International Journal of Scientific Management and Development ISSN:2345-3974
January 2016, Vol.4, No.1, pp:1-6

Research Paper

Investigation of Stock Market Liquidity and Banks Dividend Policy in Stock Market of Iran

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Available online at: www.IJSMD.Com
Received 4th September 2015, Accepted 23th November 2015

Abstract

Making decision on the payment of dividends is one of the important decisions that the banks listed on Tehran Stock Exchange are facing. Policy of banks listed on Tehran Stock Exchange on dividends is the factors that affect their value. Dividend profit is known to adhesion properties. Bank listed on the Stock Exchange in Tehran that reduce their dividends, usually encounter with a sharp decline in its value. Therefore, this research seeks to answer the question whether these factors affect the payment of dividend profit and what is the extent of these effects. The result of this research is shown that bank liquidity has significant negative effects on the bank's dividend profit. So, the first hypothesis that "there is a significant relationship between bank liquidity and dividend policy" cannot be excluded. Also growth opportunity of Bank (shown by the ratio of market value to book value) has a significant positive impact on the bank's dividend profit. So, the second hypothesis that that "there is a significant correlation between growth opportunities and banks intention on dividend" cannot be excluded. AndAccording to estimated results, the size of the Bank has no significant effects on bank dividend profit. So, third hypothesis that "there is a significant correlation between the size of the bank and dividend policy" is rejected. According to estimated results, the volume of profit in bank has a significant positive impact on the bank's dividend profit. So, fourth hypothesis that "there is a significant correlation between the profitability of the bank and dividend policy" cannot be excluded.

Keywords: Stock Market, payment of dividends, Banks Dividend Policy.

Introduction

Investment firms provide performance report and decision demand on some of the issues by holding the annual meeting. In most cases, the most controversial part of the convention is to decide on the dividend, because shareholders offer maximum profit distribution to receive cash return for their investment and managers in corporations are not interested on dividend in order to compensate the lack of liquidity and avoid exiting of financial resources.

So, making decision on the payment of dividends is one of the important decisions that the banks listed on Tehran Stock Exchange are facing. Policy of banks listed on Tehran Stock Exchange on dividends is the factors that affect their value. Dividend profit is known to adhesion properties. Bank listed on the Stock Exchange in Tehran that reduce their dividends, usually encounter with a sharp decline in its value.

So, managers tend to avoid high interest payments. Unless, they are confident to their abilities to keep high levels of dividend. Survey of Lintner (1956) and Bravo (2005) also found that from perspectives of managers sustainability is one of the most important factors in decisions of dividend. In fact, gaining profit regularly is the basis to pay dividend profit. Bank listed on the Tehran stock exchange which regularly fails to gain profit, certainly cannot have a regular dividend policy.

Also, dividends payment is subject to having sufficient cash. Mismatch between liquidity and dividend profit means challenging of Bank listed on the Tehran Stock Exchange. In fact, banks listed in the Tehran Stock Exchange distribute dividends when have sufficient cash flow to distribute profits.

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In one hand, dividend payments resulted in the withdrawal of resources in the bank listed in the Tehran Stock Exchange. When, just the demand of shareholders is considered and high dividend profit is paid, the bank listed in the Tehran Stock Exchange cannot use the opportunities ahead. In fact, firms are facing with many investment opportunities need more cash; therefore, they pay lower dividend profit.

Given the above explanations, the profitability of banks listed on the Tehran Stock Exchange, changes in the payment of dividend profit, liquidity of banks listed in the Tehran Stock Exchange, growth opportunities and the size of the banks listed in Tehran Stock Exchange are factors influencing the dividend policy. Therefore, this research seeks to answer the question whether these factors affect the payment of dividend profit and what is the extent of these effects.

Objectives of the study

The main objective of this study is to investigate the relationship between stock market liquidity and dividend policy of the Bank listed on the Tehran Stock Exchange. But secondary objectives of this study are as follows:

- investigate the dividend policy in banks listed in the Tehran Stock Exchange.
- investigate the effect of stock market liquidity and growth opportunities in banks listed in the Tehran Stock Exchange on their sensitivity dividend
- investigate the relationship between dividend policy and liquidity in banks listed in the Tehran Stock Exchange.
- investigate the effect of liquidity on the stock market

Hypotheses

1. There is a significant relationship between liquidity of banks listed in Tehran Stock Exchange and dividend policy.
2. There is a significant relationship between growth opportunities and the willingness of banks listed in Tehran Stock Exchange on the dividend.
3. There is a significant relationship between sizes of the banks listed in the Tehran Stock Exchange and dividend policy.
4. There is a significant relationship between profitability of banks listed in Tehran Stock Exchange and dividend policy.

Variables

Row	hypotheses	Independent variable	Dependent variable
1	First	Liquidity (ability to pay dividend)	Dividend
2	Second	Growth opportunities	Dividend
3	Third	Size of bank	Dividend
4	Fourth	Profitability of bank	Dividend

In this study, the ratio of "market value to book value" of banks listed on Tehran Stock Exchange to examine investment opportunities and growth has been used, because it is expected that banks listed in Tehran Stock Exchange with high-growth opportunities are not interested to distribute profits.

It could be stated that the liquidity situation of banks listed in Tehran Stock Exchange is related to its capital structure. Banks listed in Tehran Stock Exchange may have high profit, but their liquidity is not adequate due to improper implementation of investment projects and development. Also, if the cash flow is high and the need for cash is scarce. (I.e. there are fewer opportunities for profitable investment) banks listed on Tehran Stock Exchange shall decide on the dividend.

Possible applications of this research:

• Identify dividend policy in banks listed in Tehran Stock Exchange and the benefits of investing in them
• Create a framework for researcher in field of stock market
• Identify barriers in dividend at banks listed in Tehran Stock Exchange

Research literature

Researchers have provided many models and theories to describe, explain and predict the factors affecting the Bank's decision on the dividend. Miller and Modigliani (1961) in their famous theory called the "irrelevance dividend profit" claimed dividend in full market conditions had no impact on the bank value and is irrelevant in a decision-making factor.

However, their claims were subject to the establishment of several assumptions which are mentioned as following:

1) The absence of tax,
2) The absence of transaction costs including the cost of equity and debt,
3) Lack of impact of financial leverage (debt ratio) on capital fee
4) Information asymmetry between owners and managers in relation to expected future conditions,
5) Lack of impact of the allocation of net income between dividend profit and retained earnings on cost of equity in the Bank (Fung, Zechariah and Tan, 2007)

Baker et al (2001) in their article entitled "Factors affecting decisions dividend policy," conducted a survey to determine the most important factors in American banks which are traded .Based on the responses of 188 financial manager, income stability was introduced as the most important factors of dividend profit,.

Hida Kaki Kiyoshi Kato et al examined the relationship between the current changes in dividend payments and past performance of profits. The dependent variable used in the regression is payments dividend and standardized changes based on total assets were independent variable.

They concluded that not only profit of the current changes but also changes in profit in one year ago has a significant positive effect on the dividend changes. (Kiyoshi Kato, 2002)

Deshmukh examined the dynamic of dividend policy using a random model and concluded that dividend has reverse relationship to inequality of information and growth of investment and is directly related to the level of cash flows. (Deshmukh, 2003)

Abor et al (Abor, et al., 2010) in a study examined the impact of investment opportunities and financing on dividend policy. The research was conducted on 34 banks listed in the Ghana stock exchange in 1990 to 2006. Panel data with fixed effects methods has been used to estimate multivariable linear model. Summary of findings of the study indicate that the investment opportunity has a negative impact on dividend policy. Also, financing of bank have little impact on the bank's dividend policy and profitable banks are more likely to divide the profits among its shareholders.

DeAngelo et al (2010) in a study entitled "life-cycle, profitability, investment opportunities," stated that life cycle, profitability and investment opportunities are influencing factors on dividend profit.

Sheng, Len and Chong (2011) in a study on banks listed on the Taiwan Stock Exchange examined the relationship between future earnings and dividend policy. Results of the study indicated that dividend and actual profits of bank in two next years are correlated and they interpreted this finding as information content in dividends for investors.

Konceler et al. (2011) examined the American Bank which tried to divide profit within 2000 to 2006. They report their findings in this case that both earnings per share and cash flow per share are important indices to anticipate the amount of dividend profit in Banks.

Nrayanvzhng (2011) examined the effect of liquidity on the efficiency using the criteria including exchange volume, turnover rate and risk of exchange in Shanghai and Shenzhen at China and found that liquidity has strong and negative effect on stock exchange in Shanghai compared to Shenzhen stock exchange, but these results were not confirmed by all criteria.

ALadin Hamyd, Ronin Cancan examined the simultaneous effect of stock price and liquidity in 2013. The results showed that the synchronization of stock price effect on the liquidity of shares. Under the assumptions of relative synchronization, the more consistent returns, improves the liquidity.

Under the assumptions of absolute simultaneity, the liquidity is more in more volatile stocks or beta. Our results support both hypotheses. We find that all three indicators mentioned in this article are negatively correlated with stock returns and systematic. The analysis also shows that larger industrial component in returns improves the liquidity.

The general view is that one of the factors affecting the Bank's dividend policy is the uncertainty of cash flows; this means that the banks with lack of confidence than their own cash flows, in anticipation of likely future exposure to liquidity shortages tend to be less distributed dividend and instead resource operations (i.e. their profits) to retained earnings in the Bank.

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Konceler et al. (2011) examined the American banks which tried to divide the profit in 2000 and 2006. They interpret their findings in this case that the earnings per share and cash flow per share are appropriate indicators to predict the amount of dividend profit in banks.

Amido and Abor (2011) in a study entitled "Profitability, cash flow, tax, percent of shareholders and fluctuations of profit" expressed that profitability, cash flows and growth opportunities are factors affecting dividend profit. DeAngelo et al (2010) in a study introduced "Life Cycle, Profitability, Investment Opportunities" as influencing factors in dividend profit.

Chai and Su (2009) examined the importance of the uncertainty of future cash flows in their dividend policy. The results showed that among banks, uncertainty of cash flow on dividend is much greater than the effect of other potential factors dividend policy such as composition of the paid-up capital, conflict of interest and investment opportunities.

Chen, Liu and Huang (2009) examined the effect of changes in cash dividends on stock prices in 2000 to 2004.The results showed that changes in cash dividends has a positive impact on stock prices. The study also showed little heterogeneity between the effects of changes in cash dividends at China stock markets. However, the effect of changes in cash dividends for the period represents the difference between the two rules. Cross-sectional analysis indicates that both cash and non-floating dividends have power to explain changes in cash dividend.

Independent variables in this study:

1. Liquidity (the ability to pay dividends)
2. Growth opportunities
3. The size of the bank
4. The Bank's profitability

Dependent variables of the present study:

Dividend profit

Research Methodology

In this study, the relationship between the variables is analyzed and obtained based on objective research. In this research, the financial statements of branches of Iran Zamin bank in Iran from 2011 to 2013 have been examined. First, the regression model of panel data and how to estimate these models are explained based on estimation model and using panel data approach.

The introduction of models and data used

Since, the main purpose of this study is to investigate the relationship between liquidity in stock market and dividend policy of banks, an appropriate model using panel data methods is estimated. But, secondary objectives of the present study are as follows:

- ✓ Investigate the dividend policy of Banks
- ✓ Investigate the effect of bank liquidity and growth opportunities of banks on the sensitivity of dividend
- ✓ Investigate the relationship between dividend policy and liquidity on banks
- ✓ Investigate the effect of liquidity on banks

So, in order to examine the main objective and secondary objectives of this study, we estimate the following model.

$$dividend_{it} = \alpha_i + \beta_1 profit_{it} + \beta_2 liquidity_{it} + \beta_3 size_{it} + \beta_4 growth_{it} + \varepsilon_{it}$$

Where:

$$i = 1,2,3,\ldots,60$$

$$t = 1385,1386,\ldots,1392$$

$dividend_{it}$: Dividend profit

$profit_{it}$: Banking Profit

$liquidity_{it}$: Banking liquidity

$size_{it}$: Size of Bank

$growth_{it}$: the ratio of market value to book value (as an index for growth opportunity and Banking investment.

Estimation of studied model

Before estimating the model as mentioned before, it is needed to conduct a test to specity whether estimation of data panel is in fixed effect of aggregated data, which is described in the following.

The significance test of the group (Limer test)

Results of Limer test are shown in the table below.

Table1 - results of Limer test

		Redundant Fixed Effects Tests	
		Equation: EQ01	
	Test cross-section fixed effects		
Prob.	d.f.	Statistic	Effects Test
0.0000	(59,356)	27.032205	Cross-section F

The hypothesis is rejected and the estimation is in panel data character, given the hypotheses of Limer test is on the character of the estimate in data aggregation and according to the results of above table.

The test to select fixed effects method or random effects method

After rejecting the null hypothesis, the model is estimated using GIS Method and random effect method to examine the acceptance of fixed intercept method. As mentioned earlier, random effect method considers a unified intercepts for all units and the difference between intercept in each unit is transferred to the relevant unit except. The specific intercept of each unit is obtained by multiplying the error and the intercept of all units.

After estimating the model by both methods, finally Hausman test is used to select either fixed effects method or random effects method.

If different intercept for different groups were confirmed, then the most appropriate option can be selected using the Hausman test between estimation with fixed effect and estimation with random effects.

In Hausman test, the null hypothesis is as follows:

H0: There is no correlation between individual effects and explanatory variables.

The assumption of ER Model is that all α are random; therefore, there is no correlation between X and α . Hausmann also used this hypothesis and states; if there is no correlation between X and α , the R.E model would be better. For this model, Hausman test was conducted in Eviews 7 software and the results are shown in Table 4-2.

Table2 - the results of the Hausman test

Correlated Random Effects - Hausman Test			
Pool: POOL02			
Test cross-section random effects			
Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	33.482053	4	0.0001

Hausman statistic has degree of freedom K (The number of explanatory variables). Chi-square statistic for degrees of freedom 4 and probability level of the statistic indicates that the null hypothesis that there is a causal effect can be rejected. So, we use fixed effect method.

The introduction of models and data used

Since, the main purpose of this study is to investigate the relationship between liquidity in the banks listed on Tehran stock exchange and their dividend policy; we will try to estimate an appropriate model using panel data methods. The secondary objectives of the present study are as follows:

- ✓ Investigate dividend policy in banks
- ✓ Investigate the effect of stock market liquidity and growth opportunities on the their dividend sensitivity
- ✓ Investigate the relationship between dividend policy and liquidity in banks
- ✓ Investigate the effect of liquidity on the stock market

So, in order to examine the main objective and secondary objectives of this study, we estimate the following model.

$$dividend_{it} = \alpha_i + \beta_1 profit_{it} + \beta_2 liquidity_{it} + \beta_3 size_{it} + \beta_4 growth_{it} + \varepsilon_{it}$$

Where:

$$i = 1,2,3,\ldots,60$$

$$t = 1385,1386,\ldots,1392$$

$dividend_{it}$: Dividend profit

$profit_{it}$: Banking Profit

$liquidity_{it}$: Banking liquidity

$size_{it}$: Size of Bank

$growth_{it}$: the ratio of market value to book value (as an index for growth opportunity and Banking investment.

Estimating the model using fixed effect model method

The estimated model using fixed effect method is as following:

Table 3- the estimation results of panel data models with fixed effect method

Variable	Estimation coefficient	T Statistic	Significance probability
C	197	18.09	0.000
$liquidity_{it}$	-0.0004	-1.94	0.05
$profit_{it}$	0.03	1.65	0.09
$size_{it}$	-0.00000528	-0.23	0.81
$growth_{it}$	7.92	2.36	0.01
R-Squared	0.45		
Adjust R-squared	0.34		
Prob(F-Statistic)	0.000		
Durbin-Watson stat	1.88		

Resource: Findings of the study

The value in parentheses indicates significant probability (Prob) for each of the coefficients.

Interpretation of estimation results:

As shown in Table (4-3), bank liquidity has significant negative effects on the bank's dividend profit. So, the first hypothesis that "there is a significant relationship between bank liquidity and dividend policy" cannot be excluded.

According to estimated results, growth opportunity of Bank (shown by the ratio of market value to book value) has a significant positive impact on the bank's dividend profit. So, the second hypothesis that that "there is a significant correlation between growth opportunities and banks intention on dividend" cannot be excluded.

According to estimated results, the size of the Bank has no significant effects on bank dividend profit. So, third hypothesis that "there is a significant correlation between the size of the bank and dividend policy" is rejected.

According to estimated results, the volume of profit in bank has a significant positive impact on the bank's dividend profit. So, fourth hypothesis that "there is a significant correlation between the profitability of the bank and dividend policy" cannot be excluded.

Research limitations

Many social and political factors affect on the economy in the country and bank as one of most important financial systems; therefore, the type of relationships cannot be specified correctly. The economic models in Iran are insufficient give the broad factors that affect on economic sections systematically.

Iran Zamin Bank has been chosen as a case study. This is a new private bank which is forming and is not able to implement and observe all standards of banking system, so access to the available data related to the study variables is other limitation of the researcher.

Recommendations for future research

It is recommended to examine other explanatory variables in addition to the studied variables. Also, the certification of professors is added to the study model to estimate it closer to the reality.

When data is available, it is suggested to conduct this research in different economic periods. According to the role of economic variables, this important issue can be considered in different modes and different periods.

When data is available, it is suggested to conduct this research on several banks and the both public and private. Because according to different policies in banks, this important issue can be considered in different modes.

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