whether short-term or long-term.

Finally, I separated the sets of dependent variable data into two groups: data generated by banks that employ some form of goal-based long-term compensation and data from those that do not. I examined the descriptive statistics of each to see if the goal-oriented nature of certain pay packages had any effect on the dependent variables.

Data

Table 1 shows the compensation components for the CEO of each bank in the sample of 27. 12 of the banks utilize some form of goal-based long-term compensation. Nearly every bank's annual incentive involves preset goals, even though none of them is marked as such. Long-term percentage of at-risk pay ranges from 0% to 100% as does the goal-based percentage. Change in Allowance for Loan Losses ranges from -15.79% to 550% with a mean of 68.88%. Change in Net Income ranges from -1085.5% to 42.5%, with a mean of -89.06%.

Figure 1, Figure 2, and Figure 3 show the statistical and graphical results of the linear regression tests. Percent change in Allowance and Net Income have R^2 values of .045 and .021, respectively. The best-fit regression equation for Allowance is $\hat{y} = -1.47x + 1.68$. The equation for Net Income is

$\hat{y} = -1.41x + 0.05$. P-values are 0.288 and 0.469, well outside any acceptable level of Type I error probability.

Table 3 shows the data and Figure 4 shows the descriptive statistics for the same dependent variables, now adjusted for the percentage of at-risk long-term compensation that is goal-based. In compiling the descriptive statistics, I omitted the marginal cases of Countrywide Financial and Merrill Lynch, whose goal-based pay components amount to an insignificant percentage of at-risk pay (<10%).

The data present little notable information other than the discrepancies in standard deviation and variance. The goal-based results seem far more contained, with variances of 0.035 and 0.116 for Allowance and Net Income, respectively. In contrast, the non-goal-based results show variances of 2.520 and 8.269, respectively. I will discuss the possible significance of this finding in the next section.

Table 1: 2006 CEO Compensation

Company	CEO	Salary	Annual Incentives	Stock Awards	Stock Option Grants	Equity	Cash	Change in Pension Value and Non-Qualified Deferred Earnings	All other Comp.	Total
Bank of America	Kenneth Lewis	1,500		<i>11,699</i>	<i>4,967</i>		<i>6,500</i>	2,988	220	27,873
Bank of New York	Thomas Renyi	1,000	6,276	<i>4,000</i>	4,400			0	236	15,912
BB&T	John Allison IV	927	980	<i>1,145</i>	1,738		<i>1,990</i>	1,414	250	8,444
Capital One	Richard Fairbank	0	0	6,389	30,893			5	152	37,439
Citi	Charles Prince	1,000	13,200	10,633	747			137	258	25,976
Colonial	Robert Lowder	1,118	660	0	216			0	626	2,619
Comerica	Ralph Babb	927	1,205	2,139	2,589		<i>718</i>	947	83	8,608
Commerce	David Kemper	778	527	166	833			158	123	2,584
Countrywide	Angelo Mozilo	2,868	20,462	<i>1,104</i>	26,669			11	643	51,756
E*Trade	Mitchell Caplan	750	4,700	1,725	2,613			0	158	9,945
Fifth Third	Kevin Kabat	602	464	<i>657</i>	<i>1,074</i>			13	91	2,900
First Horizon	J. Kenneth Glass	940		299	986			780	63	3,068
Huntington	Thomas Hoaglin	841	821	117	857			134	67	2,836
JPMorgan Chase	James Dimon	1,000	13,000	7,166	17,353			46	488	39,053
Keybank	Henry Meyer	992	2,966	2,658	1,886			3,167	355	12,025
Manufacturers and Traders	Robert Sadler	800	650					426	52	1,928
Marshall and Ilsley	Dennis Kuester	925	1,452	974	1,760	<i>865</i>		1,479	306	7,761
Merrill Lynch	E. Stanley O'Neil	700	18,500	64,780	3,071	<i>2,000</i>		1,950	375	91,375
National City	David Daberko	1,000	2,136	1,883	2,658	<i>450</i>	<i>450</i>	0	501	9,078
PNC	James Rohr	950	2,850	5,380	5,281			3,338	272	18,071
Regions	C. Dowd Ritter	995	2,786	6,642	1,511			1,132	743	13,810
Sovereign	Joseph Campanelli	565	37	261	38			2,683	38	3,622
SunTrust	L. Phillip Humman	1,000	1,635	501	792		<i>502</i>	2,962	147	7,540
U.S. Bank	Richard Davis	625	1,500	100	2,422			1,248	22	5,917
Wachovia	G. Kennedy Thompson	1,090	5,150	<i>9,064</i>	8,145			181	216	23,846
Washington Mutual	Kerry Killinger	1,000	4,074	2,251	5,149			1,271	502	14,246
Wells Fargo	Richard Kovacevich	995	8,500		16,826			2,982	544	29,847

Note: All numbers in 1,000s. *Italic* numbers are goal-based, all others are not goal-based. Source: Securities and Exchange Commission. EDGAR. Washington, D.C., June 1, 2008.

Note: In 2007, Citigroup implemented a long-term incentive program with performance metrics. However, this program did not exist in 2006, so its effect is not acknowledged. First Horizon utilizes a performance-based compensation system, but it has not paid out any awards the past few years, as management has missed the goals for successive years. Huntington utilizes a goal-based LTIP, but performance did not break the threshold, and so no awards were paid out for this year. In 2006, PNC implemented a three-year incentive grant program. However, since it was based on three years of performance, no grants will be paid until 2009. As such none is represented in the 2006 compensation.

Table 2: Compensation Summaries and Performance Metrics

Company	Total	Total At-Risk Comp.	Long-term comp as % of At-Risk Comp	Goal- Based Long-term as % of At-Risk	Percent Increase in Allow- ance as % of Total Loans	Percent Change in Net Income from 2006-07
Bank of America	27,873	23,166	100.0%	100.0%	3.9%	-29.1%
Bank of New York	15,912	14,676	57.2%	27.3%	-15.8%	-28.4%
BB&T	8,444	5,852	83.3%	53.6%	3.8%	13.5%
Capital One	37,439	37,282	100.0%	0.0%	28.8%	-35.0%
Citi	25,976	24,580	46.3%	0.0%	56.8%	-83.2%
Colonial	2,619	876	24.7%	0.0%	32.7%	-31.9%
Comerica	8,608	6,651	81.9%	10.8%	5.8%	-23.2%
Commerce	2,584	1,526	65.5%	0.0%	-7.4%	-6.0%
Countrywide	51,756	48,234	57.6%	2.3%	550.0%	-126.3%
E*Trade	9,945	9,038	48.0%	0.0%	538.5%	-329.3%
Fifth Third	2,900	2,194	78.9%	78.9%	12.5%	-9.1%
First Horizon	3,068	1,285	100.0%	23.3%	58.2%	-63.3%
Huntington	2,836	1,794	54.3%	0.0%	350.0%	-83.7%
JPMorgan Chase	39,053	37,519	65.4%	0.0%	17.9%	6.4%
Keybank	12,025	7,510	60.5%	35.4%	18.2%	-12.9%
Manufacturers and Traders	1,928	650	0.0%	0.0%	4.6%	-22.0%
Marshall and Ilsley	7,761	5,051	71.2%	17.1%	7.0%	42.5%
Merrill Lynch	91,375	88,351	79.1%	2.3%	-13.8%	-203.7%
National City	9,078	7,578	71.8%	11.9%	28.8%	-86.4%
PNC	18,071	13,511	78.9%	0.0%	8.0%	-43.5%
Regions	13,810	10,939	74.5%	0.0%	24.1%	-7.5%
Sovereign	3,622	336	89.1%	0.0%	45.5%	-1,085.5%
SunTrust	7,540	3,431	52.3%	14.6%	22.1%	-22.8%
U.S. Bank	5,917	4,022	62.7%	0.0%	-6.4%	-9.0%
Wachovia	23,846	22,359	77.0%	40.5%	22.5%	-19.0%
Washington Mutual	14,246	11,474	64.5%	0.0%	45.8%	-101.9%
Wells Fargo	29,847	25,326	66.4%	0.0%	17.8%	-4.3%

Note: All numbers in 1,000s. Source: Securities and Exchange Commission. EDGAR. Washington, D.C., June 1, 2008.

Figure 1

Allowance % Change

SUMMARY OUTPUT

<i>Regression Statistics</i>						
Multiple R		0.212180058				
R Square		0.045020377				
Adjusted R Square		0.006821192				
Standard Error		1.518661872				
Observations		27				

ANOVA						
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>	
Regression	1	2.718173717	2.718174	1.178569	0.288005309	
Residual	25	57.65834707	2.306334			
Total	26	60.37652079				

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	1.675151603	0.954376631	1.755231	0.091468	-0.290423847	3.640727053
X Variable 1	-1.470493385	1.354520432	-1.08562	0.288005	-4.260180413	1.319193642

Net Income Change

SUMMARY OUTPUT

<i>Regression Statistics</i>						
Multiple R		0.145387174				
R Square		0.02113743				
Adjusted R Square		-0.018017072				
Standard Error		2.145803957				
Observations		27				

ANOVA						
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>	
Regression	1	2.485710592	2.485711	0.539847	0.469332751	
Residual	25	115.1118656	4.604475			
Total	26	117.5975762				

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	0.052607372	1.348493163	0.039012	0.969191	-2.724666262	2.829881007
X Variable 1	-1.406208609	1.913879157	-0.73474	0.469333	-5.347916484	2.535499267

Figure 2

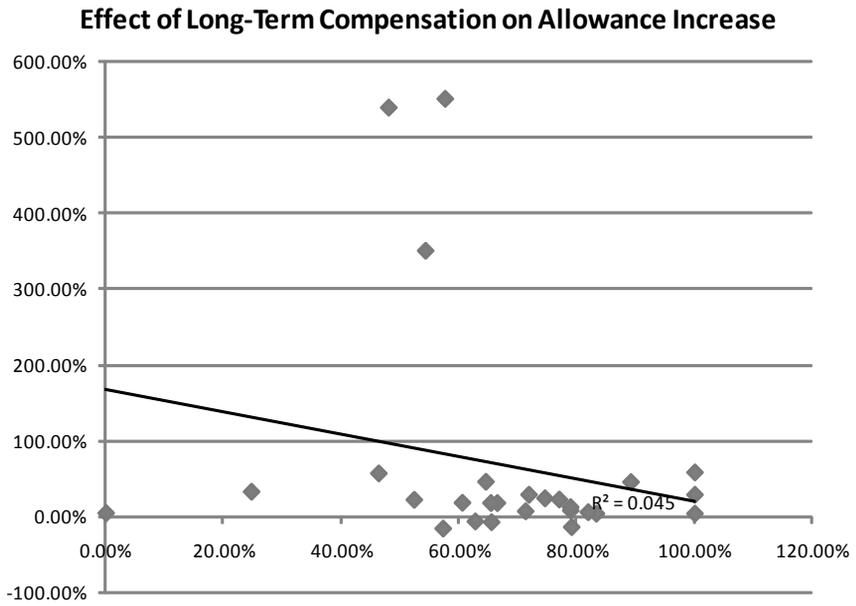


Figure 3

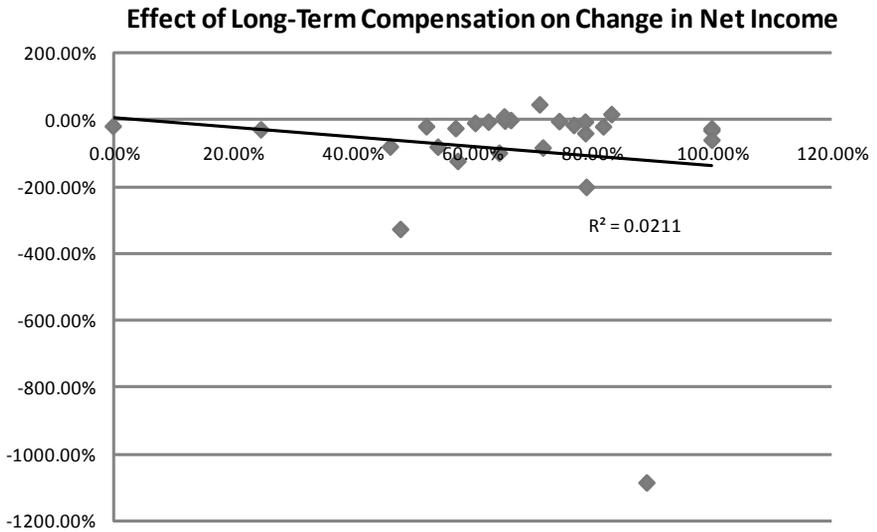


Table 3: Effect of Goal-Based Compensation

Company	Goal-Based Long-term as % of At-Risk	Percent Increase in Allowance as % of Total Loans	Percent Change in Net Income from 2006-07
<i>Bank of America</i>	100.0%	3.9%	-29.1%
<i>Fifth Third</i>	78.9%	12.5%	-9.1%
<i>BB&T</i>	53.6%	3.8%	13.5%
<i>Wachovia</i>	40.5%	22.5%	-19.0%
<i>Keybank</i>	35.4%	18.2%	-12.9%
<i>Bank of New York</i>	27.3%	-15.8%	-28.4%
<i>First Horizon</i>	23.3%	58.2%	-63.3%
<i>Marshall and Ilsley</i>	17.1%	7.0%	42.5%
<i>SunTrust</i>	14.6%	22.1%	-22.8%
<i>National City</i>	11.9%	28.8%	-86.4%
<i>Comerica</i>	10.8%	5.8%	-23.2%
<u>Countrywide</u>	2.3%	550.0%	-126.3%
<u>Merrill Lynch</u>	2.3%	-13.8%	-203.7%
Capital One*	0.0%	28.8%	-35.0%
Citi*	0.0%	56.8%	-83.2%
Colonial*	0.0%	32.7%	-31.9%
Commerce*	0.0%	-7.4%	-6.0%
E*Trade*	0.0%	538.5%	-329.3%
Huntington*	0.0%	350.0%	-83.7%
JPMorgan Chase*	0.0%	17.9%	6.4%
Manufacturers and Traders*	0.0%	4.6%	-22.0%
PNC*	0.0%	8.0%	-43.5%
Regions*	0.0%	24.1%	-7.5%
Sovereign*	0.0%	45.5%	-1085.5%
U.S. Bank*	0.0%	-6.4%	-9.0%
Washington Mutual*	0.0%	45.8%	-101.9%
Wells Fargo*	0.0%	17.8%	-4.3%
	Averages:	68.9%	-89.1%
	Standard Dev.:	152.4%	212.7%
	Median:	18.2%	-28.4%

Bold = Outliers (2 Std dev. beyond mean)

Italic = Companies utilizing goal-based plans

* = Companies not using such plans

Underlined = Very limited use of goal-based plans

Figure 4

Allowance for Loan Loss Stats

Percent Change in Net Income Stats

Goal-Based Stats (At least 10% of At-risk pay)

Mean	0.151737507
Standard Error	0.056590934
Median	0.125
Mode	#N/A
Standard Deviation	0.1876909
Sample Variance	0.0352279
Kurtosis	2.362742743
Skewness	0.901035064
Range	0.73952739
Minimum	-0.157894737
Maximum	0.581632653
Sum	1.669112581
Count	11
Confidence Level(95.0%)	0.126092459

Goal-Based Stats (At least 10% of At-risk pay)

Mean	-0.2165
Standard Error	0.102743572
Median	-0.2283
Mode	#N/A
Standard Deviation	0.340761879
Sample Variance	0.116118658
Kurtosis	1.137733454
Skewness	-0.103646033
Range	1.2885
Minimum	-0.8635
Maximum	0.425
Sum	-2.3815
Count	11
Confidence Level(95.0%)	0.228926944

Non-Goal-based Stats (Not including marginal cases)

Mean	0.826289771
Standard Error	0.424230328
Median	0.264341024
Mode	#N/A
Standard Deviation	1.5873245
Sample Variance	2.5195992
Kurtosis	5.517366457
Skewness	2.476425001
Range	5.458144796
Minimum	-0.073529412
Maximum	5.384615385
Sum	11.5680568
Count	14
Confidence Level(95.0%)	0.916493902

Non-Goal-Based Stats (Not including marginal cases)

Mean	-1.311728571
Standard Error	0.768550215
Median	-0.3345
Mode	#N/A
Standard Deviation	2.87565159
Sample Variance	8.269372065
Kurtosis	11.06117342
Skewness	-3.255081467
Range	10.9188
Minimum	-10.855
Maximum	0.0638
Sum	-18.3642
Count	14
Confidence Level(95.0%)	1.660351793

Analysis

The regression test's results leave little ambiguity. Applying a 10% significance level, I cannot reject the null hypothesis that no linear relationship exists between "long-term compensation" in one year and percent changes in Allowance for Loan Losses and Net Income in the next year. The t-statistics generated from the two-tailed regression t-tests are -1.086 for Allowance and -0.735 for Net Income with 26 degrees of freedom. Thus, the p-values are 0.288 and 0.470, well above the 0.1 maximum required to meet the 10% significance level. The probability of falsely rejecting the null hypothesis is too high in either case to conclude that a relationship exists between the independent variable and either dependent variable. Therefore, I fail to reject H_0 and conclude that no relationship is apparent.

Once it has been established that no relationship exists between the level of long-term compensation as a portion of total at-risk compensation and the chosen metric of long-term planning, the next step should be to offer some kind of explanation for this phenomenon. Long-term compensation's stated goals are clearly not materializing, and firms would benefit from knowing why so that they might then revise their pay packages.

In order to offer one possible cause, I looked at the descriptive statistics of the sample data, splitting the dependent variable outcomes into two groups based on the accompanying independent variable. One group consisted of the results for firms that employ goal-based long-term compensation programs (excluding those for whom the program constitutes an insignificant portion of total pay), and the other group consisted of the results for the firms that employ no such program.

Obviously with the small sample sizes, such an analysis has limited use. Some interesting figures are worth mentioning, however. The mean percent change in both categories was noticeably lower for the goal-based subset than for the non-goal-based subset. The goal-based group averaged changes of 15.17% and -21.65% for Allowance and Net Income, respectively. The non-goal-based group averaged 82.63% and -131.17%. This might suggest that long-term, goal-based compensation can focus a CEO on maintaining sustainable loan portfolios and accurately predicting loan losses in addition to keeping net income under control in times of crisis.

More telling are the variability metrics for the different subsets. Standard deviations for the goal-based outcomes are 18.77 and 34.08 basis points, compared to 158.73 and 287.57 basis points for the non-goal based outcomes, respectively. Lacking the statistical rigor of the broader regression t-test, this cursory analysis falls short of offering a firm conclusion. Understanding this,

I performed this simple post-regression analysis merely to suggest a possible direction for a broader, more in-depth study. An ordinary least-squares regression on a large data set using an interaction indicator variable for goal-based compensation would be an excellent next step in the study of the effects of performance goals.

VII. Conclusion

The above analysis fails to provide convincing evidence that the size of the long-term component of CEO compensation in one year has any effect on or relates to the change in Allowance for Loan Losses or Net Income the following year. Assuming that my chosen metric accurately reflects management's long-term planning and thought, I conclude that long-term CEO compensation, by itself, does not ensure the CEO will adopt a long-term perspective when attempting to maximize shareholder value. In fact, two banks at the extremes of the long-term compensation spectrum, Bank of America at 100% of at-risk pay and Manufacturers and Traders at 0%, produced nearly identical results (See Table 2).

It is not sufficient, then, for firms to establish so-called "long-term pay" schemes and claim, as Countrywide Financial does in their 2007 proxy statement, that such schemes "align the interests of our named executive officers with our stockholders by using cash and equity based incentives that link executive compensation to the Company's short- and long-term performance."⁴⁰ In addition to Countrywide's 550% increase in Allowance for Loan Losses in 2007 and its eventual sale to Bank of America in 2008, consider the words of Angelo Mozilo, Countrywide's CEO, as evidence of the firm's lacking long-term perspective: "The problem that we face today was unanticipated....It bears noting that no one predicted the severity and force of the housing market downturn that followed."⁴¹

This statement may describe Mozilo and his cohorts at Countrywide—and the firm's performance suggests it does—but it certainly does not describe everyone in the industry, as the outcomes of this study show. Prior to the onset of the mortgage crisis, John Allison, CEO of BB&T, identified the risk to his firm of adopting the looser lending standards which eventually proved troublesome for so many banks:

We often pass on things that might be short-term profitable, and I'll give you a concrete example. We did not get into the negative amor-

⁴⁰ Countrywide Financial Corporation, *Ibid.*

⁴¹ Mozilo, Angelo. "Testimony of Angelo Mozilo Before the Committee on Oversight and Government Reform." *Committee on Oversight and Government Reform*. March 7, 2008. <http://oversight.house.gov/documents/20080307121803.pdf> (accessed January 28, 2009).

tization mortgage business....It sounds good when real-estate values are going up real fast, but we've been in the business long enough to know real-estate values don't always go up real fast. So that when people are paying less than the interest on their loans, at the end of five years...they're going to owe a lot more on their mortgage than their house is worth. That's not a good thing. That got to be the fad last year and the year before; huge market in that. We could have made a lot of money doing that, but we said 'no, we're not going to do that because it's not good for our clients.' We got some of our clients fixed rate mortgages and they're a lot happier today. Some of our clients went elsewhere and they're not our clients anymore. But we think you make profits by doing the right thing, not by doing the wrong thing.⁴²

Clearly, some executives saw the end of rising home prices and the inevitable consequences. Yet, both Allison and Mozilo's long-term compensation exceeded 50% of their total at-risk compensation. Examining long-term pay alone does not explain the discrepancy.

For this reason, I chose to examine the difference in outcomes between those banks that employed goal-based long-term compensation plans and those that did not. While far from conclusive, the data seem to imply that preset goals keep increases in Allowance for Loan Losses and decreases in Net Income contained, with less variation in the goal-based group than in the non-goal-based one. These phenomena may be due to a number of plausible causes. Presumably, setting goals for the CEO to meet, such as three-year average ROE, would focus his or her attention on projects that would achieve the desired result. The drawback of such a program, though, is that the CEO may only do what the plan rewards if agency theory holds. As such, the compensation committee must strike a balance.

Another possible reason for the discrepancy could be that rewarding CEOs primarily with equity has the unfortunate consequence of subjecting the executive's pay to the market's fluctuations. The CEO's actions might center too much on pleasing the stock market instead of achieving real results.

Finally, goal-based plans can have benefits from a corporate governance standpoint. In order to devise such plans, a firm's board of directors—or at least its compensation committee—must educate themselves on what constitutes acceptable, and exceptional, performance. Under such a compensation plan, the board is forced to put in writing exactly what it expects of manage-

⁴² Allison, John A, interview by Russell Roberts. *Allison on Strategy, Profits, and Self-Interest* (May 7, 2007).

ment, making it easier to hold management accountable for those results.

Looking forward, I believe this study could be expanded to include a wider selection of banks. Researchers would benefit from discovering and developing more and better metrics for “long-term thinking,” as this concept might offer some insights into the effectiveness of governance tools that more traditional performance metrics do not. Lastly, I think the role of goal-based compensation should be studied in far more depth in the future, perhaps drawing on Latham and Locke’s work with goal-setting theory. I believe their theory may hold some real benefits for focusing management’s incentives and avoiding conflicts between what CEOs are told to do and what they are paid to do.

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