5-2013

A Study of the Effect of the 2008 Economic Crisis upon the Relationship between CEO Compensation and Firm Performance Measures.

Adam Smolnycki
East Tennessee State University

Adam Roth Smolnycki

FNCE-4018-005

Dr. William Trainor

April 9, 2013

***A Study of the Effect of the 2008 Economic Crisis upon the Relationship between CEO Compensation and Firm Performance Measures*:**

Thesis Proposal

I would like to dedicate this paper to both of my parents, William and Deborah Smolnycki, for without their persistent help and motivation this study would have never been accomplished.

Thank you Mom and Dad

I. Executive Summary

This study investigates the effect the 2008 economic crisis had on the relationship between CEO compensation and firm performance measures for S&P 500 financial companies. The findings assist S&P 500 financial companies to better determine compensation levels for CEOs by accounting for performance as well as account for the most recent valley in the economic cycle. The study uses a database of CEO compensation data for S&P 500 financial firms from both before and after the crisis. The database also contains firm performance data for the respective firms and years. The relationship is explored using separate multiple regression models, then comparing the strength of relationship in 2007-2008 and 2011-2012.

The results find a significant difference in Salary amounts from before and after the crisis. The p-stat and t-stat values the study uses in determining the significance of variables find the only significant variable tested to be the one representing the difference in Salary amounts from before and after the crisis. Compared to other studies on similar topics, Revenues are decidedly less important in the S&P 500 financial sector than they are for other scopes of study as a whole. The study also discovers an alarming disconnect between stock and investor returns and compensation amounts.

Index

Index, Continued

Index, Continued

Chapter 1: Literature Review and Study Design

I. Introduction

This study illustrates the relationship between CEO compensation and firm performance measures in S&P 500 financial companies. The study investigates if this relationship is stronger or weaker before or after the most recent economic crisis of 2008. In the years leading into the 2008 crisis and since, there have been many public discussions about CEO compensation and its relative "fairness." This "fairness" refers to the fact everyone's pay is related to:

a) The amount of hours they work.

b) The results they achieve.

This seems a slightly simplistic view; however most hold it to be true. Based upon this, CEO's have their pay tied to both of the points listed above.

A complicating issue is a CEO's job description. They are responsible for operations of entire companies which span across the United States as well as abroad. How are they supposed to have their performance measured?

The most concrete answer to this question is firm performance numbers such as ROE, ROA, net margin, etc. These are the most effective measures of performance because they are uniformly measured. With the accounting rules and regulations of GAAP (Generally Accepted Accounting Principles) in place each of these measures are calculated the same way ending with the same results no matter who does the calculation. Therefore, this study uses return on equity (ROE), annual investor returns, net margin, earnings per share (EPS), and gross revenues as its measures for performance.

Once the relationship between these variables and CEO compensation is determined, the study then compares the strength of this relationship pre-crisis to the strength of the relationship post-crisis. This allows for it to be determined if compensation was reigned in from its pre-crisis, higher levels to lower levels after the crisis in order to adjust for the poor management decisions which contributed to the crisis.

II. Literature Review

Many attempts have been made trying to determine the best measures of the relationship between CEO compensation and various firm performance measures. These attempts differ by which statistical tests are used, how compensation is measured, and which performance measures are chosen.

One point agreed upon by most sources is the basic relationship between CEO compensation and firm performance measures, regardless of which measures are used, differs depending upon how it is approached. Simply because a measure, such as revenue, is not strongly related to executive compensation in one industry or sector does not mean it will not be very strongly related to executive compensation in another sector or industry. It all depends on the scope and area of focus.

In a 2001 study, Duru and Iyengar find bonuses and equity-based pay are more strongly related to accounting measures similar to those this study uses, while salary and long-term compensation are better tied to firm market performance. This supports the choice of the performance measures this study uses since it concerns itself with the short-term.

Conyon and Lerong in a 2008 paper find companies in which the CEO holds another position among the board or executives paid their CEOs more while those in which the CEO did

not hold another position paid the CEOs less. This study notes if each CEO holds one or more positions with their company. However, it does not study the effects of this due to the fact the majority of financial sector CEOs in the S&P 500 hold more than one position or title with their company. Since it applies to the majority of this study's area of focus an adjustment seems unnecessary.

In a 2011 study Luo and Jackson conduct a similar study to this one to determine the similarities and differences in the same relationship between CEO compensation and performance measures in Chinese and American financial companies. They conclude the relationship between compensation and revenues is similar between Chinese and American firms. Their study provides much assistance in determining how to setup the models which this study uses.

In a 2010 test Marin runs 5 separate measures in relationship to CEO compensation including earnings per share (EPS), return on assets (ROA), shareholder's equity, stock price, and firm size. Marin finds firm size has the strongest relationship with CEO compensation of all variables he tested. This study tests two of these measures, EPS and stock price. The rest of the measures Marin tests are considered but determined to not be significantly related due to Marin's previous work.

Dikolli, Hofman, and Pfeiffer (2012) conclude performance measures are slightly stronger when using a netted measure for executive compensation. This adjustment is not made in this study because CEO compensation is part of the cost of conducting business. Netting CEO compensation from a firm's performance is like netting the rest of employee pay from firm performance. Although it would possibly help strengthen the relationship between CEO

compensation and firm performance measures, this study does not net CEO compensation from the firm performance measure data.

In 2010 Cooper, Gulen, and Rau attempt to determine the relationship between CEO compensation and investor returns and find they are inversely related. This study notes Cooper, Gulen, and Rau's work and includes investor returns due to the significant relationship, although inverse.

Overall, there are many studies concerning the relation of CEO compensation to any number of performance measures. Although the relationships, adjustments, and areas of focus differ they all contribute to the research being conducted in this field. This study's contribution to the field is the inclusion of economic crises as determining factors in the strength of the relationship between CEO compensation and performance measures.

III. Research Objectives

A. Explore the relationship between CEO compensation and firm performance measures in S&P 500 financial firms from both 2007 and 2011.
B. Compare the strength of this relationship in 2007 and 2011.
C. Conclude if CEO compensation is drawn back to adjust for poor decisions which contribute to the 2008 financial crisis.

IV. Research Design

This study investigates the strength of relationship between CEO compensation and firm performance. It then determines if the relationship changed after the 2008 financial crisis.

The hypotheses are as follows:

$H1_0$: There is no relationship between CEO compensation and firm performance measures.

$H1_A$: There is a relationship between CEO compensation and firm performance measures.

$H2_0$: There is no difference in the relationship of the CEO compensation and firm performance measures in 2007 and 2011.

$H2_A$: There is a difference between the relationship of the CEO compensation and firm performance measures in 2007 and 2011.

Compensation is defined thusly:

a) Total Cash Compensation (Salary) – the CEO's base salary
b) Total Compensation (Total) – the CEO's total amount earned through all compensation methods

Following are the performance measures which the model uses:

1) Return on equity (ROE)
2) Annual investor returns
3) Net margin
4) Earnings per share (EPS)
5) Gross revenues

The strength of the relationship is determined by running multiple regression models which include both the 2007-2008 data sets and the 2011-2012 data sets. Once the models are run the t-stat and p-stat values are compared in order to determine the effects the crisis had on the strength of relationship overall as well as for each individual variable tested. The model reveals any significant changes in the relationships between the firm performance measures and CEO compensation as well as if such relationships changed due to the 2008 economic crisis.

V. Data Sources

The primary sources used by the study are the firm performance measures and the CEO compensation data. Examples of these measures can be found in Tables 2-1, 2-2, 2-3, and 2-4 in the appendix. The CEO compensation data is gathered from salary.com along with usatoday.com for the 2011 and 2007 data respectively. Usatoday.com is used to gather further 2008 compensation data while salary.com is also be used to gather further 2012 compensation data. The firm performance measures are gathered from wikinvest.com and yahoo.com. For the literature review a majority of the sources are secondary. Most sources used are other papers written on similar topics, either determining the relationship between CEO compensation and firm performance or studying the effects different actions and measures have on the relationship.

VI. Statistical Tests

For the statistical analysis of this study, separate multiple regression models are run. Each model attempts to define in more detail the relationships between firm performance

measures and CEO compensation. All models attempt to relate the compensation levels to the firm performance measures listed previously:

1) Return on equity (ROE)
2) Annual investor returns
3) Net margin
4) Earnings per share (EPS)
5) Gross revenues

Using the results of the various regression models the p-stat and t-stat values are compared to determine what affects the 2008 economic crisis had on the relationship between CEO compensation and firm performance measures. These comparisons determine if poor performance of CEOs such as that leading to the 2008 economic crisis had a direct impact on their compensation for the period of time during or immediately after said performance.

Chapter 2: Data and Statistical Tests

In this chapter both the data and statistical tests shall be presented. As previously stated the data contains both CEO compensation as well as firm performance measures.

I. Raw Data

Table 2-1 on page 54 of the appendix contains the raw data for all 2007 information collected. There are seven different sets of data gathered from this year: Total Compensation, Salary, Return on Equity (ROE), Net Margin, Revenues, Earnings per Share (EPS), and the Annual Investor Return for the company's stock in the given year. The mean, or average, values are $18.91 million, 15.31%, 15.12%, -2.05%, $5.05, and $27.37 million for Total Compensation, ROE, Net Margin, Annual Investor Returns, Earnings per Share, and Revenues respectively. The standard deviation values are $27.87 million, 7.69%, 8.18%, 20.93%, $4.75, and $33.03 million. The median values are as follows: $11.447 million, 14%, 13%, -8%, $3.46, and $14.15 million. These values along with the minimum and maximum values are shown in Table 2-17 below and on page 51:

Table 2-17

	Minimum	Maximum	Mean	Standard Deviation	Median
Total Compensation	**$2.321 million**	**$170.699 million**	**$18.91 million**	**$27.87 million**	**$11.44 million**
ROE	**3%**	**37%**	**15.31%**	**$7.69%**	**14.00%**
Net Margin	**2%**	**44%**	**15.12%**	**8.18%**	**13.00%**
Annual Investor Returns	**-45%**	**41%**	**-2.05%**	**20.93%**	**-8.00%**
EPS	**$0.72**	**$29.20**	**$5.05**	**$4.75**	**$3.46**
Revenues	**$1.76 million**	**$159.23 million**	**$27.37 million**	**$33.03 million**	**$14.15 million**

Table 2-2 on page 56 in the appendix contains the raw data for all 2011 information gathered. This table is made of the same types of data as Table 2-1 but gathered from the year 2011 instead of 2007. The mean, or average, values are $113.152 million, 11.47%, 13.12%, -13.49%, $4.038, and $24.39 million for Total Compensation, ROE, Net Margin, Annual Investor Returns, Earnings per Share, and Revenues respectively. The standard deviation values are

$56.576 million, 9.94%, 13.11%, 21.87%, $4.537, and $28.66 million. The median values are $10.018 million, 10%, 12%, -12%, $3.07, and $12.56 million. These values along with the minimum and maximum values are shown in Table 2-18 on page 52 and below:

Table 2-18

	Minimum	Maximum	Mean	Standard Deviation	Median
Total Compensation	**$.000001 million (1 dollar)**	**$24.559 million**	**$113.152 million**	**$56.57 million**	**$10.02 million**
ROE	**-2%**	**46%**	**11.47%**	**9.94%**	**10.00%**
Net Margin	**-15%**	**57%**	**13.12%**	**13.11%**	**12.00%**
Annual Investor Returns	**-60%**	**451%**	**-13.49%**	**21.87%**	**-12.00%**
EPS	**-$0.53**	**$27.28**	**$4.03**	**$4.53**	**$3.07**
Revenues	**$1.76 million**	**$115.37 million**	**$24.39 million**	**$28.66 million**	**$12.56 million**

Table 2-3 on page 58 in the appendix contains the compensation data gathered from the year 2008. This table includes Total Compensation along with Salary for each CEO for the year

2008. The mean, or average, values are $9.644 million and $0.925 million for Total Compensation and Salary respectively. The standard deviation values are $7.525 million and $0.281 million respectively. The median values are $8.293 million and $0.994 million. The minimum and maximum values are as follows on Table 2-19 from page 53 in the appendix:

Table 2-19

	Minimum	Maximum	Mean	Standard Deviation	Median
Total Compensation	**$8.293 million**	**$27.327 million**	**$9.64 million**	**$7.53 million**	**$8.29 million**
Salary	**$0.994 million**	**$1.338 million**	**$0.93 million**	**$0.28 million**	**$0.99 million**

Table 2-4 on page 59 in the appendix contains the compensation data gathered from the year 2012. This table includes the same two categories as Table 2-3 but is gathered from 2012 instead of 2008. The mean, or average, values are $9.123 million and $3.890 million for Total Compensation and Salary respectively. The standard deviation values are $8.100 million and $1.932 million. The median values are $6.545 million and $3.791 million. The minimum and maximum values are in Table-20 below as well as on page 53 in the appendix:

Table 2-20

	Minimum	Maximum	Mean	Standard Deviation	Median
Total Compensation	**$0.160 million**	**$41.990 million**	**$9.12 million**	**$8.10 million**	**$6.54 million**
Salary	**$0**	**$8.975 million**	**$3.89 million**	**$1.93 million**	**$3.79 million**

II. Regression Results

The first regression model ran the 2007 and 2011 data for Total Compensation and the firm performance measures. The results can be seen below in Table 2-5 and on page 45 in the appendix.

Predictor	Coef	SE Coef	T	P
Constant	**11166544**	**5718583**	**1.95**	**0.055**
ROE	**7886119**	**28216655**	**0.28**	**0.781**
Net Margin	**-17843925**	**26627182**	**-0.67**	**0.505**
Annual Investor Return	**-4123386**	**11619248**	**-0.35**	**0.724**
EPS	**694486**	**601325**	**1.15**	**0.252**
Revenues	**78555**	**84425**	**0.93**	**0.355**

As seen from the p-stat and t-stat values none of the variables are significant other than the constant. The regression equation is:

Total Compensation = 11,166,540 + 7,886,119 ROE – 17,843,925 Net Margin
- 4,123,386 Annual Investor Return + 694,486 EPS
+ 78,555 Revenues

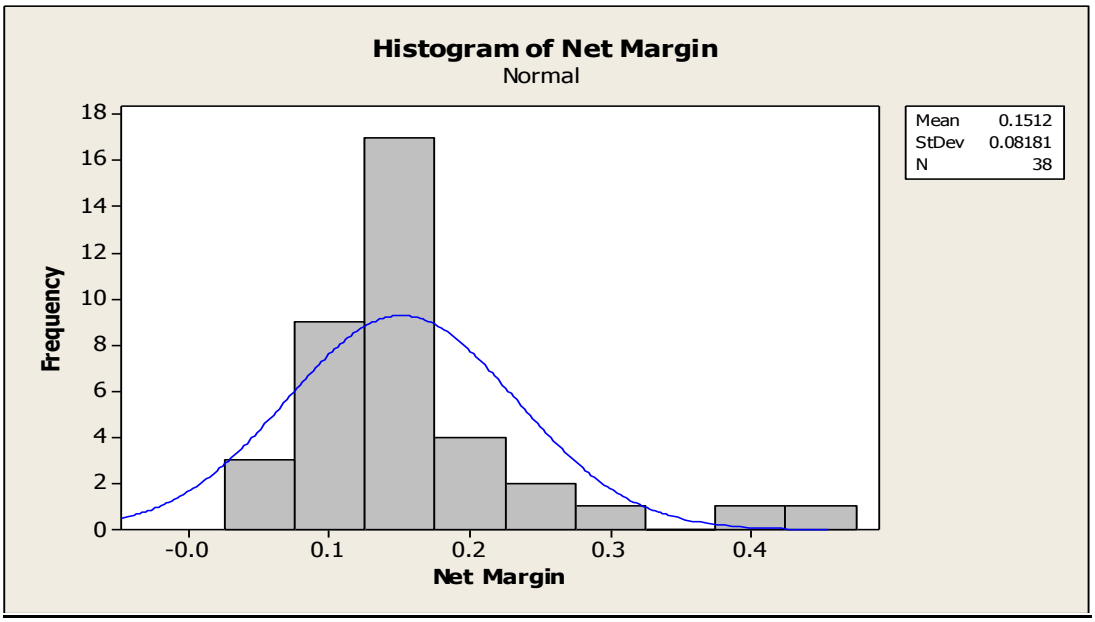
The formula has a standard deviation of $20.364 million for Total Compensation. The model finds from the coefficients Net Margin has the largest impact on Total Compensation while Revenues have the least. The adjusted r^2 value of 0.0% shows the line of best fit actually does not fit well at all however.

The outliers and reasons they are removed from the data are as follows:

1. Prologis is outside the normal curve in the category '2007 Net Margin' as seen in Table 2-A
2. Goldman Sachs is outside the normal curve in the category '2007 EPS' as seen in Table 2-B
3. Vornado Realty Trust is outside the normal curve in the category '2012 Total Compensation' as seen in Table 2-C
4. Franklin Resources is outside the normal curve in the category '2011 ROE' as seen in Table 2-D
5. T. Rowe Price is outside the normal curve in the category '2011 ROE' as seen in Table 2-D

6. CME Group is outside the normal curve in the categories ‘2011 Net Margin’ and ‘2011 EPS’ as seen in Table 2-E and Table 2-F respectively
7. Bank of America is outside the normal curve in the category ‘2011 Revenues’ as seen in Table 2-G
8. Citigroup is outside the normal curve in the category ‘2011 Salary’ with a value of $1.00.
9. Aon lacks accurate compensation data
10. Charles Schwab lacks accurate compensation data
11. ACE Limited lacks accurate compensation data

Below is Table 2-A, an example of the graphs used to determine the outliers above. Table 2-A and the remaining outlier graphs are available in the appendix beginning on page 41.



Once the results from the first regression are analyzed, the second regression runs the same model but with the outliers removed. At this point the data appears as represented in Table 2-6 (page 45) below.

Predictor	Coef	SE Coef	T	P
Constant	**9,941,680**	**9,035,879**	**1.10**	**0.276**
ROE	**5,672,133**	**46,292,057**	**0.12**	**0.903**
Net Margin	**-5,021,656**	**44,015,543**	**-0.11**	**0.910**
Annual Investor Return	**-13,278,842**	**15,534,633**	**-0.85**	**0.396**
EPS	**755,285**	**1,565,878**	**0.48**	**0.632**
Revenues	**75,695**	**113,865**	**0.66**	**0.509**

From the results it is apparent none of the variables are significant.

The regression equation is:

Total Compensation = 9,941,680 + 5,672,133 ROE – 5,021,656 Net Margin

- 13,278,842 Annual Investor Return + 755,285 EPS

+ 75,695 Revenues

The formula has a standard deviation of $22.615 million of Total Compensation. The coefficients show Annual Investor Returns has the largest, and inverse, impact on Total Compensation while Revenues has the smallest. The adjusted r^2 value of 0.0% shows the line fits no better than the first model and does not fit well at all.

Once the second regression is completed, the third is run offsetting the firm performance measures and compensation data by one year. This allows the firm performance data from 2007 and 2011 to predict the compensation in 2008 and 2012 respectively. This is done in order to allow the model to 'determine' compensation amounts. The same methods are used to determine if there are any additional outliers due to the change. One additional outlier, Vornado Realty Trust, is found in the new category of '2012 Total Compensation.' The additional data which is added to the regression is shown Tables 2-3 and 2-4 on pages 58-59 in the appendix. Once the additional outlier is discovered and removed, the new regression results are shown on Table 2-7 below as well as on page 46 in the appendix.

Predictor	**Coef**	**SE Coef**	**T**	**P**
Constant	**2,660,769**	**2,094,427**	**1.27**	**0.209**
ROE	**44,648,038**	**10,766,015**	**4.15**	**0.000**
Net Margin	**-9,759,132**	**10,215,722**	**-0.96**	**0.344**
Annual Investor Return	**4,377,368**	**3,601,568**	**1.22**	**0.230**
EPS	**274,321**	**366,077**	**0.75**	**0.457**
Revenues	**-28,131**	**26,432**	**-1.06**	**0.292**

By looking at the p-stat and t-stat values once again it is determined all variables except ROE are insignificant while ROE had strong value of T = 4.15 and p = .000.

The regression equation is:

Total Compensation = 2,660,769 + 44,648,038 ROE – 9,759,132 Net Margin

+ 4,377,368 Annual Investor Return + 274,321 EPS

- 28,131 Revenues

The formula has a standard deviation of $5.242 million in Total Compensation. From the coefficient values the study determines ROE has the largest effect of Total Compensation while Revenues has the smallest. The adjusted r^2 value of 29.5% shows an improvement in the relationships strength.

After the previous results are determined the study decides it worthwhile to determine if there is a significant difference between any of the variable values from 2007/2008 and 2011/2012. To do so an additional six variables are added into the regression. Each variable is comprised of the previous values such as Total Compensation or ROE, then multiplied by a dummy variable of 0 or 1 representing 2007/2008 and 2011/2012 respectively. The new layout of the data can be found on Table 2-8 on page 60 in the appendix. The corresponding regression results are on Table 2-9 below and on page 47.

Predictor	Coef	SE Coef	T	P
Constant	**2,660,769**	**2,094,427**	**1.27**	**0.209**
ROE	**44,648,038**	**10,766,015**	**4.15**	**0.000**
Net Margin	**-9,759,132**	**10,215,722**	**-0.96**	**0.344**
Annual Investor Return	**4,377,368**	**3,601,568**	**1.22**	**0.230**
EPS	**274,321**	**366,077**	**0.75**	**0.457**
Revenues	**-28,131**	**26,432**	**-1.06**	**0.292**
Change in Compensation	**3,840,636**	**4,610,505**	**0.83**	**0.409**
Change in ROE	**-54,555,433**	**22,128,943**	**-2.47**	**0.017**
Change in Net Margin	**-30,016,180**	**24,086,869**	**-1.25**	**0.219**
Change in Annual Investor Return	**-4,007,479**	**6,839,951**	**-0.59**	**0.561**
Change in EPS	**385,661**	**704,609**	**0.55**	**0.587**
Change in Revenues	**46,412**	**52,371**	**0.89**	**0.380**

From the resulting t-stat and p-stat values the variable ROE is significant and has the only significant difference from one data set to another. The remaining variables are weak in strength.

The regression equation is

Total Compensation = - 64,988 + 55,412,405 ROE + 22,568,220 Net Margin
+ 7,857,096 Annual Investor Return – 18,581 EPS
- 29,135 Revenues + 3,840,636 Change in Compensation
– 54,555,433 Change in ROE
- 30,016,180 Change in Net Margin
- 4,007,479 Change in Annual Investor Return + 385,661 Change in EPS
+ 46,412 Change in Revenues

The equation has a standard deviation of $4.726 million for Total Compensation. The coefficient values show ROE and EPS respectively have the largest and smallest impacts on Total Compensation. The adjusted r^2 value of 42.7% shows a much stronger relationship overall.

At this point an attempt to simplify the regressions and drill down into what truly are the best determinants of CEO compensation is undertaken. A few separate models are conceived, each with slight differences from one another, in an attempt to tweak the results and see what can be found. One regression is tested using the difference between the two data sets of firm performance measures. An example is Bank of America's Total Compensation being $2,000,000 in 2008 and $5,500,000 in 2012. The regression would then use the difference of the values, which is $3,500,000 (5,500,000 – 2,000,000 = 3,500,000). Another model attempts making Total Compensation and Revenues into one variable since other literature has already proven a significant relationship between the two. This is done by creating a ratio of Total Compensation divided by Revenues to represent compensation per dollar of revenues earned. Finally, it is decided to rerun the previous models but with Salary in place of Total

Compensation. This is done since other published studies have shown there is a significant difference in the relationships of firm performance measures and Salary or Total Compensation

The regression using the difference between data sets is run using the same outliers as previously determined. Table 2-10 (page 62) displays the new data set while Table 2-11 (page 48) below displays the regression results.

Predictor	Coef	SE Coef	T	P
Constant	**-1,364**	**1,995**	**-0.68**	**0.501**
ROE	**9,455**	**19,034**	**0.50**	**0.624**
Net Margin	**-9,918**	**18,565**	**-0.53**	**0.598**
Annual Investor Return	**-1,100**	**6,125**	**-0.18**	**0.859**
EPS	**-676.8**	**751.8**	**-0.90**	**0.377**
Revenues	**0.00023**	**0.00006**	**3.66**	**0.001**

From the p and t stats Revenues are found to be very significant while the other variables are very weak.

The regression equation is:

Total Compensation (in 1000s) = - 1364 + 9455 ROE - 9918 Net Margin

- 1100 Annual Investor Return - 677 EPS

+ 0.000233 Revenues (in 1000s)

The formula has a standard deviation 9,429.95 thousands of dollars for Total Compensation. From the coefficient values of -9,918 for Net Margin and 0.000233 for Revenues it is apparent these two variables have the largest and smallest effects on Total Compensation.

This result shows the model based upon the differences is closer to what other studies see in terms of the Revenue to Total Compensation relationship than the other models this study runs.

The regression using the new ratio of compensation per revenue dollars earned has the outlay shown in Table 2-12 (page 63) and the results shown in Table 2-13 below and also on page 48 in the appendix.

Predictor	**Coef**	**SE Coef**	**T**	**P**
Constant	**0.00146**	**0.00043**	**-0.68**	**0.501**
ROE	**-0.00552**	**0.00231**	**0.50**	**0.624**
Net Margin	**0.00845**	**0.00197**	**-0.53**	**0.598**
Annual Investor Return	**0.00001**	**0.00073**	**-0.18**	**0.859**
EPS	**-0.00012**	**0.00007**	**-0.90**	**0.377**
Revenues	**-0.00000**	**0.00000**	**3.66**	**0.001**
Change in Ratio	**-0.00025**	**0.00030**	**-0.84**	**0.407**

These results are found using the same outliers as before. By looking at the p-stat and t-stat values once again it is determined the variables ROE, Margin, EPS, and Revenues along with the constant are all significant. This lack of relationship to Annual Investor Returns shows an alarming disconnect or lack of relationship between CEO compensation package alignments and investors' goals.

The regression equation is:

Total Comp/Revenue Ratio = 0.00146 - 0.00552 ROE + 0.00846 Net Margin

+ 0.000018 Annual Investor Return - 0.000129 EPS

- 0.000000 Revenues (in 1000s) - 0.000257 Change in Ratio

The equation has a standard deviation of 0.0001 units of the ratio created. Net Margin is found to have the largest impact on the Total Compensation to Revenue ratio. On the other hand, Revenues are found to have the least impact on the ratio. The adjusted r^2 value of 34.3% shows a somewhat weak overall fit but does show the surprising lack of investor returns importance to CEOs and their compensation packages.

When running some of the previous regressions with Salary replacing Total Compensation, the study comes to the conclusion Net Margin is insignificant. Therefore, Net Margin is not a part of any of the modified regressions. The study conducts the regression of Salary and Total Compensation vs. ROE, EPS, Annual Investor Returns, Revenues, and a dummy variable for each determinant. The study also conducts the regression using the difference between the two data sets with Salary and Total Compensation vs. ROE, EPS, Annual Investor Returns, and Revenues.

The results for the regression of Salary and the firm performance measures with dummy variables can be seen in Table 2-14 below and on page 49.

Predictor	Coef	SE Coef	T	P
Constant	**968.4**	**714.1**	**1.36**	**0.181**
ROE	**1,851**	**3,642**	**0.51**	**0.614**
Annual Investor Return	**-95**	**1,434**	**-0.07**	**0.948**
EPS	**-24.8**	**123.6**	**-0.20**	**0.842**
Revenues (in 1000s)	**-0.000002**	**0.000007**	**-0.29**	**0.775**
Change in Compensation	**2,826.10**	**909.5**	**3.11**	**0.003**
Change in ROE	**1,381**	**6,545**	**0.21**	**0.834**
Change in Annual Investor Return	**-1,596**	**1,953**	**-0.82**	**0.418**
Change in EPS	**-233.8**	**191.3**	**-1.22**	**0.228**
Change in Revenues	**26.1**	**14.07**	**1.86**	**0.070**

Looking at the p-stat and t-stat values it is determined there is a significant difference in the Salary amounts as well as in Revenues.

The regression equation is

Salary (in 1000s) = 968 + 1851 ROE - 95 Annual Investor Return - 25 EPS

- 0.000002 Revenues (in 1000s) + 2826 Change in Compensation

+ 1381 Change in ROE - 1596 Change in Annual Investor Return

- 234 Change in EPS + 26.1 Change in Revenues

The formula has a standard deviation of 1,406.88 thousands of dollars for Salary. The largest effect on the equation is caused by the variable representing the difference between the

pre-crisis and post-crisis data sets. The smallest influence in the model is from Revenues. The adjusted r^2 value of 51.9% shows it is more accurate than any other model which has been run by this study.

The results for the regression of Total Compensation and the firm performance measures with dummy variables can be seen in Table 2-15 below as well as on page 50.

Predictor	Coef	SE Coef	T	P
Constant	7,744	3,700	2.09	0.042
ROE	19,486	18,871	1.03	0.307
Annual Investor Return	-8,883	7,429	-1.20	0.238
EPS	-388.1	640.6	-0.61	0.548
Revenues (in 1000s)	0.00001	0.00003	0.45	0.657
Change in Compensation	1,512	4,713	0.32	0.750
Change in ROE	-58,013	33,915	-1.71	0.094
Change in Annual Investor Returns	26,940	10,122	2.66	0.011
Change in EPS	-39.7	991.2	-0.04	0.968
Change in Revenues	294.14	72.88	4.04	0.000

Looking at the p-stat and t-stat values it is determined only the Revenues, ROE, and Annual Investor Return amounts differed significantly, though with no strong relationship to Total Compensation.

The regression equation is:

Total Compensation (in 1000s) = 7744 + 19486 ROE - 8883 Annual Investor Return
- 388 EPS + 0.000016 Revenues (in 1000s)
+ 1512 Change in Compensation - 58013 Change in ROE
+ 26940 Change in Annual Investor Returns
- 40 Change in EPS + 294 Change in Revenues

The equation has a standard deviation of 7,289.79 thousands of dollars in Total Compensation. The largest impact arises from the variable representing the difference in Annual Investor Returns from one data set to another. The smallest impact comes from the difference in EPS from the pre-crisis data set to the post-crisis data set. The adjusted r^2 value of 17.5% shows the equation is not an accurate predictor of Total Compensation.

The results for the regression of the difference between the two data sets with Salary and the firm performance measures can be seen in Table 2-16 below and on page 50 of the appendix.

Predictor	**Coef**	**SE Coef**	**T**	**P**
Constant	**2,842.3**	**386.4**	**7.36**	**0.000**
ROE	**247**	**3,438**	**0.07**	**0.943**
Annual Investor Return	**-1,395**	**1,171**	**-1.19**	**0.245**
EPS	**-137.6**	**147.4**	**-0.93**	**0.360**
Revenues (in 1000s)	**0.00001**	**0.00001**	**0.91**	**0.373**

Looking at the p-stat and t-stat values it is seen no significant relationship exists at all. Not a single test variable is significant and the adjusted r^2 value is 0.0%.

The regression equation is:

$$\text{Salary (in 1000s)} = 2842 + 247\ \text{ROE} - 1395\ \text{Annual Investor Return} - 138\ \text{EPS} + 0.000011\ \text{Revenues (in 1000s)}$$

The formula has a standard deviation of 1,850.21 thousands of dollars in Salary. While Annual Investor Returns have the largest impact in this model, Revenues have the smallest. The adjusted r^2 value of 0.0% shows the equation is not an accurate predictor of Total Compensation.

Chapter 3: Results and Interpretations

After running numerous regressions attempting to discover if there are any models which are more accurate than others when investigating the relationship between CEO compensation and their firms' performances, the study finds there are none which fit better than others. The study concludes of all the models run, the results on Tables 2-14 and 2-15 (page 49-50) and their adjusted r^2 values are the ones most likely to match what is expected to occur by real life investors.

From the results in Chapter 2 it is found throughout the different setups of regressions the variable Net Margin, which in the beginning is considered significant, is actually very insignificant. This can be proven by the p-stat and t-stat values found in the following models:

- Total Compensation vs. Firm Performance Measures with dummies (Table 2-9, page 33) (t-stat = -1.25) (p-stat = 0.219)
- Difference Between Salary Data Sets vs Firm Performance Measures (Table 2-11, page 35) (t-stat = -0.53) (p-stat = 0.598)
- Total Compensation vs Firm Performance Measures without dummies (Table 2-7, page 32) (t-stat = -0.96) (p-stat = 0.344)

From these results and others present in the appendix, CEO compensation is definitively not determined in any way, shape, or form by the Net Margin of a firm. Once the study concludes this variable is insignificant it removes Net Margin from the final statistical tests to avoid any correlation error which might occur in the r^2 and adjusted-r^2 values which the study uses as the final determinant for the existence of a relationship.

In Tables 2-14 and 2-15 (page 49-50) the statistical results with the removal of Net Margin can be seen. The effect is a significant increase in the strength of relationship between the firm performance measures and salary while the relationship with Total Compensation weakens slightly.

I. Revenues

The effect Revenues has on the models represented by Tables 2-14 and 2-15 (page 49-50) is negligible. Not only are the values 0.00001 and -0.000002 respectively, but the t-stat and p-stat values show they are insignificant as well. Although the study does not confirm the findings from other studies in terms of Revenues' significance with the t-stat and p-stat values, there is a significant difference discovered in the relationship between compensation and revenues from 2007 to 2011. The study expects to see such a result as numerous other studies on such similar topics conclude and affirm many times over Revenues are most likely the strongest determinant of any CEO's compensation. This is noted in Chapter 1 in the Literature Review with an article from Marin in 2010. This relationship is very strong since revenues are typically a very good indicator of firm size which logically has a significant effect on how much a firm's CEO earns. Since a CEO's job is to oversee an entire corporation, it takes more time and effort to run a larger company. Therefore, CEOs of larger firms deserve higher compensation amounts.

II. Difference between Data Sets

The most significant variable identified is the difference between the two data sets. The study finds there is a significant difference in Salary amounts from 2008 to 2012. In the model using Salary (Table 2-14, page 49) as the measurement of compensation this difference has the largest effect or coefficient on the amount of Salary as well. This shows there is a significant

difference in Salary amounts before and after the economic crisis. This finding is important for the study since the primary hypothesis is to determine if the 2008 financial crisis had an effect on this exact measure. This confirms the assumption that since the economic crisis is considered to have been caused by the financial industry the responsible firms' CEOs had their compensation models changed or reduced.

III. Annual Investor Returns

The results for Annual Investor Returns are mixed. In terms of the relationship between returns and Salary the correlation is poor. From the t-stat = -0.07 and p-stat = 0.948 from Table 2-14 (page 49) it is seen there is almost no relationship at all. However, when the study looks at the same relationship using Total Compensation instead of Salary, it becomes much stronger, though still technically speaking statistically insignificant. From the p-stat = 0.238 and t-stat = -1.20 from Table 2-15 (page 50) the study concludes this difference arises from the differences between Salary and Total Compensation. Total Compensation includes Bonuses and Other Compensation which Salary excludes. Bonuses, since Other Compensation is very small in almost every case, are therefore very significantly tied to the previous year's Annual Investor Returns. These findings are significant since, according to most companies and their description for CEO compensation packages, one of the highest priorities is aligning CEO goals with shareholder goals. This is logical and expected to be seen as other studies have published similar findings.

IV. Return on Equity

The results for Return on Equity (ROE) for the most part are similar when tested in relationship to either Salary or Total Compensation. From the t-stat = 0.51 and 1.03 and p-stat =

0.614 and 0.307 for Salary and Total Compensation respectively (Table 2-14, page 49)(Table 2-15, page 50), it is seen there is no significant relationship, although it is more noticeable than Net Margin. This variable is included in the study for similar reasons to which Annual Investor Returns are included. Where Annual Investor Return is deemed an appropriate measure to determine if a CEO's performance is good or bad for investors, ROE is deemed an appropriate measure to determine a CEO's performance relative to returns on intra-firm projects. The only significant discovery during the testing is the relationship between ROE and Total Compensation changes from 2008 to 2012. However, this change does not take place in relationship to Salary.

V. Earnings per Share

The results for Earnings per Share (EPS) are found to be statistically insignificant as seen from the values of t-stat = -0.20 and -0.61 and p-stat = 0.842 and 0.548 from Tables 2-14 and 2-15 (page 49-50) for both Salary and Total Compensation respectively. This result is somewhat surprising considering what an important measure EPS is of a company in the field of Finance. EPS is included in the study due to its trait of being a measure of overall firm profitability as well as a measure which is important in many investor valuation models. Having such a position of importance the study believes EPS is an important input or determinant in a CEO compensation package formula or model.

VI. Summary

Overall, although the study finds individual variables either significant or insignificant, the ending adjusted-r^2 values show just how well the entire models fit. For the regression model using Salary (Table 2-14) (page 49) the results find an adjusted-r^2 value of 51.9% while for Total Compensation the results (Table 2-15) (page 50) come to a value of 17.5%. This shows the

model using the variables of ROE, EPS, Annual Investor Returns, and Revenues as determinants for CEO compensation is a much better predictor of base Salary than of Total Compensation. As previously mentioned, the primary difference in the relationships is Total Compensation includes both the Bonuses and Other categories of compensation while Salary ignores them. Bonuses seem to be much more volatile year-to-year and tied much more strongly to stock performance than Salary, which is tied more strongly to firm size per the Revenues variable than anything else discovered.

Chapter 4: Summary and Conclusions

From the statistical tests run the study concludes that of the various measurements, the regression models are much better predictors of Salary amounts than of Total Compensation. The study also discovers an alarming disconnect between Annual Investor Returns, the variable used to represent investor interests, and its ability to accurately predict compensation. Although still not a significant predictor in either model, the large difference in the statistical relationship found between Annual Investor Returns and Salary or Total Compensation shows Bonuses, the input ignored in the measurement of Salary, is much more strongly tied to investor goals.

The results from models testing the difference in variables from one data set to another in terms of total amounts see significant changes in Salary as well as the relationship between Bonuses and Annual Investor Returns. Salaries grow by four times, much larger than the rate the economy grows in the equivalent timeframe. The amount of input Annual Investor Returns has is much stronger when related to a compensation method which includes bonuses. This change suggests stockholders in the time of crisis might have begun rewarding CEOs in larger amounts for better stock returns.

In future attempts to determine CEO compensation for any given year the study suggests including the variable Revenue. Also, the study recommends including Annual Investor Returns if 'Bonuses' are included within the compensation measurement. The models also suggest not including Net Margin while investigating further EPS and ROE as determinants of compensation as the study finds them to be statistically insignificant during the time horizon of study.

The overall inability to accurately predict a CEO's compensation based upon the majority of uniformly measured statistics among companies is worrying. How such a large amount of

cash and value is paid to one person, the CEO, is a decision the public feels can and should be done in a publicly uniform manner. This would cause less controversy when companies begin doing poorly and CEO compensation amounts begin to come into question. Shareholders deserve to know if a company which they invest in is responsibly dispersing funds not only to its shareholders and employees but also the officers of the company.

Works Cited

(n.d.). Retrieved April 2012, from Wikinvest.com: wikinvest.com

(n.d.). Retrieved April 2012, from Yahoo.com: yahoo.com

(n.d.). Retrieved April 2012, from USAtoday.com: usatoday.com

(n.d.). Retrieved April 2012, from Salary.com: salary.com

Conyon, M. J., & He, L. (2008, August 31). *Executive Compensation and CEO Equity Incentives in China's Listed Firms*. Retrieved February 18, 2012, from dx.doi.org: http://dx.doi.org/10.2139/ssrn.1261911

Cooper, M. J., Gulen, H., & Rau, P. R. (2010, July). *Performance for Pay? The Relation Between CEO Incentive Compensation and Future Stock Price Performance*. Retrieved February 18, 2012, from poole.ncsu.edu: http://poole.ncsu.edu/documents/CEOPerformanceforPay_0710.pdf

Dikolli, S., Hofmann, C., & Pfeiffer, T. (2012, January 21). *Accounting for Net Performance in Managerial Compensation Contracts*. Retrieved February 18, 2012, from business.uts.edu: http://www.business.uts.edu.au/accounting/pdfs/conf12dikolli.pdf

Duru, A. I., & Iyengar, R. J. (2001). *The Relevance of Firms' Accounting and Marketing Performance for CEO Compensation.* Retrieved February 18, 2012, from Journal of Applied Business Research: http://journals.cluteonline.com/index.php/JABR/article/view/2095/2284

Luo, Y., & Jackson, D. (2011, July 23). *Executive Compensation, Ownership Structure and Firm Performance in Chinese Financial Corporations*. Retrieved February 18, 2012, from dx.doi.org: http://dx.doi.org/10.2139/ssrn.1893554

Marin, M. (2010, May). *CEO Compensation and Company Performance: A Case Study of the U.S. Automotive Sector*. Retrieved February 28, 2012, from Proquest Dissertations and Theses: http://search.proquest.com/docview/518646566

Appendix

Section 1: Outlier Graphs

Table 2-A

2007 Net Margin

Prologis is the company outside the curve; it is slight however with a value of 0.437.

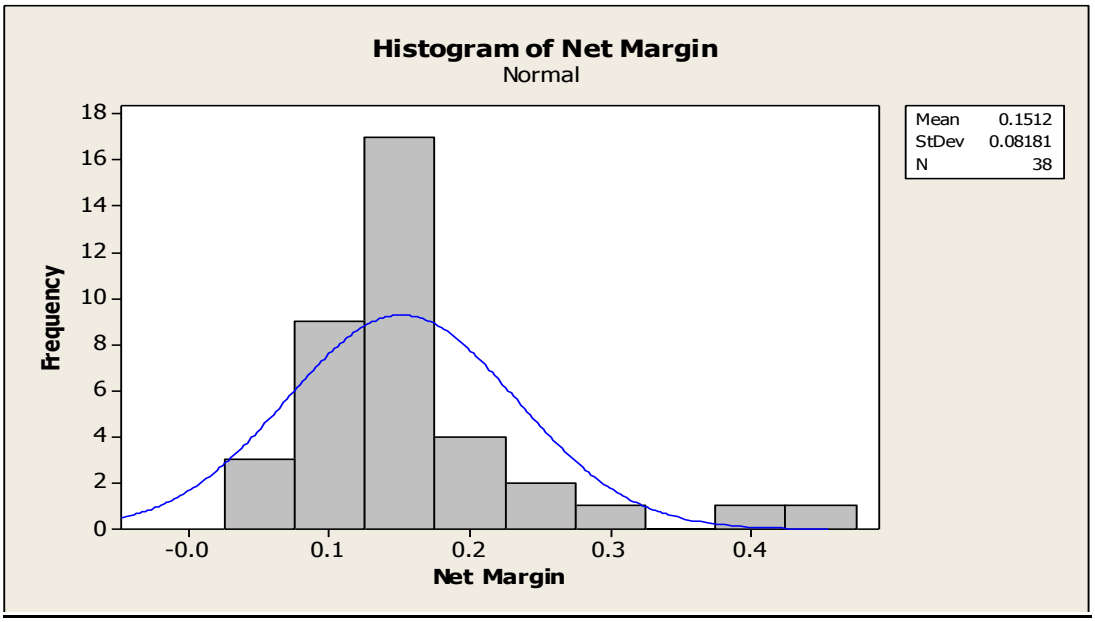


Table 2-B

2007 EPS

Goldman Sachs is the outlier here with a value of $29.20.

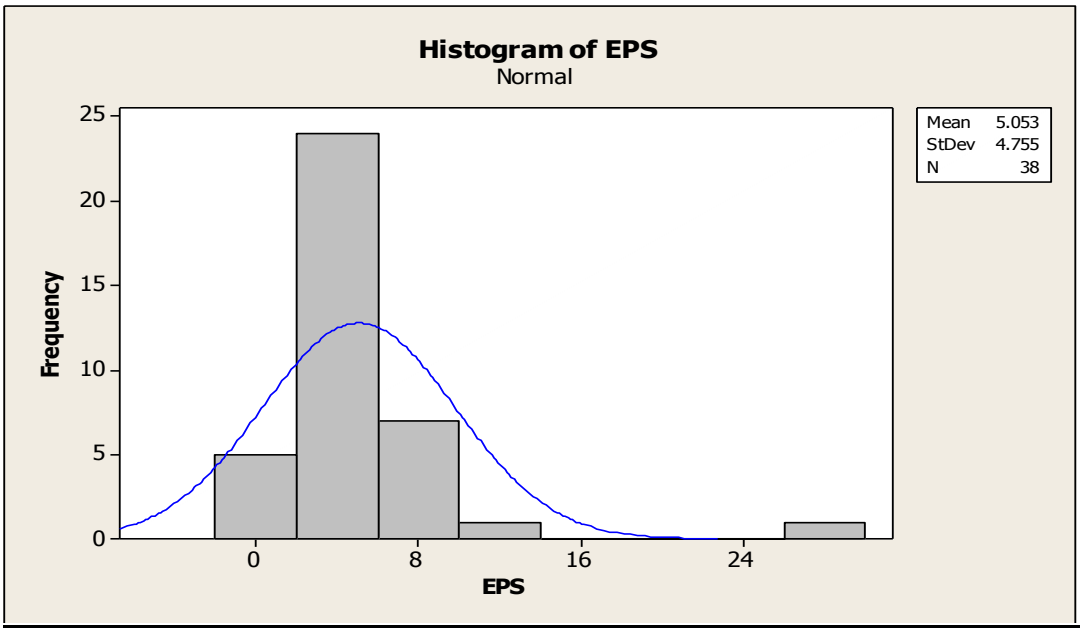


Table 2-C

2012 Compensation

Here we can see one outlier, Vornado Realty Trust, with a value of $64,400,000.

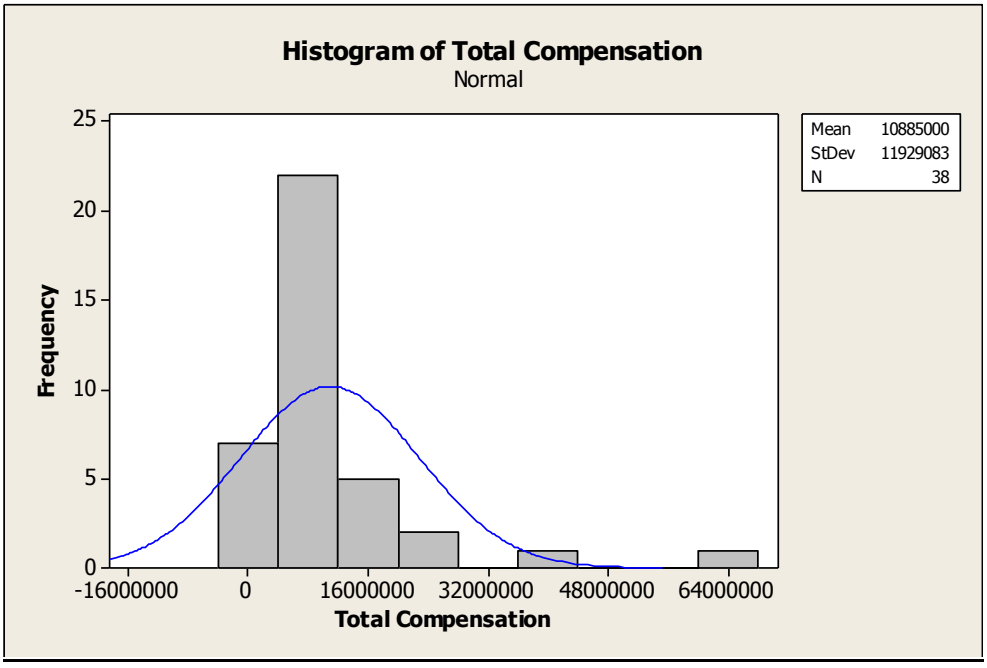


Table 2-D

2011 ROE

Both Franklin Resources and T. Rowe Price are outside the curve with values of .46 and .45 respectively.

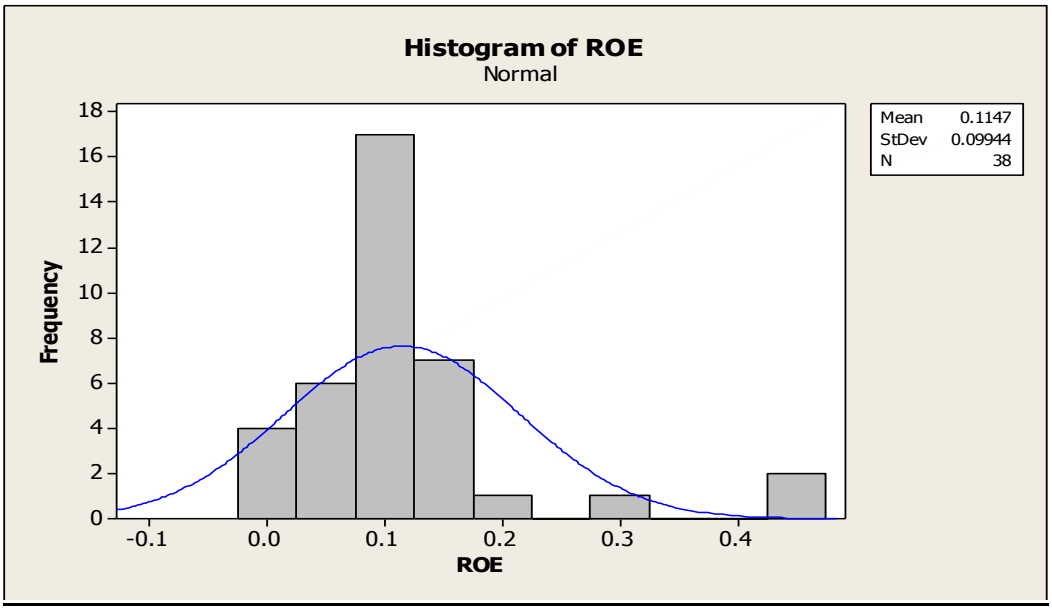


Table 2-E

2011 Net Margin

CME is outside the curve with a value of 0.57.

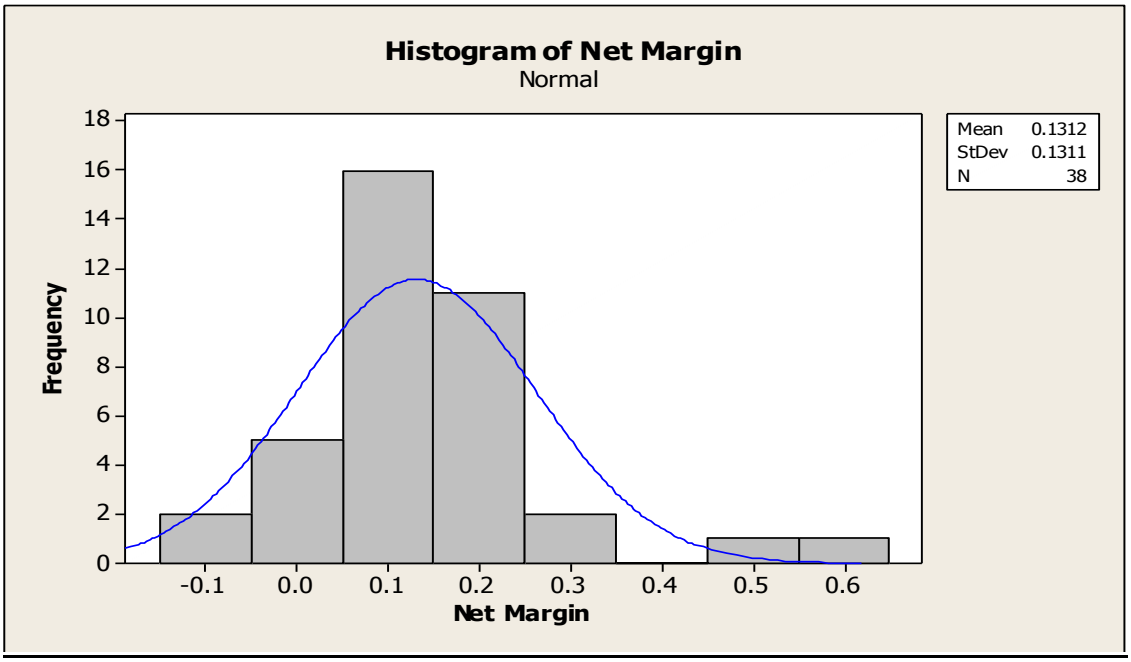


Table 2-F

2011 EPS

CME is again outside the curve with a value of $27.28.

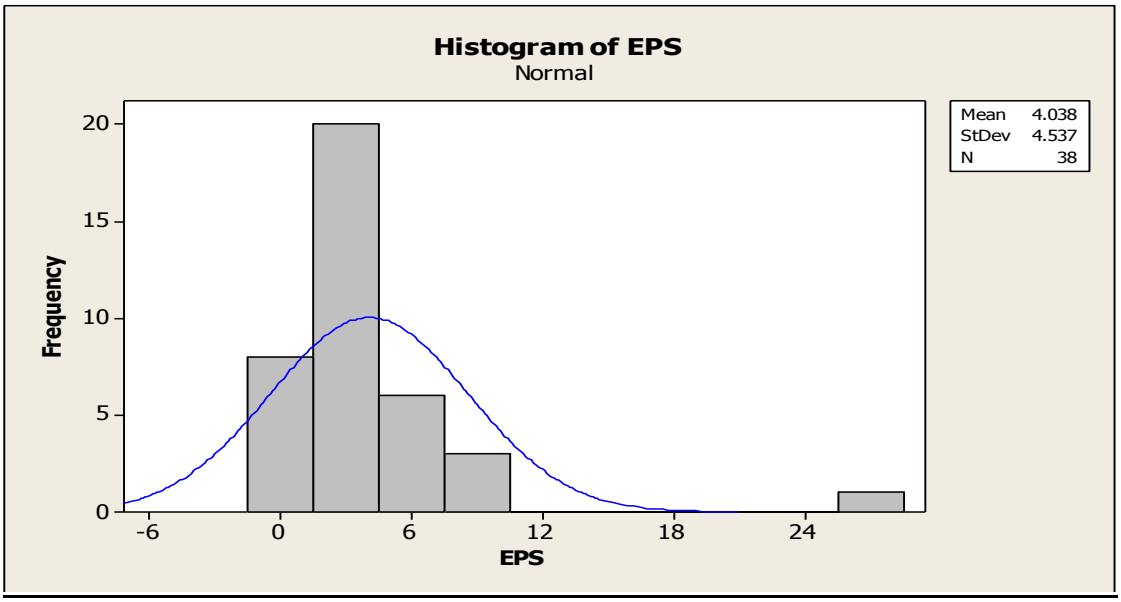
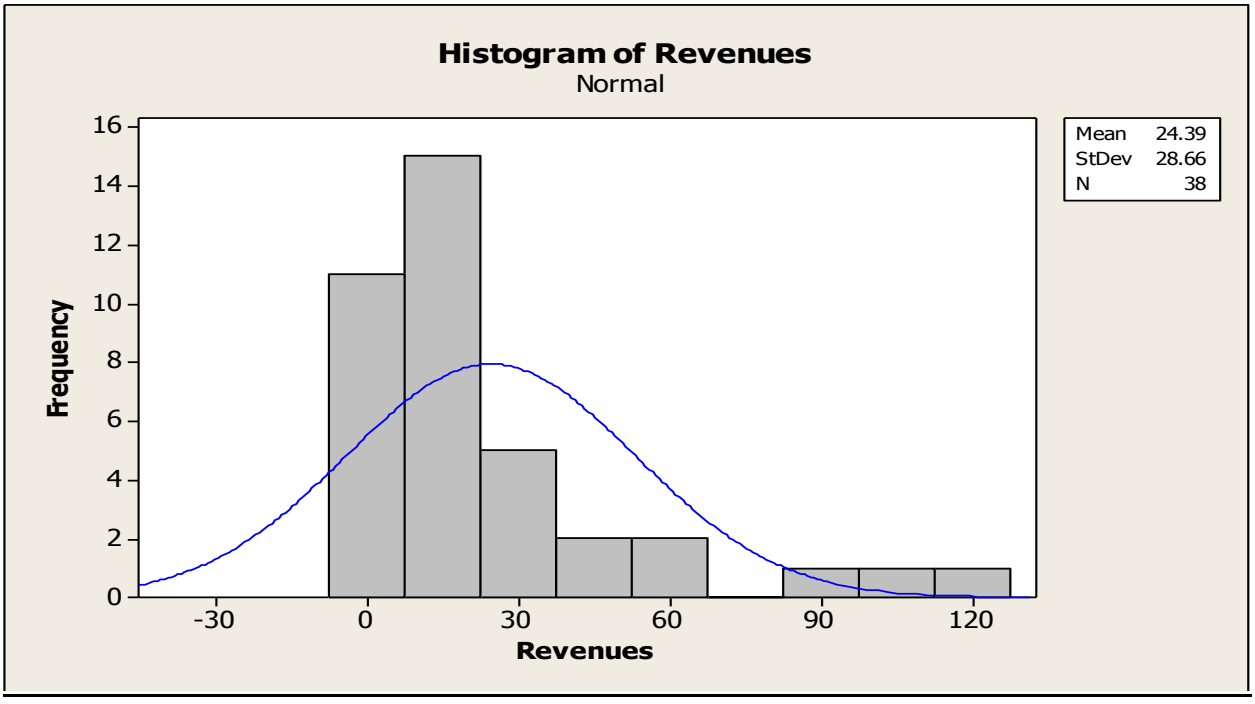


Table 2-G

2011 Revenues

Bank of America is outside the curve here with a value of 115.37.



Section 2: Regression Results

Table 2-5

Predictor	Coef	SE Coef	T	P
Constant	11166544	5718583	1.95	0.055
ROE	7886119	28216655	0.28	0.781
Net Margin	-17843925	26627182	-0.67	0.505
Annual Investor Return	-4123386	11619248	-0.35	0.724
EPS	694486	601325	1.15	0.252
Revenues	78555	84425	0.93	0.355

Table 2-6

Predictor	Coef	SE Coef	T	P
Constant	9,941,680	9,035,879	1.10	0.276
ROE	5,672,133	46,292,057	0.12	0.903
Net Margin	-5,021,656	44,015,543	-0.11	0.910
Annual Investor Return	-13,278,842	15,534,633	-0.85	0.396
EPS	755,285	1,565,878	0.48	0.632
Revenues	75,695	113,865	0.66	0.509

Table 2-7

Predictor	Coef	SE Coef	T	P
Constant	2,660,769	2,094,427	1.27	0.209
ROE	44,648,038	10,766,015	4.15	0.000
Net Margin	-9,759,132	10,215,722	-0.96	0.344
Annual Investor Return	4,377,368	3,601,568	1.22	0.230
EPS	274,321	366,077	0.75	0.457
Revenues	-28,131	26,432	-1.06	0.292

Table 2-9

Predictor	Coef	SE Coef	T	P
Constant	2,660,769	2,094,427	1.27	0.209
ROE	44,648,038	10,766,015	4.15	0.000
Net Margin	-9,759,132	10,215,722	-0.96	0.344
Annual Investor Return	4,377,368	3,601,568	1.22	0.230
EPS	274,321	366,077	0.75	0.457
Revenues	-28,131	26,432	-1.06	0.292
Change in Compensation	3,840,636	4,610,505	0.83	0.409
Change in ROE	-54,555,433	22,128,943	-2.47	0.017
Change in Net Margin	-30,016,180	24,086,869	-1.25	0.219
Change in Annual Investor Return	-4,007,479	6,839,951	-0.59	0.561
Change in EPS	385,661	704,609	0.55	0.587
Change in Revenues	46,412	52,371	0.89	0.380

Table 2-11

Predictor	Coef	SE Coef	T	P
Constant	-1,364	1,995	-0.68	0.501
ROE	9,455	19,034	0.50	0.624
Net Margin	-9,918	18,565	-0.53	0.598
Annual Investor Return	-1,100	6,125	-0.18	0.859
EPS	-676.8	751.8	-0.90	0.377
Revenues	0.00023	0.00006	3.66	0.001

Table 2-13

Predictor	Coef	SE Coef	T	P
Constant	0.00146	0.00043	-0.68	0.501
ROE	-0.00552	0.00231	0.50	0.624
Net Margin	0.00845	0.00197	-0.53	0.598
Annual Investor Return	0.00001	0.00073	-0.18	0.859
EPS	-0.00012	0.00007	-0.90	0.377
Revenues	-0.00000	0.00000	3.66	0.001
Change in Compensation	-0.00025	0.00030	-0.84	0.407

Table 2-14

Predictor	Coef	SE Coef	T	P
Constant	968.4	714.1	1.36	0.181
ROE	1,851	3,642	0.51	0.614
Annual Investor Return	-95	1,434	-0.07	0.948
EPS	-24.8	123.6	-0.20	0.842
Revenues (in 1000s)	-0.000002	0.000007	-0.29	0.775
Change in Compensation	2,826.10	909.5	3.11	0.003
Change in ROE	1,381	6,545	0.21	0.834
Change in Annual Investor Returns	-1,596	1,953	-0.82	0.418
Change in EPS	-233.8	191.3	-1.22	0.228
Change in Revenues	26.1	14.07	1.86	0.070

Table 2-15

Predictor	Coef	SE Coef	T	P
Constant	7,744	3,700	2.09	0.042
ROE	19,486	18,871	1.03	0.307
Annual Investor Return	-8,883	7,429	-1.20	0.238
EPS	-388.1	640.6	-0.61	0.548
Revenues (in 1000s)	0.00001	0.00003	0.45	0.657
Change in Compensation	1,512	4,713	0.32	0.750
Change in ROE	-58,013	33,915	-1.71	0.094
Change in Annual Investor Returns	26,940	10,122	2.66	0.011
Change in EPS	-39.7	991.2	-0.04	0.968
Change in Revenues	294.14	72.88	4.04	0.000

Table 2-16

Predictor	Coef	SE Coef	T	P
Constant	2,842.3	386.4	7.36	0.000
ROE	247	3,438	0.07	0.943
Annual Investor Return	-1,395	1,171	-1.19	0.245
EPS	-137.6	147.4	-0.93	0.360
Revenues (in 1000s)	0.00001	0.00001	0.91	0.373

Section 3: Raw Data Statistics

Table 2-17

	Minimum	Maximum	Mean	Standard Deviation	Median
Total Compensation	**$2.321 million**	**$170.699 million**	**$18.91 million**	**$27.87 million**	**$11.44 million**
ROE	**3%**	**37%**	**15.31%**	**$7.69%**	**14.00%**
Net Margin	**2%**	**44%**	**15.12%**	**8.18%**	**13.00%**
Annual Investor Returns	**-45%**	**41%**	**-2.05%**	**20.93%**	**-8.00%**
EPS	**$0.72**	**$29.20**	**$5.05**	**$4.75**	**$3.46**
Revenues	**$1.76 million**	**$159.23 million**	**$27.37 million**	**$33.03 million**	**$14.15 million**

Table 2-18

	Minimum	Maximum	Mean	Standard Deviation	Median
Total Compensation	**$.000001 million (1 dollar)**	**$24.559 million**	**$113.152 million**	**$56.57 million**	**$10.02 million**
ROE	**-2%**	**46%**	**11.47%**	**9.94%**	**10.00%**
Net Margin	**-15%**	**57%**	**13.12%**	**13.11%**	**12.00%**
Annual Investor Returns	**-60%**	**451%**	**-13.49%**	**21.87%**	**-12.00%**
EPS	**-$0.53**	**$27.28**	**$4.03**	**$4.53**	**$3.07**
Revenues	**$1.76 million**	**$115.37 million**	**$24.39 million**	**$28.66 million**	**$12.56 million**

Table 2-19

	Minimum	Maximum	Mean	Standard Deviation	Median
Total Compensation	**$8.293 million**	**$27.327 million**	**$9.64 million**	**$7.53 million**	**$8.29 million**
Salary	**$0.994 million**	**$1.338 million**	**$0.93 million**	**$0.28 million**	**$0.99 million**

Table 2-20

	Minimum	Maximum	Mean	Standard Deviation	Median
Total Compensation	**$0.160 million**	**$41.990 million**	**$9.12 million**	**$8.10 million**	**$6.54 million**
Salary	**$0**	**$8.975 million**	**$3.89 million**	**$1.93 million**	**$3.79 million**

Section 4: Raw Data Sets

Table 2-1

Company Name	Total Compensation	Salary	ROE	Net Margin	Annual Investor Return	EPS	Revenues
ACE	$14,831,083	$1,200,000	17%	18%	4%	$7.82	$14.15
Aflac	$11,963,440	$1,289,200	19%	11%	38%	$3.44	$15.39
Allstate	$10,695,367	$957,596	21%	13%	-18%	$8.23	$36.75
American Express	$50,126,585	$1,238,461	37%	13%	-13%	$3.46	$31.56
American International Group	$13,930,361	$1,000,000	6%	6%	-18%	$2.45	$110.06
Ameriprise Financial	$23,053,075	$850,000	10%	9%	2%	$3.57	$8.65
Aon	$10,300,260	$1,500,000					
BB&T	$5,938,268	$965,250	14%	16%	-27%	$3.18	$10.67
Bank of America	$20,404,009	$1,500,000	11%	13%	-19%	$3.33	$119.19
CME Group	$3,589,940	$850,000	10%	38%	35%	$12.36	$1.76
Capital One Financial	$170,699,585	-	6%	14%	-38%	$4.21	$19.13
Charles Schwab	$8,162,865	$900,000					
Chubb	$12,938,957	$1,275,000	20%	20%	5%	$7.49	$14.11
Citigroup	$3,164,320	$250,000	3%	2%	-45%	$0.72	$159.23
Fifth Third Bancorp	$10,030,801	$866,534	11%	13%	-35%	$2.02	$8.49
Franklin Resources	$12,691,338	$780,132	25%	27%	21%	$7.22	$6.63
Goldman Sachs Group	$53,965,418	$600,000	29%	13%	17%	$29.20	$87.97
Hartford Financial Services Group	$10,481,574	$1,150,000	16%	11%	-5%	$9.40	$25.92
JPMorgan Chase	$28,856,330	$1,000,000	13%	13%	-7%	$4.56	$116.35

Lincoln National	$16,345,139	$929,231	10%	13%	-11%	$4.60	$10.59
Loews	$4,195,024	$1,275,000	15%	14%	22%	$4.70	$18.38
Marsh & McLennan Companies	$6,033,862	$1,000,000	36%	5%	-11%	$4.76	$11.35
MetLife	$14,264,432	$1,000,000	12%	8%	6%	$5.73	$53.01
Morgan Stanley	$41,399,010	$800,000	9%	3%	-15%	$2.97	$85.33
NYSE Euronext	$7,606,244	$548,077	12%	16%	-9%	$2.43	$4.16
Northern Trust	$14,364,657	$1,087,500	17%	14%	28%	$3.29	$5.40
Principal Financial Group	$8,635,909	$1,000,000	11%	8%	19%	$3.19	$10.91
ProLogis	$9,855,870	$780,000	15%	44%	7%	$4.07	$2.26
Progressive	$9,184,920	$750,000	20%	8%	-13%	$1.74	$14.69
Prudential Financial	$18,025,198	$1,000,000	16%	11%	10%	$8.24	$34.65
Public Storage	$2,321,960	$865,150	3%	24%	-23%	$1.30	$1.89
Regions Financial	$17,339,272	$995,000	6%	13%	-34%	$1.80	$10.93
Simon Property Group	$3,608,462	$882,308	12%	14%	-11%	$1.96	$3.78
State Street	$17,097,780	$1,000,000	14%	11%	22%	$3.26	$11.82
SunTrust Banks	$4,500,194	$1,000,000	9%	12%	-23%	$4.60	$13.46
T. Rowe Price Group	$7,928,113	$350,000	26%	29%	41%	$2.53	$2.31
The Bank of New York Mellon	$20,515,810	$975,000	10%	15%	19%	$1.78	$14.78
Travelers Companies	$18,715,604	$1,000,000	18%	18%	2%	$8.44	$26.02
US Bancorp	$5,864,202	$850,032	20%	21%	-8%	$2.47	$20.31
Vornado Realty Trust	$5,476,159	$1,000,000	9%	16%	-26%	$3.78	$3.61
Wells Fargo	$11,447,960	$749,615	17%	15%	-12%	$2.44	5$3.59

Table 2-2

Company Name	Total Compensation	Salary	ROE	Net Margin	Annual Investor Return	EPS	Revenues
ACE Limited	$15,620,587.00	$5,400,000.00	5%	-1%	13%	$3.60	$ 23.23
AFLAC Inc	$15,872,272.00	$5,426,761.00	16%	9%	-22%	$4.21	$ 22.17
Allstate Corp	$8,620,261.00	$2,184,942.00	4%	2%	-12%	$1.58	$ 32.65
American Express Co	$16,252,851.00	$3,942,308.00	28%	15%	11%	$4.20	$ 32.28
American Intl Group Inc	$8,405,802.00	$3,000,000.00	19%	26%	-46%	$8.95	$ 64.24
Ameriprise Financial	$16,792,686.00	$10,378,000.0	10%	9%	-13%	$4.40	$10.35
Aon Corporation	$20,783,301.00	$3,450,000.00	12%	9%	2%	$3.09	$11.29
BB&T Corporation	$8,287,147.00	$2,076,094.00	8%	13%	-3%	$1.85	$10.00
Bank of America Corp	$1,220,234.00	$950,000.00	1%	-15%	-60%	$0.13	$115.37
CME Group Inc.	$6,881,922.00	$3,295,737.00	9%	57%	-23%	$27.28	$ 3.28
Capital One Financial	$14,850,675.00		11%	18%	-1%	$5.61	$18.55
Charles Schwab	$10,018,919.00	$3,262,500.00					
Chubb Corp.	$13,831,409.00	$4,912,500.00	11%	12%	18%	$6.21	$13.59
Citigroup Inc.	$1.00	$1.00	7%	11%	451%	$3.86	$102.51
Fifth Third Bancorp	$4,758,013.00	$3,144,823.00	10%	19%	-12%	$1.41	$ 6.68
Franklin Resources	$6,728,758.00	$3,410,629.00	46%	27%	-12%	$8.81	$ 7.07
Goldman Sachs Group	$14,114,080.00	$6,000,000.00	15%	9%	-46%	$8.98	$36.79
Hartford Financial Svc.Gp.	$10,505,553.00	$2,855,750.00	3%	2%	-38%	$1.31	$21.87
JPMorgan Chase & Co.	$20,776,324.00	$6,000,000.00	11%	17%	-21%	$4.97	$111.03
Lincoln National	$7,166,988.00	$3,248,888.00	2%	3%	-30%	$1.04	$10.64
Loews Corp.	$5,105,353.00	$3,700,000.00	6%	12%	-3%	$4.27	$14.13
Marsh & McLennan	$14,038,187.00	$5,650,000.00	16%	9%	18%	$1.81	$11.53
MetLife Inc.	$13,867,854.00	$5,500,000.00	10%	8%	-29%	$5.17	$65.38
Morgan Stanley	$14,854,049.00	$4,680,000.00	14%	10%	-45%	$2.37	$39.91

NYSE Euronext	$7,058,040.00	$3,375,000.00	9%	14%	-10%	$2.40	$ 4.55
Northern Trust Corp.	$9,453,179.00	$2,900,000.00	9%	14%	-27%	$2.50	$4.17
Principal Financial Group	$6,046,944.00	$2,328,984.00	14%	8%	-24%	$2.37	$8.71
ProLogis	$6,203,434.00	$3,000,000.00	-2%	-14%	-7%	$(0.53)	$1.76
Progressive Corp.	$9,605,558.00	$2,015,625.00	8%	7%	-1%	$0.84	$7.99
Prudential Financial	$16,186,247.00	$7,575,722.00	10%	8%	-13%	$7.24	$40.38
Public Storage	$2,009,800.00	$2,000,000.00	9%	46%	35%	$4.87	$1.81
Regions Financial Corp.	$3,306,928.00	$837,500.00	1%	0%	-39%	$0.15	$6.40
Simon Property Group Inc	$24,559,899.00	$5,000,000.00	16%	22%	32%	$2.55	$3.42
State Street Corp.	$11,252,603.00	$4,961,058.00	10%	19%	-13%	$3.94	$10.29
SunTrust Banks	$5,816,671.00	$1,077,300.00	3%	8%	-40%	$1.35	$9.60
T. Rowe Price Group	$7,136,137.00	$5,350,000.00	45%	25%	-10%	$3.05	$3.43
The Bank of New York Mellon Corp.	$19,379,257.00	$6,610,000.00	8%	16%	-33%	$2.14	$16.08
The Travelers Companies Inc.	$19,800,171.00	$7,250,000.00	6%	6%	8%	$3.63	$25.45
U.S. Bancorp	$16,104,276.00	$4,090,162.00	15%	23%	1%	$2.56	$21.40
Vornado Realty Trust	$9,940,955.00	$1,005,700.00	9%	18%	-5%	$3.21	$3.22
Wells Fargo	$17,568,387.00	$6,539,847.00	12%	18%	-11%	$3.01	$87.60

Table 2-3

Company Name	Total Compensation	2008 Salary
AFLAC Inc	9726895	1338200
Allstate Corp	8343930	1040769
American Express Co	27327318	1250000
American Intl Group Inc	460478	0
Ameriprise Financial	1386000	850000
BB&T Corporation	4143218	993675
Capital One Financial	68344	0
Chubb Corp.	16969472	1275000
Fifth Third Bancorp	3336063	899995
Hartford Financial Svc.Gp.	4470496	1150000
JPMorgan Chase & Co.	1000000	1000000
Lincoln National	7809349	1000000
Loews Corp.	6928757	1100000
Marsh & McLennan	24962204	927083
MetLife Inc.	22477471	1000000
Morgan Stanley	1908522	800000
NYSE Euronext	9175727	1000000
Northern Trust Corp.	8379651	856250
Principal Financial Group	4163906	737475
Progressive Corp.	9314597	778846
Prudential Financial	14018355	970769
Public Storage	16961743	952543
Regions Financial Corp.	3976796	995000
Simon Property Group Inc	3440952	1000000
State Street Corp.	24517276	1000000
SunTrust Banks	8091887	1077300
The Bank of New York Mellon Corp.	14183633	993750
The Travelers Companies Inc.	14498858	1000000
U.S. Bancorp	8242592	900034
Wells Fargo	9041087	878920

Table 2-4

Company Name	Total Compensation	2012 Salary
AFLAC Inc	17130000	5039049
Allstate Corp	4140000	3352800
American Express Co	10920000	4000000
American Intl Group Inc	7020000	3000000
Ameriprise Financial	6440000	8975000
BB&T Corporation	4280000	3555000
Capital One Financial	160000	0
Chubb Corp.	16840000	4425000
Fifth Third Bancorp	4070000	2514988
Hartford Financial Svc.Gp.	4710000	1100000
JPMorgan Chase & Co.	41990000	5916667
Lincoln National	5040000	5262231
Loews Corp.	3800000	3950000
Marsh & McLennan	7040000	5650000
MetLife Inc.	2690000	3833334
Morgan Stanley	10390000	3516011
NYSE Euronext	4910000	3750000
Northern Trust Corp.	17680000	2556250
Principal Financial Group	4720000	2178923
Progressive Corp.	10450000	1987500
Prudential Financial	11130000	7798054
Public Storage	10450000	2750000
Regions Financial Corp.	3400000	850000
Simon Property Group Inc	6510000	5211538
State Street Corp.	9210000	3608000
SunTrust Banks	2830000	1501444
The Bank of New York Mellon Corp.	5770000	4866667
The Travelers Companies Inc.	25480000	5500000
U.S. Bancorp	6580000	4175037
Wells Fargo	7930000	5900000

Section 5: Regression Outlays

Table 2-8

Company Name	Total Compensation	ROE	Net Margin	Annual Investor Return	EPS	Revenues	2008/2012	ROE/Year	Net Margin/Year	Annual Investor Return/Year	EPS/Year	Revenues/Year
Aflac	9726895	0.191	0.106	0.38	3.44	15.39	0	0	0	0	0	0
Allstate	8343930	0.212	0.126	-0.18	8.23	36.75	0	0	0	0	0	0
American Express	27327318	0.373	0.128	-0.13	3.46	31.56	0	0	0	0	0	0
American International Group	460478	0.063	0.056	-0.18	2.45	110.06	0	0	0	0	0	0
Ameriprise Financial	1386000	0.103	0.094	0.02	3.57	8.65	0	0	0	0	0	0
BB&T	4143218	0.142	0.163	-0.27	3.18	10.67	0	0	0	0	0	0
Capital One Financial	68344	0.063	0.135	-0.38	4.21	19.13	0	0	0	0	0	0
Chubb	16969472	0.198	0.199	0.05	7.49	14.11	0	0	0	0	0	0
Fifth Third Bancorp	3336063	0.112	0.127	-0.35	2.02	8.49	0	0	0	0	0	0
Hartford Financial Services Group	4470496	0.155	0.114	-0.05	9.4	25.92	0	0	0	0	0	0
JPMorgan Chase	1000000	0.129	0.132	-0.07	4.56	116.35	0	0	0	0	0	0
Lincoln National	7809349	0.102	0.125	-0.11	4.6	10.59	0	0	0	0	0	0
Loews	6928757	0.146	0.135	0.22	4.7	18.38	0	0	0	0	0	0
Marsh & McLennan Companies	24962204	0.363	0.047	-0.11	4.76	11.35	0	0	0	0	0	0
MetLife	22477471	0.121	0.081	0.06	5.73	53.01	0	0	0	0	0	0
Morgan Stanley	1908522	0.094	0.03	-0.15	2.97	85.33	0	0	0	0	0	0
NYSE Euronext	9175727	0.116	0.155	-0.09	2.43	4.16	0	0	0	0	0	0
Northern Trust	8379651	0.172	0.135	0.28	3.29	5.4	0	0	0	0	0	0
Principal Financial Group	4163906	0.108	0.077	0.19	3.19	10.91	0	0	0	0	0	0
Progressive	9314597	0.201	0.081	-0.13	1.74	14.69	0	0	0	0	0	0
Prudential Financial	14018355	0.16	0.106	0.1	8.24	34.65	0	0	0	0	0	0
Public Storage	16961743	0.026	0.242	-0.23	1.3	1.89	0	0	0	0	0	0
Regions Financial	3976796	0.062	0.127	-0.34	1.8	10.93	0	0	0	0	0	0
Simon Property Group	3440952	0.116	0.137	-0.11	1.96	3.78	0	0	0	0	0	0
State Street	24517276	0.136	0.107	0.22	3.26	11.82	0	0	0	0	0	0
SunTrust Banks	8091887	0.0898	0.121	-0.23	4.6	13.46	0	0	0	0	0	0
The Bank of New York Mellon	14183633	0.099	0.151	0.19	1.78	14.78	0	0	0	0	0	0
Travelers Companies	14498858	0.178	0.177	0.02	8.44	26.02	0	0	0	0	0	0

US Bancorp	8242592	0.202	0.213	-0.08	2.47	20.31	0	0	0	0	0	0
Wells Fargo	9041087	0.172	0.15	-0.12	2.44	53.59	0	0	0	0	0	0
AFLAC Inc	5039049	0.16	0.08675	-0.21	4.21	22.17	1	0.16	0.08675	-0.21	4.21	22.17
Allstate Corp	3352800	0.042	0.02375	-0.12	1.58	32.65	1	0.042	0.02375	-0.12	1.58	32.65
American Express Co	4000000	0.282	0.15175	0.10	4.2	32.28	1	0.282	0.15175	0.10	4.2	32.28
American Intl Group Inc	3000000	0.187	0.264	-0.46	8.95	64.24	1	0.187	0.264	-0.46	8.95	64.24
Ameriprise Financial	8975000	0.102	0.094	-0.13	4.4	10.35	1	0.102	0.094	-0.13	4.4	10.35
BB&T Corporation	3555000	0.076	0.12825	-0.03	1.85	10	1	0.076	0.12825	-0.03	1.85	10
Capital One Financial		0.112	0.17525	-0.01	5.61	18.55	1	0.112	0.17525	-0.01	5.61	18.55
Chubb Corp.	4425000	0.108	0.124	0.17	6.21	13.59	1	0.108	0.124	0.17	6.21	13.59
Fifth Third Bancorp	2514988	0.095	0.194	-0.12	1.41	6.68	1	0.095	0.194	-0.12	1.41	6.68
Hartford Financial Svc.Gp.	1100000	0.029	0.024	-0.38	1.31	21.87	1	0.029	0.024	-0.38	1.31	21.87
JPMorgan Chase & Co.	5916667	0.106	0.17	-0.20	4.97	111.03	1	0.106	0.17	-0.20	4.97	111.03
Lincoln National	5262231	0.022	0.02525	-0.30	1.04	10.64	1	0.022	0.02525	-0.30	1.04	10.64
Loews Corp.	3950000	0.057	0.12	-0.03	4.27	14.13	1	0.057	0.12	-0.03	4.27	14.13
Marsh & McLennan	5650000	0.161	0.085	0.18	1.81	11.53	1	0.161	0.085	0.18	1.81	11.53
MetLife Inc.	3833334	0.101	0.0815	-0.28	5.17	65.38	1	0.101	0.0815	-0.28	5.17	65.38
Morgan Stanley	3516011	0.144	0.1045	-0.44	2.37	39.91	1	0.144	0.1045	-0.44	2.37	39.91
NYSE Euronext	3750000	0.092	0.135	-0.09	2.4	4.55	1	0.092	0.135	-0.09	2.4	4.55
Northern Trust Corp.	2556250	0.087	0.1445	-0.26	2.5	4.17	1	0.087	0.1445	-0.26	2.5	4.17
Principal Financial Group	2178923	0.142	0.082	-0.23	2.37	8.71	1	0.142	0.082	-0.23	2.37	8.71
Progressive Corp.	1987500	0.082	0.065	-0.008	0.84	7.99	1	0.082	0.065	-0.008	0.84	7.99
Prudential Financial	7798054	0.1	0.0845	-0.13	7.24	40.38	1	0.1	0.0845	-0.13	7.24	40.38
Public Storage	2750000	0.088	0.46	0.35	4.87	1.81	1	0.088	0.46	0.35	4.87	1.81
Regions Financial Corp.	850000	0.008	-0.0015	-0.39	0.15	6.4	1	0.008	-0.0015	-0.39	0.15	6.4
Simon Property Group Inc	5211538	0.158	0.2195	0.31	2.55	3.42	1	0.158	0.2195	0.31	2.55	3.42
State Street Corp.	3608000	0.103	0.186	-0.12	3.94	10.29	1	0.103	0.186	-0.12	3.94	10.29
SunTrust Banks	1501444	0.027	0.0755	-0.40	1.35	9.6	1	0.027	0.0755	-0.40	1.35	9.6
The Bank of New York Mellon Corp.	4866667	0.077	0.1605	-0.33	2.14	16.08	1	0.077	0.1605	-0.33	2.14	16.08
The Travelers Companies Inc.	5500000	0.057	0.0565	0.08	3.63	25.45	1	0.057	0.0565	0.08	3.63	25.45

U.S. Bancorp	4175037	0.153	0.22725	0.012	2.56	21.4	1	0.153	0.22725	0.01	2.56	21.4
Wells Fargo	5900000	0.118	0.1815	-0.106	3.01	87.6	1	0.118	0.1815	-0.10	3.01	87.6

Table 2-10

Company Name	Total Compensation (in 1000s)	ROE	Annual Investor Return	EPS	Revenues (in 1000s)
Aflac	7403.105	-0.019	-0.5	-1	38200000
Allstate	-4203.93	-0.052	-0.039199719	-4.02	-14580000
American Express	-16407.318	-0.331	0.006784606	-1.88	1090000
American International Group	6559.522	0.219	0.286004619	1.75	32280000
Ameriprise Financial	5054	0.084	-0.480575934	5.38	55590000
BB&T	136.782	-0.04	0.137571281	1.22	-320000
Chubb	91.656	-0.086	-0.062090212	-1.88	4440000
Fifth Third Bancorp	-129.472	-0.004	0.52868443	4.19	5100000
Hartford Financial Services Group	733.937	-0.005	-0.41	-0.42	10870000
JPMorgan Chase	239.504	-0.1	-0.311730412	-3.25	-94480000
Lincoln National	40990	0.004	-0.098139535	0.37	100440000
Loews	-2769.349	-0.124	-0.523514377	-3.66	-7740000
Marsh & McLennan Companies	-3128.757	-0.306	0.075359144	-0.49	2780000
MetLife	-17922.204	0.04	0.120661578	-3.92	-41480000
Morgan Stanley	-19787.471	0.007	-0.139877642	2.2	-19950000
NYSE Euronext	8481.478	0.028	-0.355168295	-0.06	35750000
Northern Trust	-4265.727	-0.08	-0.375427435	-0.89	-850000
Principal Financial Group	9300.349	-0.021	-0.459306576	-0.69	-6740000
Progressive	556.094	-0.221	0.06	-2.27	-12930000
Prudential Financial	1135.403	-0.078	-0.108959681	-7.4	-26660000
Public Storage	-2888.355	0.074	0.097743564	5.94	38490000
Regions Financial	-6511.743	0.026	0.691502104	3.07	-9120000
Simon Property Group	-576.796	-0.108	-0.283854749	-1.81	2620000
State Street	3069.048	0.022	0.09962878	-0.71	-8400000
SunTrust Banks	-15307.276	0.0132	0.104280844	-0.66	-3170000
The Bank of New York Mellon	-5261.887	-0.072	-0.594809619	-0.43	-5180000
Travelers Companies	-8413.633	-0.101	-0.350817197	-6.3	-9940000
US Bancorp	10981.142	-0.145	0.163259048	1.16	5140000
Wells Fargo	-1662.592	0.059	0.272867647	-1.22	17790000

Table 2-12

Company Name	Total Comp/Revenue Ratio	ROE	Net Margin	Annual Investor Return	EPS	Revenues (in 1000s)
Aflac	0.000632027	0.191	0.106	0.38	3.44	15390000
Allstate	0.000227046	0.212	0.126	-0.18	8.23	36750000
American Express	0.000865885	0.373	0.128	-0.13	3.46	31560000
American International Group	4.18388E-06	0.063	0.056	-0.18	2.45	110060000
Ameriprise Financial	0.000160231	0.103	0.094	0.02	3.57	8650000
BB&T	0.000388305	0.142	0.163	-0.27	3.18	10670000
Chubb	4.84366E-06	0.198	0.199	0.05	7.49	14110000
Fifth Third Bancorp	0.00199876	0.112	0.127	-0.35	2.02	8490000
Hartford Financial Services Group	0.000128706	0.155	0.114	-0.05	9.4	25920000
JPMorgan Chase	3.84228E-05	0.129	0.132	-0.07	4.56	116350000
Lincoln National	9.44287E-05	0.102	0.125	-0.11	4.6	10590000
Loews	0.000424883	0.146	0.135	0.22	4.7	18380000
Marsh & McLennan Companies	0.000610463	0.363	0.047	-0.11	4.76	11350000
MetLife	0.000470896	0.121	0.081	0.06	5.73	53010000
Morgan Stanley	0.000263418	0.094	0.03	-0.15	2.97	85330000
NYSE Euronext	0.000458779	0.116	0.155	-0.09	2.43	4160000
Northern Trust	0.001699209	0.172	0.135	0.28	3.29	5400000
Principal Financial Group	0.000768071	0.108	0.077	0.19	3.19	10910000
Progressive	0.000283452	0.201	0.081	-0.13	1.74	14690000
Prudential Financial	0.00026882	0.16	0.106	0.1	8.24	34650000
Public Storage	0.007417119	0.026	0.242	-0.23	1.3	1890000
Regions Financial	0.001551852	0.062	0.127	-0.34	1.8	10930000
Simon Property Group	0.001052062	0.116	0.137	-0.11	1.96	3780000
State Street	0.000291113	0.136	0.107	0.22	3.26	11820000
SunTrust Banks	0.001821492	0.0898	0.121	-0.23	4.6	13460000
The Bank of New York Mellon	0.000547489	0.099	0.151	0.19	1.78	14780000
Travelers Companies	0.000545105	0.178	0.177	0.02	8.44	26020000
US Bancorp	0.000713878	0.202	0.213	-0.08	2.47	20310000
Wells Fargo	0.002283266	0.094	0.16	-0.26	3.78	3610000
AFLAC Inc	0.000319649	0.172	0.15	-0.12	2.44	53590000
Allstate Corp	0.000186739	0.16	0.08675	-0.219199719	4.21	22170000
American Express Co	0.000334456	0.042	0.0237	-0.123215394	1.58	32650000

			5			
American Intl Group Inc	0.000217472	0.282	0.15175	0.106004619	4.2	32280000
Ameriprise Financial	0.000100249	0.187	0.264	-0.460575934	8.95	64240000
BB&T Corporation	0.000413527	0.102	0.094	-0.132428719	4.4	10350000
Chubb Corp.	8.62534E-06	0.112	0.17525	-0.012090212	5.61	18550000
Fifth Third Bancorp	0.001239146	0.108	0.124	0.17868443	6.21	13590000
Hartford Financial Svc.Gp.	0.000110628	0.15	0.09	-0.46	8.98	36790000
JPMorgan Chase & Co.	0.000215364	0.029	0.024	-0.381730412	1.31	21870000
Lincoln National	0.000378186	0.106	0.17	-0.208139535	4.97	111030000
Loews Corp.	0.000473684	0.022	0.02525	-0.303514377	1.04	10640000
Marsh & McLennan	0.000268931	0.057	0.12	-0.034640856	4.27	14130000
MetLife Inc.	0.000610581	0.161	0.085	0.180661578	1.81	11530000
Morgan Stanley	4.11441E-05	0.101	0.0815	-0.289877642	5.17	65380000
NYSE Euronext	0.000260336	0.144	0.1045	-0.445168295	2.37	39910000
Northern Trust Corp.	0.001079121	0.092	0.135	-0.095427435	2.4	4550000
Principal Financial Group	0.004239808	0.087	0.1445	-0.269306576	2.5	4170000
Progressive Corp.	0.002681818	-0.02	-0.14	-0.07	-0.53	1760000
Prudential Financial	0.001307885	0.082	0.065	-0.008959681	0.84	7990000
Public Storage	0.000275632	0.1	0.0845	-0.132256436	7.24	40380000
Regions Financial Corp.	0.005773481	0.088	0.46	0.351502104	4.87	1810000
Simon Property Group Inc	0.00053125	0.008	-0.0015	-0.393854749	0.15	6400000
State Street Corp.	0.001903509	0.158	0.2195	0.31962878	2.55	3420000
SunTrust Banks	0.000895044	0.103	0.186	-0.125719156	3.94	10290000
The Bank of New York Mellon Corp.	0.000294792	0.027	0.0755	-0.404809619	1.35	9600000
The Travelers Companies Inc.	0.000358831	0.077	0.1605	-0.330817197	2.14	16080000
U.S. Bancorp	0.001001179	0.057	0.0565	0.083259048	3.63	25450000
Wells Fargo	0.000307477	0.153	0.2272	0.012867647	2.56	21400000