ANY DIFFERENCES IN THE DIVIDEND POLICY BETWEEN NATIONAL AND REGIONAL BANKS?

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Abstract

This study compares the dividend policy of Korean national and regional banks by identifying the factors that may determine the payout ratio of the banks using the sample over 1994-2008 periods. Based on the fixed effects regression estimation, this study finds that the payout ratio of national banks appears to be more significantly and closely related to the variables such as debt ratio (negative relationship), future growth opportunity (negative relationship), profitability (positive relationship), and outside ownership (positive relationship) than regional banks. These results are appealing intuitively considering that generally national banks are larger banks and more actively traded in capital market, and therefore, national banks would be subject to greater indirect market discipline and pressure in dividend market. Thus, national banks may receive more pressure than regional banks to send the correct signal to the market through the dividend policy. Therefore the pattern of dividend policy for national banks would be more significant and predictable compared to regional banks.

Keywords: Dividend Policy, Payout Ratio, National Banks, Regional Banks, Fixed Effects Model

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I. Introduction

Dividend policy is an important issue in corporate finance, and dividends are a major cash outlay for corporations. It may be obvious that a firm would want to give as much as possible cash back to its shareholders by paying dividends. It may be equally obvious, however, that a firm needs to always invest the money for the future reward to its shareholders instead of paying it out. Between these two offsetting choices, the firm's manager should make an optimal decision on the amount of dividend payment to maximize the firm value or the firm's stock price. A manager of the firm signals the expectations about the current and future earnings of the firm or other valuable information to the capital market investors by paying dividends. This function is referred to as the signaling effect of dividend policy. Through the signaling effect of dividend policy, managers of the firm are subject to the pressure from the market that they have to pay the optimal amount of dividends to maximize the firm value. This mechanism coming from the market may serve as one form of indirect discipline or monitoring tool on the firm's behavior. Also, dividend payments are said to be effective in reducing the agency problem of managers that could occur when the firm has enough free cash flows. When the firm has enough amounts of free cash flows, the managers who have greater interests in outer expansion and growth of the business would have higher priority on making new investments, sometimes even in unprofitable projects, rather than paying dividends. This decision will ultimately turn out to reduce the firm value. Dividend payments, however, would be effective in decreasing this agency problem by reducing the amount of free cash flows.

This study continues the above line of research by examining the dividend policy of Korean banking industry. Specifically, we examine whether there is any difference in the dividend policy between Korean national and regional banks. National banks are allowed to open branch and office nationwide and there is no regional restriction in their operation. Regional banks, however, are allowed to open branch and operate only within their own regions. To help regional banks to overcome the disadvantages due to regional limitation and inferior market structure, and to give them more incentives for the contributions to the regional economy, many regulatory flexibilities and advantages are given to regional banks in terms of various investment and corporate finance decision. The number of regional banks in Korea increased substantially through the late 1980s and the early 1990s due to the liberalization and deregulation of the Korean banking industry. At the beginning of the sample period of this study 1994, there were total twenty four banks in Korea. Among them, fourteen banks were national banks, and ten banks were

regional banks. This number of regional banks was maintained until year 1997. However, since the financial crisis 1997-1998, the number of commercial banks in Korea continuously decreased, and in 2008, only eight national banks and six regional banks remained

In this study, we focus on the dividend policy of Korean national and regional banks. Generally, as explained above less strict supervisory concern is imposed on regional banks, and this advantage might put regional banks subject to less indirect discipline and pressure from the capital market about the dividend payment. If so, regional banks may not need to signal such consistent and significant implication about their dividend policy to the market compared to national banks. This may imply that the pattern of dividend policy of regional banks would be less significant and predictable than national banks. By employing the data over a relatively long period 1994-2008, and using a panel regression approach, we compare the dividend policy between these two groups and examine whether there is any difference in the dividend policy for these two groups.

Korean firms tended to maintain lower dividend payout ratio compared to the firms in other countries. The structural and systematical inefficiency of Korean capital market and the firms' over-demand for funds made the firms to less rely on the use of external financing for their business. Instead firms prefer to use internal financing as the source of funds by paying less dividends and holding more retained earnings. There are not many previous studies on dividend policy in Korea. Moreover, there has not been any study focusing on the dividend policy of Korean banking industry. Sangyong Ju (1993) found that the dividend payout ratio of the firms listed in the Value Line Investment Survey is negatively related to the firm's insider ownership. Jungdo Lee and Jeongtaek Kong (1994) found that payout ratios of Korean firms are positively related to the firm's profitability and asset size, but negatively related to the firm's operational risk and default risk. Cheoljung Kim (1996) found that payout ratio is negatively related to both insider ownership and future growth opportunity. Kyungseo Park, Eunjung Lee, Inmoo Lee (2003) found that payout ratio has a negative relationship with respect to firm size and debt ratio, a positive relationship with profitability and free cash flow.

The next section 2 describes the sample of banks, testing models and hypotheses. In section 3, we present the empirical results and in section 4 offer concluding remarks.

II. Data, Sample, Hypothesis and Testing Model

The data for this study are collected from the Statistics of Bank management published by the Korean Financial Supervisory Service over the period 1994-2008. We included all the national and regional banks during this period. There were total 24 banks in 1994. The number of banks continuously increased up to 26 until 1997. Since 1997, the number of banks decreased continuously due to Asian financial crisis, and there were total 17 banks in 2000. Since 2008, total 14 banks have existed in Korean banking industry.

The summary statistics of all the variables used this study are presented in table 1. Payout ratio is measured by dividing the cash dividend by the net income. Debt ratio and loan ratio are measured by the ratio of total debt and total loans to the total asset, respectively. Outsider's share is measured by the ratio of total equity owned by outside shareholders to the total equity of the bank. Payout ratio averages 18.3%, and the highest ratio is 148%. The average debt ratio averages 95.3%, ranging from 85.8% to 106%. The loan ratio averages 47.3%, ranging from 27.2% to 69.1%. The ROA averages -0.19, ranging from -10.19 to 3.05. The ratio of outside shareholders averages 5.5% and the highest ratio is 22.5%.

As the main method of the empirical analysis in this study, we use the following fixed effects regression model. In the estimation of panel data combining both cross-sectional and time-series data such as this study, the use of OLS regression may result in omitted variable problem. This problem occurs when the individual bank-specific component of the error is correlated with the regressors in the model. In this case, the use of fixed-effects regression technique can avoid the omitted variable problem and generate unbiased results.

$$(DIV)_{i,t}=\beta_0+\beta_1(DEBT)_{i,t}+\beta_2\times(LOAN)_{i,t}+\beta_3(ROA)_{i,t}+\beta_4\times(OUTSHARE)_{i,t}+\varepsilon_{i,t} \text{ ----------(1)}$$

Dependent variable represents the bank's payout ratio, and is measured by the ratio of cash dividend to net income for each year. As the main explanatory variables, we use the bank's debt ratio measuring the financial soundness of the bank, the ratio of total loans to total asset capturing the bank's future growth and profit opportunity, ROA (return on asset) measuring the level of the bank's current profitability, and finally the level of ownership owned by outside shareholders. The hypothesized relationships between each of these four explanatory variables and dividend policy measured by payout ratio are as follows. Considering that the most closely monitored variable by the bank regulator for the bank's financial soundness is the debt ratio or capital structure, the banks with higher debt ratio would hold more retained earnings as capital rather than paying net income as dividends, because dividend payment aggravates the capital structure of the firm. Furthermore, the banks with higher debt ratio would have more demand for

the funds because of current and future interest payments. Therefore, a negative relationship is expected between debt ratio and payout ratio. We use the ratio of total loans to total asset to measure the bank's future growth opportunity and profitability. Loan is the best asset-category variable capturing the possibility of future growth opportunity. A higher loan ratio reflects positive and optimistic expectations on future economic conditions by household and business sectors. Thus, other things being equal, when loan ratio is higher, the banks would decrease current dividend payment and retain more earnings to prepare for the future source of funds. Therefore, a negative relationship is expected between loan ratio and payout ratio. The banks with higher ROA are expected to pay more dividends, and therefore, a positive relationship is expected between ROA and payout ratio. Finally, we expect a positive relationship between ownership by outside shareholders and payout ratio. Generally, inside shareholders would have greater interests in the size and growth of their business, and therefore, they would have greater incentives to retain more earnings to expand their business rather than paying earnings as dividends. Thus, it is expected that the banks with greater insider (outsider) ownership would have less (greater) incentives to pay dividends.

III. Empirical Results

3.1. Correlation Test

Before estimating the above fixed effects regression model, we examine the correlation coefficients among the variables used in the study as a prerequisite test. Table 2 presents the Pearson correlation coefficients among the variables for the national banks and regional banks, respectively. The first table shows the correlation coefficients for the national banks. It shows that the payout ratio has a significantly negative correlation with debt ratio. Thus, the banks with higher debt ratio pay less dividends. This is the same result as hypothesized, because the banks with higher debt ratio would be subject to higher regulatory pressure to improve the capital structure, and they would have more demand for the funds such as interest payments. The table shows a negative coefficient between loan ratio and payout ratio as hypothesized. But the coefficient is not significant. The correlation coefficient between ROA and payout ratio is significantly positive. Thus, the banks with higher profitability pay more dividends. The payout ratio has a significantly positive correlation with respect to outside shareholders as hypothesized. Thus the banks with higher proportion of outside shareholders pay more net income as current dividends rather than retaining the net income for the source of future investment.

The second table shows the correlation coefficients for the regional banks. The table shows similar results between payout ratio and the first three explanatory variables; debt ratio, loan ratio and ROA. But the sizes of correlation coefficients are less than in the case of national banks. The coefficient is negative with respect to outside shareholders. Therefore, theses results imply that our hypothesized results are found more clearly and significantly in the sample of national banks.

3.2. Full Sample Results

Table 3 shows the results of fixed effects regression estimation. The first table presents the results for national banks and the second table presents the results for the regional banks, respectively. Both tables show significantly negative coefficients on the debt ratio. The size of the coefficient is almost the same between national and regional banks. Thus, for both groups, we can conclude that the banks with higher debt ratio tend to pay significantly less dividends as hypothesized. For the loan ratio, the coefficient is significantly negative for the national banks, but it is not for the regional banks. Thus, the national banks appear to undertake future growth opportunity more significantly and aggressively than regional banks by reducing dividend payment and retaining more income when the loan ratio is higher. Similarly, even though the coefficient on ROA is significantly negative for both groups, it is much greater and more significant for the national banks. The coefficient on outside shareholders is positive for both groups, though insignificant within 10% significance level. However, the coefficient is much greater and more significant for the national banks. Thus, overall, the results in table 3 show that our hypothesized expectations on dividend policy of Korean banks are more significantly and clearly found in national banks than regional banks. These results are appealing intuitively considering that generally national banks are larger banks and more actively traded in capital market, and therefore, national banks would be subject to greater indirect market discipline and pressure in dividend market. Thus, national banks may receive more pressure than regional banks to send the correct signal to the market through the dividend policy. Therefore the pattern of dividend policy for national banks would be more significant and predictable compared to regional banks.

3.3. Partitioned Sample Results

In this section, we examine what differences in the pattern of dividend policy there are between national banks and regional banks when their financial and operational characteristics are different. Specifically, for each of the two groups (national and regional banks), we partition each group into the two sub-groups based on the variables that are closely monitored by the bank regulator for the bank's financial and operational soundness. We use the following three characteristics variables to partition

the sample; capital ratio as the measure of the bank's financial soundness, ROA as the measure of the bank's profitability, and the ratio of nonperforming loans as the measure of the bank's asset quality. For each of these three characteristics variables, every bank is partitioned between higher category group and lower category group based on the median value. Then, for each group, equation (1) is estimated, and we compare the pattern of dividend policy and examine whether there are any differences between the two groups.

Table 4 shows the results when the sample is partitioned at the median capital ratio. The above two tables are the results for the national banks with higher capital and lower capital ratio, respectively. The two tables below are the results for the regional banks with higher capital and lower capital ratio, respectively. In the results for the national banks, the debt ratio is significantly negative for both higher capital and lower capital category. But the loan ratio is significantly negative only for the higher capital ratio group. Thus, when the loan ratio is higher, the national banks with higher capital ratio undertake future growth opportunity more significantly and aggressively by reducing dividend payment and holding more retained earnings than the banks with lower capital ratio. Also, the table shows that the national banks with higher capital ratio pay significantly more dividends when the ROA is higher. The two tables below about the regional banks show generally insignificant results except for the debt ratio. So, the results in table 3 show that the hypothesized pattern for the dividend policy is observed more significantly from the national banks. Table 5 and 6 show the results when the sample is partitioned at the median value of ROA and nonperforming loan ratio, respectively. It is shown in table 5 that the loan ratio is significantly negative and ROA is significantly positive only for the national banks with higher ROA. Also, it is shown in table 6 that the loan ratio is significantly negative and the ratio of outside shareholders is significantly positive only for the banks with lower nonperforming loan ratio. Thus, the patterns of paying less dividends to undertake future growth opportunity and paying more dividends when the proportion of outside shareholders is larger are observed only for the national banks. Overall, the results in table 4-6 implies that our hypothesized results about the dividend policy are more significantly observed form the national banks.

IV. Conclusion

This study compares the dividend policy of Korean national and regional banks by identifying the factors that may determine the payout ratio of the banks using the sample over 1994-2008 periods. Based on the fixed effects regression estimation, this study finds that the payout ratio of national banks appears to be more significantly and closely related to the variables such as debt ratio (negative relationship), future growth opportunity (negative relationship), profitability (positive relationship), and outside ownership (positive relationship) than regional banks. These results are appealing intuitively considering that generally national banks are larger banks and more actively traded in capital market, and therefore, national banks would be subject to greater indirect market discipline and pressure in dividend market. Thus, national banks may receive more pressure than regional banks to send the correct signal to the market through the dividend policy. Therefore the pattern of dividend policy for national banks would be more significant and predictable compared to regional banks.

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Table 1. Sample descriptive statistics

This table shows the sample descriptive statistics for the sample banks for the period 1994-2008.

	Payout ratio	Debt ratio	Loan ratio	ROA	Outside ownership
Mean	0.1831	0.9535	0.4733	-0.19	0.0554
Median	0.1095	0.9558	0.4588	0.37	0.0039
Standard deviation	0.2239	0.0210	0.0863	1.98	0.1685
Min	0	0.8585	0.2721	-10.19	0
Max	1.4829	1.0619	0.6910	3.05	0.2256
Number of observations	264	264	264	264	264

Table 2. Correlations

This table shows the Pearson correlations for the national banks and regional banks, respectively.
One, two, or three asterisks indicate statistical significance at the 10, 5, or 1% significance level, respectively.

Correlation Coefficients for National Banks (number of observations = 156)

	Payout ratio	Debt ratio	Loan ratio	ROA	Outside Ownership
Payout ratio	1				
Debt ratio	-0.5858 ***	1			
Loan ratio	-0.0637	0.0704	1		
ROA	0.3987 ***	-0.5155 ***	0.4132 ***	1	
Outside Ownership	0.1398 *	-0.2017 ***	-0.4663 ***	-0.0453	1

Correlation Coefficients for Regional Banks (number of observations = 108)

	Payout ratio	Debt ratio	Loan ratio	ROA	Outside Ownership
Payout ratio	1				
Debt ratio	-0.2400 **	1			
Loan ratio	-0.0678	-0.4332 ***	1		
ROA	0.2785 **	-0.6179 ***	0.3231 ***	1	
Outside Ownership	-0.0601	0.3966 ***	-0.1814 **	-0.4243 ***	1

Table 3. Fixed-Effects Regression Results for the Full Sample

$$(DIV)_{i,t}=\beta_0+\beta_1(DEBT)_{i,t}+\beta_2\times(LOAN)_{i,t}+\beta_3(ROA)_{i,t}+\beta_4\times(OUTSHARE)_{i,t}+\varepsilon_{i,t}$$

This table shows the fixed-effects regression results for the full sample. One, two, or three asterisks indicate statistical significance at the 10, 5, or 1% significance level, respectively.

Regression Results for National Banks

	Coefficient	Standard error	t-value
Constant	3.8541 **	1.6328	2.36
Debt ratio	-3.4905 **	1.6642	-2.09
Loan ratio	-0.6958 ***	0.2573	-2.70
ROA	0.0359 ***	0.0138	2.58
Outside Ownership	0.1084	0.0983	1.10
R^2: 0.13			
F-statistic: 5.82			
Number of observations: 156			

Regression Results for Regional Banks

	Coefficient	Standard error	t-value
Constant	3.4717 ***	0.6443	5.38
Debt ratio	-3.3632 ***	0.7013	-4.79
Loan ratio	-0.2297	0.2092	-1.09
ROA	0.0165 *	0.0088	1.85
Outside Ownership	0.0021	0.3380	0.99
R^2: 0.28			
F-statistic: 5.82			
Number of observations: 108			

Table 4. Fixed-Effects Regression Results for the Partitioned Sample

Regression Results for National Banks: Higher Capital ratio

	Coefficient	Standard error	t-value
Constant	2.9728	1.4756	3.16

Debt ratio	-3.1021 ***	1.0285	-2.44
Loan ratio	-0.9062 ***	0.5963	-3.11
ROA	0.0940 **	0.0739	1.85
Outside Ownership	0.1423	0.1850	1.45
R^2: 0.14 F-statistic: 6.11			
Number of observations: 78			

Regression Results for National Banks: Lower Capital ratio

	Coefficient	Standard error	t-value
Constant	3.2674	2.0153	2.59
Debt ratio	-3.7048 **	1.3957	-2.01
Loan ratio	-0.3018	0.9284	-1.28
ROA	-0.0164	0.0471	0.28
Outside Ownership	0.0867	0.0358	1.18
R^2: 0.13 F-statistic: 5.20			
Number of observations: 78			

Regression Results for Regional Banks: Higher Capital ratio

	Coefficient	Standard error	t-value
Constant	4. 2386	0.5864	5.32
Debt ratio	-3.9174 ***	0.9375	-3.97
Loan ratio	-0.1975	0.1946	-1.39
ROA	0.0584	0.0028	1.48
Outside Ownership	0.0074	0.4835	0.01
R^2: 0.31 F-statistic: 13.27			
Number of observations: 54			

Regression Results for Regional Banks: Lower Capital ratio

	Coefficient	Standard error	t-value
Constant	3.9704	0.6836	6.1057
Debt ratio	-3.0746 ***	0.5867	-3.0857
Loan ratio	-0.5384	0.2976	-1.17
ROA	0.0038	0.0018	1.03
Outside Ownership	0.1946	0.2957	0.21
R^2: 0.35 F-statistic: 15.20			
Number of observations: 54			

Table 5. Fixed-Effects Regression Results for the Partitioned Sample

Regression Results for National Banks: Higher ROA

	Coefficient	Standard error	t-value
Constant	1.4755 ***	1.2647	3.26
Debt ratio	-2.6838 **	0.8643	-2.02
Loan ratio	-1.8512 **	0.7381	-1.98
ROA	0.1104 *	0.0478	1.76
Outside Ownership	0.4852	0.2317	1.26
R^2: 0.15 F-statistic: 6.91			
Number of observations: 78			

Regression Results for National Banks: Lower ROA

	Coefficient	Standard error	t-value
Constant	3.1427 ***	1.5737	2.84
Debt ratio	-3.0439 **	1.6464	-1.92
Loan ratio	-0.2637	1.4350	-1.46
ROA	-0.1647	0.3529	-0.57
Outside Ownership	0.1407	0.26489	0.99
R^2: 0.12 F-statistic: 4.66			
Number of observations: 78			

Regression Results for Regional Banks: Higher ROA

	Coefficient	Standard error	t-value
Constant	4. 8464 ***	0.2058	5.02
Debt ratio	-2.9756 **	0.5367	-1.96
Loan ratio	0.1849	0.2131	0.48
ROA	0.1903	0.2435	1.27
Outside Ownership	0.2452	0.8563	0.18
R^2: 0.30 F-statistic: 13.90			
Number of observations: 54			

Regression Results for Regional Banks: Lower ROA

	Coefficient	Standard error	t-value
Constant	2.0859 ***	0.5286	4.96
Debt ratio	-3.1065 *	0.3758	-1.74
Loan ratio	-0.1536	0.7567	-0.93
ROA	0.1203	0.0567	1.21
Outside Ownership	0.3179	0.3620	0.11
R^2: 0.23 F-statistic: 11.34			
Number of observations: 54			

Table 6. Fixed-Effects Regression Results for the Partitioned Sample

Regression Results for National Banks: Lower Nonperforming Loans

	Coefficient	Standard error	t-value
Constant	1.0738 ***	1.2547	3.43
Debt ratio	-3.0938 ***	1.0859	-2.26
Loan ratio	-0.6462 *	0.1572	-1.68
ROA	0.1208	0.0895	1.38
Outside Ownership	0.09487 *	0.2139	1.75
R^2: 0.15 F-statistic: 5.97			
Number of observations: 78			

Regression Results for National Banks: Higher Nonperforming Loans

	Coefficient	Standard error	t-value
Constant	3.6578 ***	2.0453	2.65
Debt ratio	-3.3611 **	1.1766	-2.03
Loan ratio	-0.5647	0.6823	-1.32
ROA	0.0387	0.0945	0.13
Outside Ownership	0.1298	0.4537	1.03
R^2: 0.12 F-statistic: 5.33			
Number of observations: 78			

Regression Results for Regional Banks: Lower Nonperforming Loans

	Coefficient	Standard error	t-value
Constant	4. 2361 ***	0.3657	3.78
Debt ratio	-3.1147 ***	0.8674	-2.87
Loan ratio	-0.6453	0.2317	-1.41
ROA	0.2309	0.0935	1.45
Outside Ownership	0.0067	0.4537	0.08
R^2: 0.30 F-statistic: 11.57			
Number of observations: 54			

Regression Results for Regional Banks: higher Nonperforming Loans

	Coefficient	Standard error	t-value
Constant	3.3418 ***	0.7563	4.67
Debt ratio	-2.29 **	0.7456	-2.1057
Loan ratio	-0.8746	0.8790	-1.45
ROA	0.1208	0.0034	1.43
Outside Ownership	0.3265	0.2567	0.31
R^2: 0.31 F-statistic: 12.96			
Number of observations: 54			