**DOES COMPENSATION AFFECT BANK PROFITABILITY?
EVIDENCE FROM US BANKS**

by

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Abstract

The purpose of this paper is to investigate the relationship between compensation and bank profitability from 2002 to 2016. We divide the entire observation into three sub-period groups: Before the financial crisis, During the financial crisis, and After the financial crisis. We find that compensation has a negative correlation with bank profitability regardless of the economic condition.

Keywords: Bank profitability; US bank; Financial crisis; Compensation; Size; Capital; Loans; Deposits; Non-interest income.

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1. Introduction

As the importance of human capital captures organizations' attention nowadays, employee compensation becomes one of the major expenses in most organizations. The proportion of expenses in companies' revenue directly affect the companies' profitability. The portion of compensation expense over total expenses is more influential in industries that pay compensation base on employees' performance and banking industry is one of such industries. Banking industry plays a crucial role in the modern economy because it can facilitate the economic activities by transferring assets and creating money. Therefore, we have the intention to explore how employee compensation affects bank profitability.

In this paper, we examine the profitability of U.S. bank holding companies (BHC) for the years between 2002 and 2016. We obtain the data from the financial statements of all BHCs that report to U.S. Federal Reserve System. We attempt to investigate the relationship between compensation and profitability of BHCs by employing the regression model. We use return on asset (ROA) and return on equity (ROE) as the measures of profitability. ROA and ROE are the dependent variables and employee compensation is the dependent variable in our model. We find out that various literatures that study bank profitability use size, capital, loans, deposits, and income diversification as independent variables. Therefore, we apply the same determinants of profitability as control variables in our model.

The major reason that we want to study the relationship between compensation and bank profitability is that we think that the relationship is uncertain. Compensation can negatively affect bank profitability if we treat compensation as a pure cost but can positively affect bank profitability when compensation is considered as an investment in qualified human capital. In addition, high compensation may be related to the bonus that determined by the performance and higher compensation can incentivize employees to improve their performance. According to

Shapiro and Stiglitz (1984), in order to prevent employees from shirking, employers usually pay more compensation than normal level. Before performing further analysis, we expect that compensation has a positive effect on bank profitability.

In our paper, we do not simply examine how compensation relates to bank profitability, but we also consider how economic condition and time phase affect the influence compensation has on bank profitability. Therefore, we separate our observation time into three periods: before, during, and after the financial crisis of 2008 and study the relationship between compensation and bank profitability in respective time periods. We expect that banks that spend more on compensation will have a higher profitability during the crisis because the value of human capital should be evident in tough times.

We realize that rarely previous publications study the relationship between employee compensation and bank profitability. Therefore, our paper is the first to treat compensation as one of the determinants that influence bank profitability.

2. Variable Definitions

In this paper, we analyze the profitability of U.S. bank holding companies (BHC) based on yearly data within the period from 2002 to 2016. The data we get are from both balance sheets and income statements of the BHC. In order to get the variables that we use in the regression, we perform some simple calculations on the data.

We will analyze the observations over all time periods and examine the observations by separating the data into sub-period groups: before, during, and after the financial crisis of 2008. All of the control variables are frequently employed in previous literature. We expect that the economic condition will be an important factor to consider when investigating how the compensation influences the bank profitability.

2.1 Return on Assets and Return on Equity

In our study, return on assets (ROA) and return on equity (ROE) will be considered as the measure of profitability. ROA is calculated as net income divided by total assets and ROE is calculated as net income divided by total equity capital. Both ratios are widely applied as the measure of the banking industry profitability in many other types of research. We will use ROA and ROE as the dependent variable in our regression and study the results respectively.

2.2 Compensation

Compensation is the independent variable that we mainly study. We standardize the compensation measure by dividing employee salaries and benefits by the number of full-time equivalent employees at end of current period. In addition, when calculating the employee salaries and benefits, we take the inflation rate into account by multiplying the ratio of the CPI in the current year over the CPI in the previous year. We find out that compensation is not a widely used indicator when studying the bank profitability. Bertay and Uras (2016) have examined the

relationship between employee compensation and bank leverage, but they have not considered bank profitability. Investigating the empirical relationship between bank profitability and employee compensation will be the focus of this paper.

2.3 Size

The bank size will be one of the control variables in the study. It is commonly believed that larger banks earn more profitability because they achieve the economies of scale. When a bank is at its optimal size, its costs will be minimized, so the profitability will be maximized. In addition, it is generally accepted that the profitability of large banks is better protected by their diversified businesses. In our algorithm, size is calculated as the natural logarithm of total assets in dollars of each bank. The purpose of taking the logarithm of total assets is to eliminate the effects that extreme values have on the results and thus to make the fat-tailed distribution more approach to normal distribution. According to Athanasoglou, Brissimis and Delis (2008), who study the influence that bank size has on the Greek bank profitability within the period of 1985 – 2001, the relationship between bank size and profitability is expected to be non-linear, indicating that larger banks tend to have higher profit in general but the effect of size on profitability could be negative because of regulatory restrictions and other reasons if the bank is extremely large.

2.4 Capital

The capital of banks is another key control variable in the study. The capital ratio is calculated as total equity capital divided by total assets. Capital is an important indicator when analyzing bank profitability. The bank with a higher capital ratio is considered to be safer than the bank with a lower capital ratio because large proportion of the risk is covered by the assets of the former bank. The importance of capital can be realized when the economic condition is not desirable. The function of capital is to absorb risks or losses when the bank performs poorly. If

the market condition is good, the bank can convert its assets into cash by selling a portion of the assets in time in order to remedy the losses. However, when the market turns down, it is difficult for the bank to liquate its assets in a timely manner because of the rising liquidity and solvency risk in the industry. In this situation, the bank has to sacrifice its capital to cover the losses. If all of the bank's capital is used to pay for the losses, the bank may be unable to continue its operation. Therefore, the operation is guaranteed if the bank has sufficient capital and the high capital ratio will have a positive influence on the profitability of the bank. According to Berger (1995), who publishes *The Profit-Structure Relationship in Banking* in 1995, the positive relationship between capital-to-asset ratio and profitability of U.S. banks in the mid-to-late 1980s is statistically significant. Moreover, Barth, Caprio, and Levine conclude that the negative relationship between capital ratio and nonperforming loans is statistically significant, indicating that the bank with a higher capital ratio tends to have fewer nonperforming loans and therefore has fewer losses.

2.5 Loans

Loans are one of the major sources of income for banks. Banks' interest income is primarily from the interest earned from the loans. The measure of loans is calculated as loans and leases divided by total assets. There are two perspectives to evaluate how loans affect bank profitability. In general, it is widely believed that the number of loans and bank profitability have a positive relationship because banks can earn more interest from the loans if they write more loans. In *Determinants of bank profitability before and during the crisis*, Dietrich and Wanzenried, who analyze the profitability of commercial banks in Switzerland for 1999 – 2009 by employing the GMM technique, find out that the positive relationship between the volume of loans and bank profitability is statistically significant. However, on the other hand, the number of loans can adversely affect bank profitability because of the potential credit risk. The credit risk is

the potential that the borrowers will fail to meet the obligation – repay the loans. The credit risk arises when the financial condition is unfavorable because people are not able to pay back the loans. Therefore, if the bank has a large portion on loans, it will suffer a significant loss during the financial crisis. Our results support the latter case, which will be discussed in the later section.

2.6 Deposits

Banks' traditional business is managing the deposits and the profit comes from the interest income minus the interest expense. In our study, the deposits are measured as deposits in domestic offices divided by total assets. Generally, banks that have more deposits in the account earn more profit because they have sufficient sources of funding and will have the ability to expand the business to improve the profitability further. On the contrary, a large amount of deposits may induce higher rate of borrowing. When a bank already has enough funds for daily operation but would like to raise more for business expansion, it may need to raise the interest rate in order to attract the clients from the competitors. In this situation, the cost increases and the profit decreases. Furthermore, the deposits are treated as the liability in the banking industry, demonstrating that the number of deposits may adversely affect the bank profitability. Dietrich and Wanzenried conclude that the yearly growth of deposits has a statistically significant negative relationship with bank profitability, and this negative relationship is even more exaggerated during the financial crisis. In addition, their results show that commercial banks in Switzerland had a hard time to convert the growing amount of deposits into higher profit. Our results on the influence that deposits have on the bank profitability are consistent with Dietrich and Wanzenried's finding.

2.7 Income Diversification

In our study, the measure of income diversification is calculated as non-interest income divided by total operating income. Diversifying income in banking industry become more prevalent nowadays. As discussed above, traditional banks earn profit from the income margin, which is calculated as interest income minus interest expense. The potential growth of profitability is restricted by focusing only on traditional business. As more and more banks expand their business to fee-based services, their profitability can be improved by higher returns and more diversified portfolios. According to Alper and Anbar (2011), who publishes *Bank Specific and Macroeconomic Determinants of Commercial Bank Profitability: Empirical Evidence from Turkey,* examine the determinants of bank profitability in Turkey and conclude that the non-interest income has a positive and significant effect on bank profitability. Our results are consistent with their finding.

3. Descriptive Statistics

3.1 Summary Statistics

Table 1 shows the number of banks during the entire observation period and table 2 exhibits the descriptive statistics of our sample. The details of the statistics will be discussed as follows.

The number of banks was stable and remained above 2,000 before the year 2006. From 2006, the number of banks fell below 1,000. Numerous banks stopped reporting to the Federal Reserve System because the filing requirement changed in 2006. In March 2006, Federal Reserve increased the threshold for filing the FR Y-9C from $150 million in asset size to $500 million in asset size. From 2015, the number of banks had another drop because the Federal Reserve Board made a change in the reporting requirement. Before 2015, BHCs with total consolidated assets of $500 million and more should report to the Federal Reserve. In 2015, the new requirement was that BHCs with total consolidated assets of $1 billion and more should report to the Federal Reserve. Therefore, any banks that did not meet the requirement no longer report to the Federal Reserve.

In total, we obtain 19,496 observations. The mean value of ROA and ROE of our observations are 0.008 and 0.079. The standard deviations are 0.010 and 0.148 respectively. The minimum values of ROA and ROE are -0.043 and -0.918, indicating that banks suffer losses in some extreme situations.

The mean value of compensation is $74.17 in thousands and the standard deviation is $23.47 in thousands. The minimum and maximum values of compensation are $41.22 in thousands and $184.01 in thousands. The large standard deviation and a wide range of compensation demonstrate that the amount spends on employee compensation varies significantly among different banks.

The average value of the measure of bank size (the natural logarithm of total assets) is 13.93 and the standard deviation is 1.43. The minimum and maximum values are 5.92 and 21.70, illustrating that there are extremely small and extremely large banks in our sample.

The mean value of capital is 0.093 and the standard deviation is 0.032. The mean values of loans and deposits are 0.663 and 0.786 with standard deviations of 0.135 and 0.111. The high mean value of loans indicate that the majority of income comes from loans. The high mean value of deposits indicate that banks assets are mainly funded by deposits.

The measure of income diversification has a mean value of 0.176 and a standard deviation of 0.125, demonstrating that only 17.6% of income comes from the fee-based business on average.

3.2 Matrix of Correlations

Table 3 shows the matrix of correlations of the variables we use. The results are statistically significant at 5% level except for the correlation between loans and ROE and the correlation between deposits and ROE. All control variables have a statistically significant relationship with compensation.

The correlation between compensation and bank size is positive, indicating that larger banks tend to spend more on compensation. Large banks usually engage in diversified businesses and take more risk than small banks. Therefore, large banks may need to hire more qualified employees who ask for higher compensation to meet the banks' needs. Moreover, larger banks may have a more well-defined employee-benefit system, which costs more.

The capital is positively correlated with compensation. Banks that have more weight on capital have the ability to spend more on compensation in order to attract and retain employees. As mentioned in section 2.2, Bertay and Uras investigate the relationship between financial structure and employee compensation in the banking industry. Our results can be explained by their argument – "bank capital incentivizes monitoring and thereby increase labor expenditures" (Bertay & Uras, 2016).

Both loans and deposits are negatively correlated with compensation. In banks' balance sheets, deposits are treated as liabilities. Therefore, if banks increase the portions on deposits, their will have less capacity of paying employees as the funds are insufficient. In addition, our results can be deemed as an evidence that employees work in the traditional business division receive less in compensation.

The correlation between compensation and income diversification is positive, demonstrating that banks that provide more fee-based businesses spend more on employee compensation to deal with sophisticated issues and to improve the quality of service they

provide. Banks that mainly focus on traditional business, such as loans and deposits, spend a

reasonable portion on compensation would be enough.

4. Sub-period Group Comparison

We use the data over the period from the year 2002 to the year 2016 as our sample period. In order to compare the effect of the financial crisis on banks' compensation and their profitability, we divide our sample period into three sub-periods in our analysis. We define the period between year 2002 to 2006 as 'Before the financial crisis', year 2007 to 2009 as 'During the financial crisis', and year 2010 to 2016 as 'After the financial crisis'. We will expand our analysis base on these three sub-periods.

Table 4 shows the mean values of the ROA, ROE, and compensation. Before the financial crisis, the compensation has an uptrend, which is in accordance with the trend of ROA and ROE. However, they have an opposite tendency during the financial crisis. Most of the banks suffer a great loss during the financial crisis that can be seen from the negative ROA and ROE. In 2009, both ROA and ROE reaches the lowest values of -0.004 and -0.088 respectively. Some of the banks even went bankrupt that can be proved in table 1. Although the profitability of banks declines a lot, the compensation still increases from $74.17 in thousands to $76.30 in thousands. After the financial crisis, most banks began to recover gradually to their pre-crisis level. In 2016, ROA reaches 0.009 and ROE reaches 0.09 and these values are just a little lower than the values before. The compensation increases 20% after the economic crisis and reaches $91.93 in thousands in 2016. The compensation increases 40% from $65.91 in thousands to $91.93 in thousands during the entire observation period while both ROA and ROE are relatively stable. We also calculate the average annual growth rate for compensation to further analyze the effect of the financial crisis. The average annual growth rate is 3.22%, 0.73%, and 2.33% in the three sub-periods.

Based on the analysis above, the financial crisis has a huge impact on bank profitability but a lower impact on the compensation. Although the profitability decreases during the financial

crisis, the compensation keeps increasing. The effect of the financial crisis on compensation is lower its growth rate.

5. Regression

5.1 Methodology

We employ the ordinary least square (OLS) method to examine the effect of compensation on the profitability of banks. We report heteroskedasticity-robust standard errors.

We run regressions separately for the three sub-periods to check the effect of the financial crisis on compensation. We divide eight regressions into 4 groups base on the time period. Each group has two dependent variables: ROA and ROE.

Equation is as follow:

$$Y_{i,t} = \alpha + \beta \cdot Compensation_{i,t} + \gamma \cdot Control\ variables_{i,t} + \theta_t + \varepsilon_{i,t}$$

Where

$Y_{i,t}$: ROA or ROE to measure the profitability

β : Coefficient on independent variables

γ : Coefficient on control variables

$Control\ variables_{i,t}$: Size, Capital, Loans, Deposits, Non-interest income

θ_t : Year fixed effect

$\varepsilon_{i,t}$: Error term

5.2 The Entire Observation Period

Table 5 shows the regression results of the entire observation period. All the correlation coefficients of the independent variables and control variables are significant to the dependent variables at the 1% level. All the control variables have a positive correlation with ROA and ROE, but the compensation has a negative correlation.

The coefficient of compensation is -0.00004 for ROA and -0.00037 for ROE means that the banks with high compensation have low profitability that is inconsistent with our original beliefs. The explanations for the results are that compensation is a kind of expense for banks and employees who are highly compensated do not generate values they are supposed to bring to the banks. Banks may invest an unreasonable portion into the compensations.

Size is positively correlated with ROA and ROE and the coefficients are 0.00017 and 0.00244, indicating that the large banks are more likely to be profitable compared to the small banks and the result is consistent with our common sense. The reason is that large banks have more diversified businesses and they have more channels to make profit.

The correlation coefficient of capital is 0.09241 for ROA and 0.49967 for ROE, demonstrating that capital has a positive and strong relationship with bank profitability. Banks with higher capital are more able to make profit. Perceptions of capital have changed due to the financial crisis. We will discuss the change in the later section.

Loans and deposits are also positively correlated with ROA and ROE. The coefficients of loans are 0.00436 and 0.05378, respectively, and both are significant at 1% level. The coefficients of deposits are 0.00331 and 0.04778, indicating that deposits are less significant compared to loans. This result means that banks with more loans and deposits can be more profitable. The main source of income for banks is the differences between the interest income and interest expense. Non-interest income has a positive correlation with the ROA and ROE,

implying the banks with more non-interest income tend to be more likely to make profit. The reason is that the non-interest income comes from the non-traditional business, which is more profitable.

5.3 Before the Financial Crisis

Table 6 presents the regression results before the financial crisis. All the variables have the same impact on profitability as the entire observation period except capital.

The relationship between compensation and bank profitability is negative and the coefficient is -0.00002 for ROA and -0.00026 for ROE. Both of the coefficients are significant at 1% level. This result is consistent with the regression results got from the entire observation period. As mentioned in section 6.2, the reason is that the profit generated by the highly compensated employees does not offset the expenses. In other words, in order to make the spending more worthwhile and maximize the bank profitability, banks may need to balance the compensations they pay to their employees with the benefits these employees generate.

Size, loans, deposits, and non-interest income have a positive correlation with ROA and ROE. All the coefficients are significant at the 1% level.

In contrast to the correlation mentioned in section 6.2, the relationship between capital and ROE is negative. Before the financial crisis, creditors were not aware of the importance of capital in reducing bank insolvency risk, and hence banks with higher capital are charged the same borrowing cost with banks that have lower capital. As a result, capital has a negative correlation with ROE.

5.4 During the Financial Crisis

Table 7 exhibits the regression results during the financial crisis and these results are different from the previous results. The coefficient of compensation, size, capital, and non-interest-income are significant at 1% level.

Compensation has a stronger negative correlation with ROA and ROE compared to the results discussed in section 6.3. The coefficient is -0.00009 for ROA and -0.00106 for ROE. During the financial crisis, the profitability in the banking industry dropped significantly while the expense of personnel kept increasing and this trend explains the stronger negative coefficient. On the other hand, Banks with high compensation lose more during the financial crisis.

In contrast to the previous sub-period, size is negatively correlated with ROA and ROE. The coefficient of size is -0.00101 for ROA and -0.0116 for ROE. By comparing all sub-periods, we find that the size has a negative correlation with profitability only during the financial crisis. This result represents that large banks tend to suffer more loss during the financial crisis. The reason is that larger banks may use higher leverage and take more risk by issuing too much debt, especially some subprime loans. Since borrowers are not able to pay back the loans during the crisis, these unpaid loans become nonperforming loans and reduce bank profitability as a result.

Capital has a positive correlation with both ROA and ROE. The coefficient of capital is 2.25314 for ROE and is extremely high compared to other coefficients. The banks with the large portion of equity in assets tend to be more profitable. The importance of bank capital is realized during the financial crisis. Banks that hold more capital have greater ability to absorb the losses and to prevent go bankruptcy. Adequate capital is essential for banks to survive in the financial crisis. In addition, higher capital can reduce the borrowing cost for banks and increase the profit. Therefore, banks with high capital can make more profit during the crisis.

Non-interest income is positively correlated with the ROA and ROE. By comparing the results from sub-periods, we find that non-interest income has more influence on profitability during the financial crisis. Increasing the proportion of non-interest income appropriately can make banks become more stable during the financial crisis. Therefore, non-interest income reduces the volatility of bank revenue, especially during the financial crisis.

5.5 After the Financial Crisis

Table 8 represents our regression results after the financial crisis. The result is very similar to the results from sub-period before the financial crisis. All the variables have a positive correlation with ROA and ROE except for the compensation. Most of the coefficients are significant at 1% level. The coefficient of compensation is significant at 5% level.

The coefficient of compensation is -0.00004 for ROA and -0.00017 for ROE. Compared with the results during the financial crisis period, compensation has a less negative influence on bank profitability. With the end of the financial crisis, the profitability of banks began to recover and it increases at a faster rate than the rate of compensation.

Size, capital, loans, deposits, and non-interest income are all positively correlated with ROA and ROE. All the coefficients are significant at the 1% level except for the coefficient of size and loans.

Investors fully recognize the importance of capital on bank profitability after the financial crisis. Both the coefficients of capital are greater than that before the financial crisis. People believe that banks with more capital can protect their assets, so these banks are more attractive to them.

6. Conclusion

This paper analyzes the effect of compensation on the profitability of U.S. banks from the year 2002 to the year 2016. We choose ROA and ROE as our measures of profitability and we divide the entire observation period into three sub-periods: Before the financial crisis, During the financial crisis, and After the financial crisis. We got eight regressions in total and divided these regressions into four groups based on the time period. Each group has two regressions with ROA and ROE as dependent variables. In addition, we choose size, capital, loans, deposits, and non-interest income as our control variables.

For the period from the year 2002 to the year 2006, before the financial crisis, compensation has a significantly negative correlation with bank profitability. In contrast to the compensation, all other control variables are positively correlated with ROA and ROE. We conclude that banks with high compensation are less profitable before the financial crisis.

For the period from the year 2007 to the year 2009, during the financial crisis, compensation has a stronger negative correlation with ROA and ROE. In addition, size is negatively correlated with bank profitability. Capital and non-interest income have positive correlations with bank profitability and capital has a stronger influence. During the crisis, investors began paying more attention to the importance of capital. We conclude that banks with high compensation, large size, low capital, and low non-interest income are less profitable during the financial crisis.

For the period from the year 2010 to the year 2016, after the financial crisis, compensation has a significant negative correlation with ROA and ROE. All other control variables have a positive correlation with ROA and ROE. We conclude that banks with high compensation tend to be less profitable.

In summary, we conclude that the compensation has a negative correlation with bank profitability regardless of the economic condition and this conclusion is different from our expectation. In addition, compensation has a stronger influence on bank profitability during the financial crisis.

Appendix

Table 1. Number of Banks

Variable	Number of Banks
2002	2028
2003	2185
2004	2301
2005	2310
2006	986
2007	966
2008	973
2009	1015
2010	1009
2011	1018
2012	1138
2013	1142
2014	1128
2015	652
2016	645

Table 2. Descriptive Statistics

Variable	Obs	Mean	Std.Dev.	Min	Max
ROA	19496	.008	.01	-.043	.031
ROE	19496	.079	.148	-.918	.353
Compensation	19496	74.169	23.466	41.223	184.012
Size	19496	13.934	1.433	5.917	21.696
Capital	19496	.093	.032	.014	.224
Loans	19496	.663	.135	.207	.904
Deposits	19496	.786	.111	.214	.917
Non-interest income	19496	.176	.125	-.006	.745

Table 3. Matrix of Correlations

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(1) ROA	1.000							
(2) ROE	0.815*	1.000						
(3) Compensation	-0.094*	-0.071*	1.000					
(4) Size	-0.033*	-0.045*	0.381*	1.000				
(5) Capital	0.327*	0.126*	0.049*	0.097*	1.000			
(6) Loans	-0.050*	-0.013	-0.050*	-0.128*	-0.188*	1.000		
(7) Deposits	-0.056*	-0.012	-0.333*	-0.510*	-0.221*	0. 229*	1.000	
(8) Non-interest income	0.171*	0.106*	0.280*	0.351*	0.173*	-0.303*	-0.336*	1.000

* $p<0.05$

Table 4. Mean Values

Variable	ROA	ROE	Compensation
2002	0.01053	0.11624	65.91649
2003	0.01056	0.11932	68.36768
2004	0.01042	0.11890	68.40396
2005	0.01069	0.12492	69.20599
2006	0.01030	0.12006	74.68758
2007	0.00816	0.09112	74.17033
2008	-0.00018	-0.02695	76.29070
2009	-0.00412	-0.08778	76.30376
2010	0.00051	-0.01553	76.31712
2011	0.00381	0.03223	76.41216
2012	0.00671	0.06009	79.78597
2013	0.00802	0.08156	81.35297
2014	0.00586	0.08256	82.50494
2015	0.00920	0.08870	88.71285
2016	0.00896	0.08665	91.93420

Table 5. Regression (2002 – 2016)

	(1) ROA	(2) ROE
Compensation	-0.00004***	-0.00037***
	(0.00000)	(0.00006)
Size	0.00017***	0.00244***
	(0.00006)	(0.00086)
Capital	0.09241***	0.49967***
	(0.00276)	(0.05165)
Loans	0.00436***	0.05378***
	(0.00046)	(0.00731)
Deposits	0.00331***	0.04778***
	(0.00074)	(0.01063)
Non-interest income	0.01526***	0.17441***
	(0.00071)	(0.01129)
_cons	-0.00901***	-0.08426***
	(0.00139)	(0.02040)
Obs.	19496	19496
R-squared	0.32090	0.18868

Standard errors are in parenthesis

*** p<0.01, ** p<0.05, * p<0.1

Table 6. Regression (2002 – 2006)

	(1) ROA	(2) ROE
Compensation	-0.00002***	-0.00026***
	(0.00000)	(0.00007)
Size	0.00041***	0.00471***
	(0.00006)	(0.00074)
Capital	0.06640***	-0.32383***
	(0.00277)	(0.03676)
Loans	0.00508***	0.06365***
	(0.00046)	(0.00622)
Deposits	0.00436***	0.05269***
	(0.00073)	(0.00956)
Non-interest income	0.00891***	0.10454***
	(0.00077)	(0.00983)
_cons	-0.00778***	0.00081
	(0.00120)	(0.01598)
Obs.	9810	9810
R-squared	0.14617	0.06225

Standard errors are in parenthesis

*** p<0.01, ** p<0.05, * p<0.1

Table 7. Regression (2007 – 2009)

	(1)	(2)
	ROA	**ROE**
Compensation	-0.00009***	-0.00106***
	(0.00001)	(0.00023)
Size	-0.00101***	-0.01160***
	(0.00023)	(0.00373)
Capital	0.15621***	2.25314***
	(0.00974)	(0.19908)
Loans	-0.00310	-0.02412
	(0.00202)	(0.03786)
Deposits	-0.00224	-0.01199
	(0.00247)	(0.04559)
Non-interest income	0.02903***	0.38738***
	(0.00291)	(0.05049)
_cons	0.00725	-0.00280
	(0.00466)	(0.07916)
Obs.	2954	2954
R-squared	0.34024	0.23208

Standard errors are in parenthesis

*** p<0.01, ** p<0.05, * p<0.1

Table 8. Regression (2010 – 2016)

	(1)	(2)
	ROA	ROE
Compensation	-0.00004***	-0.00017**
	(0.00001)	(0.00007)
Size	0.00029***	0.00240*
	(0.00011)	(0.00136)
Capital	0.09837***	0.77256***
	(0.00501)	(0.09532)
Loans	0.00439***	0.01749
	(0.00090)	(0.01311)
Deposits	0.00517***	0.09294***
	(0.00157)	(0.01882)
Non-interest income	0.01476***	0.13514***
	(0.00107)	(0.01688)
_cons	-0.01290***	-0.13344***
	(0.00268)	(0.03547)
Obs.	6732	6732
R-squared	0.24128	0.09937

Standard errors are in parenthesis

*** p<0.01, ** p<0.05, * p<0.1

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