

Analysis of Dividend Policy Influence Factors of China's Listed Banks

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Abstract

This article analyzes the present situation of dividend distribution of listed banks in China based on the 2010-2013 panel data, the results show that some of the listed banks do not pay dividend, but the proportion is small, the dividend payment rate is generally low but the state-controlled banks often have a higher rate. Then the article analyzes the factors affecting dividend policy of listed banks by using empirical method, and finds that profitability and liquidity of assets have a positive effect on the dividend payment rate, debt levels have a negative effect on the dividend payment rate, and the growth ability and operation ability have no significant effect on the rate of dividend payment.

Keywords

Listed Banks, Dividend Policy, Influence Factor, Dividend Payment Rate, Profitability, Growth Ability, Operation Capacity, Debt Levels, Liquidity of Assets

1. Introduction

Dividend is the distribution of earnings shareholders gain from the company. The dividend policy of a company depends on its development plan and the shareholders' trade-off analysis between the immediate interests and the future development of the company. Dividend policy is a very important decision of listed companies because it plays a vital role in the operation and development of the company. Reasonable dividend policy can set up a good image for the company, attract more investors, and provide financial support for the development of the company. Therefore, when making the dividend policy, the listed companies usually have a comprehensive consideration, so as to choose an appropriate dividend policy for the development of the company.

Banking is the lifeblood of survival and development for other industries, its development plays an important role in the country's economic health. In recent years, the banking industry is getting more and more attention,

its dividend policy is getting extra attention because of its high profits. The dividend policy influence factors of banking industry are different from other industries because of the essential difference between the banking industry and other industries, the banking industry's main object of management is monetary assets, and its main business has the characteristics of high risk, high liability and the creation of credit. Scholars both in China and abroad have made a study of the dividend policy influence factors of listed Banks.

The main study of dividend policy influence factors of banking industry by foreign scholars are as follows: Dickens, Casey and Newman [1] studied the bank dividend policy influence factors by empirical method, and the results showed that the investment opportunities, scale of assets, the problem of agency, former dividend policy and risk of company have influence on dividend policy. John The is and Amitabh S. Dutta [2] selected 99 companies as samples to make a study based on Dickens' model, and found the nonlinear relationship between the internal shareholding level and the dividend payment rate of bank holding company.

The main study of listed banks dividend policy influence factors by Chinese scholars are as follows: Wang Manshu [3] made a descriptive analysis of cash dividend distribution situation of 14 China's listed banks, and drew the conclusion that China's listed banks are more likely to pay cash dividends compared with non-financial listed companies, but their cash dividend payment rate is often lower than non-financial listed companies. Besides, size, profitability and security have positive influence on cash dividend payment rate of China's listed Bank. GuoYangyang [4] analyzed the characteristics of cash dividend policy of listed Banks in China and put forward suggestions for improvement of cash dividend policy. Liu Zhiwei, Zhao Yongqin [5] selected the data from 2008 to 2010 to analyze the dividend policy of 14 listed banks in China, they also made empirical analysis using the regression analysis model, and found that earnings per share is a main factor of cash dividend policy, debt asset ratio is negatively related to the dividend payment rate but the relationship was not significant, total assets and capital adequacy ratio is also negatively related to the dividend payment rate. Chen Yue [6] made empirical analysis for 14 listed Banks in China using the data from 2006 to 2010, and the result showed that the return on equity is negatively related to the cash dividend payment rate, most listed banks in China have high profit but low dividend payment rate, they pay much attention to financing but ignore to pay back for shareholders.

In April 1991, as the first listed bank in China, Ping An Bank Co., Ltd. listed on the Shenzhen stock exchange, after that, some commercial banks are listed on the stock exchange with the deepening of financial reform in China. At present, there are 16 listed banks in China which are listed on the Shanghai stock exchange or Shenzhen stock exchange, they promote the development of China's financial, also inject new vitality for China's stock market. This article will analyze the current situation of dividend policy of China's listed banks, and then make an empirical analysis using the data from 2010 to 2013, and finally draw some conclusions according to the empirical analysis.

2. The Present Situation of the Dividend Policy of China's Listed Banks

2.1. The Present Situation of China's Listed Banks

At present, there are 16 listed banks in China including which listed on Shenzhen stock exchange and Shanghai stock exchange. **Table 1** shows the basic information of the 16 listed banks.

Table 1 show that most of the headquarters of China's listed banks are located in the economically developed provinces and regions, 94% are concentrated in Beijing, Shanghai, Guangdong, Jiangsu and Zhejiang area, what is more, there are 56% located in Beijing. Besides, there are only 16 listed banks in Shenzhen stock exchange and Shanghai stock exchange, it is quite a small number compared to the thousands of listed companies in China.

2.2. The Present Situation of Dividend Policy of China's Listed Banks

1) A small proportion of listed banks do not pay dividends

According to the dividend payment rate data of China's listed banks from RESSET database, we can calculate the proportion of listed banks which do not pay dividend to shareholders from 2010 to 2013, and the results are shown in **Table 2** as follows:

From **Table 2**, we can learn that the quantity and proportion of listed banks which do not pay dividend is quite small from 2010 to 2013, most of the listed banks would pay dividend to shareholders, the proportion of listed banks which pay dividend even reached to 100% in 2012 and 2013.

2) The dividend payment rate of listed banks is low

Table 1. The basic information of China's listed banks.

Stock code	Name of bank	Listed stock exchange	Listed time	Headquarters
000001	PingAn Bank	Shenzhen stock exchange	April 1991	Guangdong
600000	Shanghai Pudong Development Bank	Shanghai stock exchange	November 1999	Shanghai
600016	China Minsheng Bank	Shanghai stock exchange	December 2000	Beijing
600036	China Merchants Bank	Shanghai stock exchange	April 2002	Guangdong
600015	Huaxia Bank	Shanghai stock exchange	September 2003	Beijing
601988	Bank of China	Shanghai stock exchange	June 2006	Beijing
601398	Industrial and Commercial Bank of China	Shanghai stock exchange	October 2006	Beijing
601166	Industrial Bank	Shanghai stock exchange	February 2007	Fujian
601998	China Citic Bank	Shanghai stock exchange	April 2007	Beijing
601328	Bank of Communications	Shanghai stock exchange	May 2007	Shanghai
601009	Bank of Nanjing	Shanghai stock exchange	July 2007	Jiangsu
002142	Bank of Ningbo	Shenzhen stock exchange	July 2007	Zhejiang
601169	Bank of Beijing	Shanghai stock exchange	September 2007	Beijing
601939	China Construction Bank	Shanghai stock exchange	September 2007	Beijing
601288	Agricultural Bank of China	Shanghai stock exchange	July 2010	Beijing
601818	China Everbright Bank	Shanghai stock exchange	August 2010	Beijing

Table 2. The proportion of listed banks which do not pay dividend.

Year	Listed banks which do not pay dividend	
	Quantity	Proportion
2010	2	12.50%
2011	1	6.25%
2012	0	0%
2013	0	0%

Dividend payment rate is different from different countries and different industries, in China, the listed company's average dividend payment rate is about 30%, and in foreign countries, the average dividend payment rate is around 40%. We calculated the average dividend payment rate of China's listed banks from 2010 to 2013 based on the dividend payment rate data from RESSET database, and the results are shown in **Table 3**.

From **Table 3**, we can see that the average dividend payment rate of China's listed Banks have a slowly rising trend year by year from 2010 to 2013, but overall the dividend payment rate is low, maintain at the levels of 23% to 27%, lower than the average dividend payment rate of listed companies in China and the average dividend payment rate in foreign countries.

3) State-controlled banks generally have a higher dividend payment rate

Among 16 listed banks in China, there are five state-controlled banks, including Industrial and Commercial Bank of China, Agricultural Bank of China, Bank of China, China Construction Bank and Bank of Communications. We can calculate the average dividend payment rate between 2010 and 2013 for each bank, and the results are shown in **Table 4** as follows.

From **Table 4**, we can see that the top four of average dividend payment rate are all state-controlled banks, their dividend payment rate are all higher than 30%, at a high level of dividend payment rate, while the other listed banks have a relatively low dividend payment rate, Bank of Beijing, Industrial Bank and PingAn Bank are all less than 20%, especially the PingAn Bank, its average dividend payment rate is only 5.08%.

Table 3. The average dividend payment rate of listed banks.

Year	2010	2011	2012	2013
Average dividend payment rate	23.13%	23.96%	26.24%	26.90%

Table 4. The average dividend payment rate of listed banks between 2010 and 2013.

Name of bank	Average dividend payment rate (%)	Ranking
Agricultural Bank of China	39.23	1
China Construction Bank	35.98	2
Bank of China	35.95	3
Industrial and Commercial Bank of China	35.74	4
Bank of Nanjing	28.46	5
China Merchants Bank	27.40	6
China Everbright Bank	24.92	7
Shanghai Pudong Development Bank	23.14	8
Bank of Communications	22.75	9
China Minsheng Bank	21.41	10
Huaxia Bank	21.34	11
Bank of Ningbo	21.02	12
China Citic Bank	20.77	13
Bank of Beijing	19.52	14
Industrial Bank	18.16	15
PingAn Bank	5.08	16

3. The Empirical Analysis of Dividend Policy Influence Factors of China's Listed Banks

3.1. Sample Selection and Data Sources

Because the Agricultural Bank of China and the China Everbright Bank was listed in 2010, in order to ensure the integrity of the data, this article selects the data from 2010 to 2013 as samples. The relevant data are gained from the RESSET database data and the annual report of listed banks, and the tool using for data processing and empirical analysis is Eviews 6.0.

3.2. Hypothesis

There are many factors that can influence a listed bank's dividend policy, and this article tries to find out the effect of the profitability, the growth ability, the operation capacity, the debt levels and the liquidity of assets by using empirical method. First of all, we need to put forward the following hypothesis:

Hypothesis 1: The stronger the profitability, the higher the dividend payment rate.

Dividend is a way for a company to distribute its surplus, to pay back for its shareholders. Therefore, the profitability of a company is one of the important factors affecting its dividend policy. In general, a company has strong profitability can obtain long-term stability of surplus, and is more likely to have a higher dividend payment rate. On the other hand, a company has weak or unstable profitability is more likely to have a lower dividend payment rate. The indicators reflecting a company's profitability including return on total assets, return on net assets and earnings per share etc. This article selects earnings per share as an indicator for the profitability of listed banks in China.

Hypothesis 2: The stronger the growth ability, the lower the dividend payment rate.

A company has strong growth ability often need more money for its development, so it tends to remain its surplus within the company instead of distributing to shareholders. Therefore, a company has strong growth ability is more likely to have a lower dividend payment rate. This article selects earnings per share growth rate to represent the growth ability of listed banks.

Hypothesis 3: The stronger the operation capacity, the higher the dividend payment rate.

Operation capacity represents a company’s ability to use money, represents the turnover efficiency of company funds. A company has strong operation capacity can use less money to meet its funding need, therefore it can distribute more surplus to shareholders, that is to say, it often has a higher dividend payment rate. This article selects the total assets turnover ratio as the indicator for listed bank’s operation capacity.

Hypothesis 4: The higher the debt levels, the lower the dividend payment rate.

When a company has high debt levels, it often chooses not to pay dividends or pay fewer dividends, because most of its surplus will be used to make a repayment to creditors. So, the higher debt level a company is, the smaller the probability it will pay dividend to shareholders. This article selects the asset-liability ratio as the indicator for listed bank’s debt levels.

Hypothesis 5: The stronger the liquidity of assets, the higher the dividend payment rate.

There is a positive correlation between a company’s profitability and liquidity of assets, a company has strong liquidity of assets tends to bring high profit, thus the ability to pay dividends is guaranteed, the dividend payment rate is higher. This article selects operating activities cash flow per share as the indicator for listed bank’s liquidity of assets.

3.3. Building and Testing for the Empirical Model

Based on the above hypothesis and theoretical analysis, this article will analyze the factors affecting the dividend policy of listed banks in China by using multivariate linear regression model. In this model, the explained variable is dividend payment rate, and the explanatory variables are earnings per share, earnings per share growth rate, total assets turnover ratio, asset-liability ratio and operating activities cash flow per share. The specific information of these variables is shown in **Table 5** as follows:

Based on the above definition of variables, we can build the multivariate linear regression model as follows:

$$Y = \alpha_0 + \alpha_1 X_1 + \alpha_2 X_2 + \alpha_3 X_3 + \alpha_4 X_4 + \alpha_5 X_5 + \varepsilon$$

In this model, α_0 is constant term, $\alpha_1 - \alpha_5$ is regression coefficients of five Explanatory variables, and ε is random error.

After building the model, we should test the model. Because the panel data used in this article is “wide and short” type, there is no need to carry out the unit root test, but we still need to carry out the F test to find out whether we should use a mixed effect model or a fixed effect model, the F test results by using Eviews 6.0 are shown in **Table 6** as follows:

From **Table 6**, we know that the P value of F test is less than 0.05, based on the principle of F test, if the P value is less than 0.05, the fixed effect model is appropriate, so the multivariate linear regression model should

Table 5. The specific information of variables.

Variables	Influence factors	Indicators	Variable’s name	Expected symbol ¹
Explanatory variables	Profitability	Earnings per share	X ₁	+
	Growth ability	Earnings per share growth rate	X ₂	-
	Operation capacity	Total assets turnover ratio	X ₃	+
	Debt levels	Asset-liability ratio	X ₄	-
	Liquidity of assets	Operating activities cash flow per share	X ₅	+
Explained variable	Dividend payment levels	Dividend payment rate	Y	/

¹“+” represents a positive relationship between the variable and the dividend payment rate, and “-” represents a negative relationship between the variable and the dividend payment rate.

Table 6. Results of F test.

Effects Test	Test cross-section fixed effects		
	Statistic	d.f.	Prob.
Cross-section F	3.648987	(15, 43)	0.0004
Cross-section Chi-square	52.547689	15	0.0000

be a fixed effect model.

Next we carry out the Hausman test to find out whether we should use a fixed effects model or a random effects model, the Hausman test results by using Eviews 6.0 are shown in **Table 7** as follows:

From **Table 7**, we know that the P value of Hausman test is less than 0.05, based on the principle of Hausman test, if the P value is less than 0.05, the fixed effect model is appropriate, so the multivariate linear regression model should be a fixed effect model.

According to the results of F test and Hausman test above, this article will choose a fixed effects model.

3.4. Multiple Linear Regression Analysis

Based on the above model and the test results, we can carry out the multiple linear regression analysis with panel data of 16 listed banks from 2010 to 2013 by using Eviews 6.0, and the results are shown in **Table 8** as follows.

As it is shown in **Table 8**, the R2 of the regression analysis is 0.871056, and the adjusted R2 is 0.811082, so the goodness-of-fit of this model can basically accords with the requirement. Besides, the DW value is 2.226460, which is close to 2, so there is no autocorrelation. In addition according to the P values of coefficients, we know that the coefficient of X2 and X3 is not significant, and they are symbolic contrary to expectations, the another three coefficients of variables are significant under the confidence level of 95% and their symbol are the same as expected.

4. Conclusions and Analysis

According to the results of the above empirical analysis, the hypothesis 1, hypothesis 4 and hypothesis 5 can be accepted, that is to say, the dividend payment rate is positively related to the profitability and the liquidity of assets, and is negatively related to the debt levels. The correlation coefficient between the earnings per share and the dividend payment rate is 0.045395, the correlation coefficient between asset-liability ratio and the dividend payment rate is -3.301119 , and the correlation coefficient between the operating activities cash flow per share and the dividend payment rate is 0.003375, so it is clear that asset-liability ratio has greatest influence on dividend payment rate, next is the earnings per share, and the influence of the operating activities cash flow per share is quite small.

On the other hand, although the correlation coefficient of earnings per share growth rate and total assets turnover ratio didn't pass the significance test, we can't simply draw the conclusion that these two factors have no influence on the dividend payment rate, one of the reasons to explain the result is the small quantity of data, of course there are also other reasons.

The regulators in China are very concerned about the implementation of the dividend policy of listed company, and they have introduced some relevant laws and regulations to guide the listed companies to make the dividend policy in recent years. However, while these laws and regulations are making the dividend policy standard, they are also limiting the free development of the listed companies. According to "the measures for the administration of the issuance of new shares of listed company", if a listed company haven't distributed dividends to shareholders for three years and the board can't offer a reasonable explanation, the security company acting as lead underwriter must pay more attention to it and offer a detailed explanation in the due diligence report while the listed company applying for refinancing. In 2004, a regulation was introduced to forbid the public issuance of stock of listed company which is profitable but hasn't paid dividend for three years. In 2008, the securities regulatory commission raised a requirement that total cash dividends shall not be less than 30% of the average annual distributable profits in last three years. The growing listed banks may need a lot of money for development, but they can't choose the most appropriate dividend policy because of the laws and regulations, they have

Table 7. Results of Hausman test.

Test cross-section random effects			
Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	12.625350	5	0.0272

Table 8. Results of multiple linear regression analysis.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3.436610	1.403810	2.448059	0.0185
X ₁	0.045395	0.022019	2.061577	0.0453
X ₂	0.050739	0.043071	1.178044	0.2453
X ₃	-5.233077	4.099135	-1.276630	0.2086
X ₄	-3.301119	1.442593	-2.288323	0.0271
X ₅	0.003375	0.001087	3.105224	0.0034
R-squared	0.871056	Mean dependent var		0.390915
Adjusted R-squared	0.811082	S.D. dependent var		0.280089
S.E. of regression	0.063243	Sum squared resid		0.171989
F-statistic	14.52393	Durbin-Watson stat		2.226460
Prob (F-statistic)	0.000000			

to find other ways for financing instead of using surplus. This can explain why the growth ability of a company has nothing to do with the dividend policy, because dividend policy is the requirements of laws and regulations, rather than the choice of the listed company.

The total assets turnover ratio in the financial industry has a certain relationship with the main business types of financial institutions. Compared to the listed securities and insurance companies, the total assets turnover ratio of the listed banks is generally lower, this is its industry characteristics, it has nothing to do with the earnings, so its influence on the dividend policy is also not significant.

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