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## Determinants of Dividend Policy: An Analysis of Indian Banking Sector

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### ABSTRACT

Dividend policy is one of the most important and controversial aspects under corporate finance and the aim of the study are to investigate the determinants of dividend policy especially with respect to Indian banking sector. This study attempts to analyze the factors which influence the dividend policy of Indian banking firms. Using panel data pertaining to Indian banks, two regression models have been proposed, one showing dividend payout ratio and the other showing dividend rate as a dependent variable. The study considers both bank specific internal variables as well as macroeconomic variables as explanatory variables influencing the dividend policy of Indian banks. The results of the determinants of dividend payout ratio of Indian banks show growth rate of real GDP affecting dividend payout ratio positively and significantly, and also show return on assets and total deposits to total assets ratio of Indian banks affecting their payout ratio negatively and significantly. The results of the determinants of dividend rate show no variable emerging as a significant determinant, indicating the fact that Indian banks consider dividend payout ratio to be a better measure of their dividend policy.

**Key Words: Dividend Payout ratio, Dividend rate, Dividend Policy, Corporate finance**

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## **1: Introduction**

The dividend policy created by the organization is one of the key issues in the company's finances because it can affect the value of the company and the wealth of the shareholders. From the perspective of financial management, the key objective is to determine the dividend policy that maximizes the price of the stock market of the company. Dividend policy remains one of the most debatable issues in corporate finance. Financial economists are dedicated to designing and researching corporate dividend policies. The dividend policy is of two types, one is the second management surplus. Dividends are income that is paid to shareholders with the income of the company as determined by the board of directors. The dividend per share is the amount of earnings per share. The percentage of income paid as dividends is called the dividend payment ratio. The dividend policy determines the distribution model of the shareholder's income. This study tries to find the determinants of the dividend policy of Indian banks. The banking industry is the backbone of a country's economy. All Indian banks are listed on the Indian Stock Exchange. The study investigated listed banks that paid dividends more frequently. The most important determinants of the dividends of the Indian banking industry are:

1. Financial efficiency
2. Safety
3. Risk
4. Profitability

Shareholders have huge expectations about the dividends they receive. The first objective of the study was to determine the most important factor in the dividend policy of the Indian banking industry and secondly, investigate the relationship between dividend payments and their determinants: - Financial efficiency, - Security, - Risk and - Profitability.

This research will help the board of directors of listed companies, especially the rationalization of the bank's dividend policy. Therefore, this study helps to understand the determinants of dividend policy and helps the board make a decision on dividends.

### **1.1 : What Is Dividend and Why Companies Pay Dividend?**

Dividends are the distribution of the company's profits distributed to shareholders. Dividends can be in the form of cash or additional shares. The company pays shareholders a certain amount of cash per share and may also appear as dividends in shares. The company issues new shares to existing shareholders based on the proportion of existing shares. For investors, dividends are the reward for their investment.

There are many reasons why a company must pay dividends; The main objective of the company is to generate and maximize the wealth of its owners (shareholders). This is a mandatory and strategic allocation of some of the company's tax revenues to a group of shareholders, often called a dividend per share (DPS), as determined by the board of directors. Dividend payments represent cash outflows, which may deplete the company's future cash resources available for investment. Dividends are

successful transaction between shareholders and dividend payments resulting from periodic payments in cash to shareholders by increasing the risk of investors ultimately, immediately and the future of the company's financial health of the signal and the open signal to maintain its long-term discipline to implement business management.

### **Pattern of Dividend Policies in Banks**

The dividend policy pattern varies from one bank to another, depending on its characteristics. This can be a stable dividend policy, that is, the bank pays a fixed amount of dividends per share, regardless of whether there is any fluctuation in its earnings, and follows a slow and constant change, which is the main characteristic of the policy of stable dividends. The fast-growing emerging banks adopt the policy of not paying dividends immediately. These banks need resources to expand and diversify, or investors agree to accept higher yields or banks cannot access the capital market. The policy of paying periodic and additional dividends is adopted during the periods in which banks accumulate higher profits; therefore, additional profits are shared as an additional dividend instead of increasing the regular dividend payment ratio. The administration believes that shareholders have the right to pay dividends only when the bank's liquidity conditions and profits guarantee "higher dividend income and vice versa."

### **Impact of Retained Earnings on Future Dividend Policy**

The basic objective of financial managers is to focus on how to maximize the wealth of the shareholders in which the company is involved. In this context, they analyze all available sources of financing based on their strengths, weaknesses and future needs. The retained earnings are one of the most important sources of strategic financing that existing companies provide for the financing of capital projects, expansion, diversification plans and redemption of stocks and bonds. By retaining the profits, the company obtains funds at the lowest cost without floating commissions, and considers that the retained earnings are equivalent to the returns that the shareholders renounced. For shareholders, the cost of retained earnings is basically the opportunity cost of these funds. This is equivalent to the income they receive when investing these funds in alternative investments. The cost of the retained earnings is determined based on the earnings opportunities of the shareholders who have surrendered continuously.

### **Impact of Dividend on Stock Price**

Dividend policy has a great impact on the company's image, for managers, investors and lenders and other incumbent creditors also have an impact. For investors, the declaration and payment of dividends of positive and negative direction of safety and performance, and is considered an important element to evaluate the future investments of the company. Managers should evaluate the flexibility of paying dividends and strengthening investment projects. More dividend means that can be used during a minimum of capital investment and reduce the gap between managers will seek funding in the external capital markets, which would increase the risk. The lender believes that if the organization pays a high dividend, the amount available will not be enough to provide services and

redeem your claim. However, dividend payments are an example of the situation of special institutions that ultimately affect all creditors. Their policies are used as a mechanism to reduce agency costs, and the policies adopted will not change frequently. Reducing the amount of the dividend will be treated as a signal in trouble, and because its signals affect the volatility of the stock price.

### **1.2: Impact of the tax policy on dividends**

Fiscal policies play an important role in the company's dividend policy. From the perspective of companies and shareholders, tax policies are crucial. For the company, dividends can be paid with the after-tax earnings. When paying dividends, the company did not receive any tax incentives, but increased the tax burden and, finally, it became a disadvantage for the company. In addition, in accordance with the provisions of the "Income Law" Article 115-S of 1961, the company that pays the dividends payable "distributable tax benefits", known as "tax on dividends." The dividend tax levied on the company is 12.5%, with an additional 10% increase in additional tax and 2% tax on education. As regards the shareholders, according to Article 10 (34) of the Income Tax Act of 1961, the dividends received (provisional or final) are exempt from taxes, and shareholders do not have to pay any tax on them. dividends they receive. Factors affecting Dividend Policy.

### **Theoretical Framework**

Banks play important role in bridging the gap between the end users and operates in unpredictable social environment with changing economical norms depending upon pace of growth and development. Factors like external and internal economic condition, age of banks, capital market status, and government policies related to universal competition, taxation policy, past dividend rates, liquidity position of the banks, regularity and stability in dividend payment, strength to borrow funds can affects dividend policies of the banks to a large extent. These factors cannot be eliminated but can be minimized through judicious and efficient utilization of all available resources.

### **2 : Review of Literature**

Since the strategy aims to obtain a competitive advantage, which requires a lot of money, companies must adopt appropriate financial policies to mobilize venture capital. Cs and dp are a complex set of analysis because investment decisions and financing decisions are important decisions that companies must make in their operations.

**Jabbouri (2016)** analysed current profitability, liquidity and dividend scale and a significant positive correlation. **Deshmukh et al (2013)** showed an increase in the reduced dividend in debt. Debt financing increased interest costs, ultimately reducing profits and the proportion of loans to total assets and profitability are the main factors that affect delinquency. **(Ramachandran and Packkirisamy, 2010)** According to the investor's point of view, dividends either in the form of cash flow, capital gains can now be decided if any of the company's management announced a dividend in

the form of cash payments or Capital gains, but investors believe that investors are very important to the management of preferences of investors have a strong reputation in the market. (**Adelegan, 2009**), concluded through the dividend policy to increase the rate of spending or retain income after taxes, since it depends mainly on the strategy of the company that the administration should establish. However, if the management policy is to maximize the wealth of shareholders through the distribution of dividends, this decision also depends on several factors such as past performance, growth and profitability to pay in the future in order to maintain the image of Shareholders in the market and Cash inflows for various projects, because we speak of cash dividends need sufficient cash, not stock dividends. There are numerous cases(**Farther and Weygand, 2009**) found that return on assets have increased before the announcement of dividends and declined after the announcement for several years. This fact declines the beliefs that positive dividends are associated are associated only with higher future profitability. (**Abdelsalam et al. 2008**) Companies with higher returns on capital have announced more dividends, and positive correlations have also been found between the dividend decision and the payment rates. But equally important is that no significant correlation has been found between the dividend policy and the composition of the company's board of directors. Dividends are not solely associated with net earnings (**Twaijry,2007**) but with the past dividends paid, in fact the strongest determinant of the dividends payout ratio is its past ratios. (**Fama and French,2001**) analyze the issue of lower dividends paid by corporate firms over the period 1973-1999 and the factors responsible for the decline. In particular they analyze whether the lower dividends were the effect of changing firm characteristics or lower propensity to pay on the part of firms. They observe that proportion of companies paying dividend has dropped from a peak of 66.5 percent in 1978 to 20.8 percent in 1999. They attribute this decline to the changing characteristics of firms: “The decline in the incidence of dividend payers is in part due to an increasing tilt of publicly traded firms toward the characteristics – small size, low earnings, and high growth – of firms that typically have never paid dividends.(**Higgins, 1995**), but he also said that if the company prospers, stockholders are the chief beneficiaries , if it falters, they are the chief losers. **Smith (1988)** presented that stocks are one of the most popular forms of investment. People buy stocks for various reasons: some are interested in the long-term growth of their investment by buying low priced stock of a new company in the hope of substantially growth of share price over the next few years. Another reason he suggested that in a well-established firm stockholders expect the stock growth will be stable over the long run.(**Smith,1988**). **Huda and Farah (2011)** found that dividend payout decision in banking industry is dependent upon income, earnings per share, cash and retained earnings. **Marfo-Yiadom and Agyei (2011)** found that dividend payout policy in the banking sector of Ghana is based on profits, collateral capacity, leverage, and growth rate. **Al-Malkawi (2007)** and **Fama and French (2001)** linked the dividend payout with size of firm, profits, growth.

**Lee (2009)** stated that dividend is dependent upon profit and risk in Korean banking sector. **Lie (2005)** also found that firm’s ability to pay dividend decreases due to debts; it reduces the availability

of free cash flow. Kania & Bacon (2005) explored that dividend payout ratio is dependent on profits, growth, risk, liquidity, ownership control and planning for expansion. Gill et al. (2010) found that dividend payout is based on sales, profit, tax and debts to equity ratio. Al-Kuwari (2009) also concluded that the dividend payout is positively correlated with size and negatively associated with leverage ratio. Berger and DeYoung (1997) confirmed that performance of bank is related to asset quality (loan management) which leads to dividend payout decision.

## **2.1 : RESEARCH METHODOLOGY**

### **Research Design**

The study consists of 59 companies of Indian Banking Sector paying dividend. During study it is not feasible to select all the companies of Banking Sector for the study because most of the companies are not paying Dividend to their Shareholder's. So, this study has adopted the data of 59 Companies (17 Private Banks and 42 Public Banks) of Indian Banking sector such as:

1. Dividend Payout Ratio
2. Return on Equity
3. Debt Equity Ratio
4. Net Cash Flow from Operations
5. Earnings per Share
6. Price EarningsRatio

### **2.2 Objectives of the Study**

1. To study the impact of determinants of Dividend Policy.
2. To analyze the factors which influence the dividend policy of Indian banking sector.

### **2.3 Hypotheses of the Study:**

$H_0$ : There is no significant effect of Return on Equity, Debt Equity Ratio, Net Cash Flow from Operating Activities, Equity Per Share and Price Earning Ratio.

$H_1$ : Return on Equity has a significant effect on Dividend Policy.

$H_2$ : Debt- Equity Ratio has a significant effect on Dividend Policy.

$H_3$ : Cash Flow from Operations has a significant effect on Dividend Policy.

$H_4$ : Earning Per Share has a significant effect on Dividend Policy.

$H_5$ : Price Earning Ratio has a significant effect on Dividend Policy.

### **Data collection**

#### **2.4 Type of Research**

##### **Secondary Research**

The secondary data are those which have already collected and stored.

With a view of the nature and scope of the study, various formulas are used for the analysis and calculation of Ratios, Co-relation and Regression. The analysis is conducted for 59 companies of

Indian Banking Sector. This study is based on the secondary data. For the purpose of study the financial data from the period 2007-08 to 2016-17 of selected Indian banks would be used. The data would be analyzed using statistical tools like multiple regression technique, t test, the coefficient of determination ( $R^2$ ) and F-Value. The data has been sourced from Prowess database of Centre for Monitoring Indian Economy (CMIE) and analysis is done through MS-EXCEL. In this study Dividend Payout istaken as dependent variable. Return on Net worth, Debt Equity ratio, Net Cash Flow from Operations, Earning Per Share and Price Earning are used as independent variables.

## 2.5 ANALYSIS TOOLS AND TECHNIQUES

### Standard Deviation:

$$s = \sqrt{\frac{\sum_{i=1}^N (x_i - \bar{x})^2}{N - 1}}$$

### Paired t-test:

$$t = \frac{(\sum D)/N}{\sqrt{\frac{\sum D^2 - \frac{(\sum D)^2}{N}}{(N-1)(N)}}$$

### Variance:

$$\sigma^2 = \frac{\sum (X - \mu)^2}{N}$$

### F- test

F = variation between sample means / variation within the samples

### Correlation

$$r = \frac{n(\sum xy) - (\sum x)(\sum y)}{\sqrt{[n\sum x^2 - (\sum x)^2][n\sum y^2 - (\sum y)^2]}}$$

### Regression

$$r_{xy} = \frac{\overline{xy} - \bar{x}\bar{y}}{\sqrt{(\overline{x^2} - \bar{x}^2)(\overline{y^2} - \bar{y}^2)}}$$

### Conceptual Framework

The usual practice of the company is to allocate part of its profits to dividends and retain other payments and keep them elsewhere to invest in profitable channels. It is important to determine the relationship between dividend payments and income withholding. Assumptions indicate that dividends are paid or not paid or have the same effect on the value of the company. Therefore, shareholders are not worried about dividends. However, under imperfect market conditions, shareholders are more willing to distribute cash dividends if there are taxes and transaction costs. Walter believes that maintaining the dividend index affects the wealth of shareholders. The price of shares rises only when the return on investment is greater than the capitalization rate. Gordon and Ezra Soloman support dividend payments because they have a positive effect on stock prices. Factors that affect dividend payments are shareholder expectations, financial requirements, legal and other restrictions.

### 3. Data Analysis

#### Correlation Analysis

COMPANIES	DPR & ROE	DPR & DER	DPR & NCF	DPR & EPS	DPR & P/E
<b>PRIVATE BANKS</b>					
Axis Bank Ltd.	-0.88	-0.12	0.05	-0.09	-0.30
City Union Bank Ltd.	-0.62	0.16	0.00	-1.00	-1.00
Dhanlaxmi Bank Ltd.	0.03	0.90	0.00	0.90	-0.07
Federal Bank Ltd.	1.00	-0.52	0.00	0.07	0.17
H D F C Bank Ltd.	0.49	0.54	-0.01	-0.08	0.09
I C I C I Bank Ltd.	-1.00	0.24	-0.02	-0.01	0.47
Indusind Bank Ltd.	-0.86	0.29	-0.04	-0.32	-0.13
Jammu & Kashmir Bank Ltd.	0.57	-0.21	-0.02	-0.04	-0.06
Karnataka Bank Ltd.	1.00	0.95	0.00	-0.13	-0.19
Karur Vysya Bank Ltd.	-0.44	0.45	0.00	0.25	-0.69
Kotak Mahindra Bank Ltd.	-0.92	0.37	-0.09	0.27	0.08
Lakshmi Vilas Bank Ltd.	-1.00	0.96	0.00	-1.00	-0.95
Nainital Bank Ltd.	-0.11	0.12	0.00	0.00	0.00
R B L Bank Ltd.	0.68	-0.18	0.00	0.00	-0.11
South Indian Bank Ltd.	0.27	0.66	0.00	-0.03	0.16
Tamilnad Mercantile Bank Ltd.	-0.24	0.80	0.00	0.00	0.00
Yes Bank Ltd.	0.38	-0.38	0.00	0.12	0.08



COMPANIES	DPR & ROE	DPR & DER	DPR & NCF	DPR & EPS	DPR & P/E
<b>PUBLIC BANKS</b>					
Allahabad Bank	0.09	-0.68	-0.02	0.24	0.53
Andhra Bank	0.94	-0.32	-0.78	-0.53	-0.26
Bank Of Baroda	0.64	0.80	0.03	-0.13	0.18
Bank Of India	-0.32	-0.65	0.18	0.18	1.00
Bank Of Maharashtra	0.13	0.11	0.00	-0.20	0.35
Bank Of Rajasthan Ltd. [Merged]	-0.06	0.00	0.00	0.00	0.35
Bharatiya Mahila Bank Ltd. [Merged]	0.00	0.00	0.00	0.00	0.00
Canara Bank	-0.34	0.18	0.32	0.25	-1.00
Central Bank Of India	-0.30	-0.54	-0.92	0.48	-0.88
Centurion Bank Of Punjab Ltd. [Merged]	0.00	0.00	0.00	0.00	0.00
Corporation Bank	0.08	-0.71	-0.09	0.17	0.11
Dena Bank	-0.57	0.61	-0.03	0.90	1.00
Greater Bombay Co-Op. Bank Ltd.	0.17	0.31	0.01	0.00	0.00
I D B I Bank Ltd.	-0.79	1.00	0.05	1.00	-0.43
I N G Vysya Bank Ltd. [Merged]	1.00	-0.34	-0.82	0.12	-0.09
Indian Bank	0.02	0.23	0.87	-0.04	-0.22
Indian Overseas Bank	-1.00	0.11	0.13	1.00	1.00
Kapol Co-Op. Bank Ltd.	-0.15	-0.41	0.14	0.00	0.00
Kokan Mercantile Co-Op. Bank Ltd.	0.20	0.34	0.05	0.00	0.00
N K G S B Co-Op. Bank Ltd.	0.67	0.16	0.00	0.00	0.00

New India Co-Op. Bank Ltd.	0.49	0.50	0.00	0.00	0.00
Oriental Bank Of Commerce	0.01	0.81	0.00	0.11	0.15
Patan Co-Operative Bank Ltd.	-0.20	0.20	0.13	0.00	0.00
Punjab & Maharashtra Co-Op. Bank Ltd.	-0.26	-0.62	0.00	0.00	0.00
Punjab & Sind Bank	-0.12	0.28	0.00	0.45	-0.69
Punjab National Bank	0.23	-0.44	0.00	0.00	0.14
Saraswat Co-Operative Bank Ltd.	-0.56	-0.20	0.00	0.00	0.00
Shamrao Vithal Co-Op. Bank Ltd.	0.16	-0.10	0.00	0.00	0.00
Shri Arihant Co-Op. Bank Ltd.	-0.11	0.92	0.08	0.00	0.00
State Bank Of Bikaner & Jaipur [Merged]	0.48	0.18	0.00	0.00	0.49
State Bank Of Hyderabad [Merged]	-0.14	0.65	0.00	0.00	0.00
State Bank Of India	-0.12	0.27	0.00	0.00	-0.11
State Bank Of Mysore [Merged]	0.13	0.16	0.00	0.00	0.03
State Bank Of Patiala [Merged]	0.14	-0.40	0.00	0.00	0.00
State Bank Of Travancore [Merged]	0.16	0.43	0.00	-0.01	0.34
Syndicate Bank	0.34	0.49	0.00	0.12	0.11
T J S B Sahakari Bank Ltd.	-0.34	-0.12	0.00	0.00	0.00
Uco Bank	-0.19	0.19	0.00	0.19	0.32
Union Bank Of India	-0.34	-0.34	0.00	0.29	-0.29
United Bank Of India	-0.51	-0.18	0.00	0.11	0.07
Vijaya Bank	-0.18	0.29	0.00	0.48	-0.75
Zoroastrian Co-Op. Bank Ltd.	-0.67	0.16	0.00	0.00	0.00

Table 1

### 3.1 Results from Correlation Matrix

**Table 1** explains the correlation among variables that can have impact on Dividend Policy of Indian Banks. The result of correlation matrix was obtained for 17 Private Sector Banks and 42 Public Sector Banks in India. In case of Private Sector Banks, **Axis Bank Ltd** has positive correlation with Net cash flow from operations (0.05) and negative correlation with return on equity (-0.88), debt-equity ratio (-0.12), EPS (-0.09) and PE (-0.30).

**City Union Bank Ltd** has negative correlation with return on equity (-0.62) and Positive Correlation with debt equity ratio (0.16), no correlation with net cash flow from operations and perfectly negative correlation with EPS and PE.

**Federal Bank Ltd** has perfectly positive correlation with return on equity, positive correlation with EPS (0.07), PE (0.17) and no correlation with net cash flow from operations.

**HDFC Bank Ltd** has positive correlation with return on equity (0.49), debt-equity ratio (0.54), PE (0.09) and negative correlation with net cash flow from operations (-0.01) and EPS (-0.08).

**ICICI Bank Ltd** has positive correlation with debt-equity ratio (0.24), PE ratio (0.47), negative correlation with net cash flow from operations (-0.02), EPS (-0.01) and perfectly negative correlation with return on equity.

**IndusInd Bank Ltd** has negative correlation with return on equity (-0.86), net cash flow from operations (-0.04), EPS (-0.32), PE (-0.13) and positive correlation with debt equity ratio (0.29).

**Jammu & Kashmir Bank Ltd** has positive correlation with return on equity (0.57) and negative correlation with debt equity ratio (-0.21), net cash flow from operations (-0.02), EPS (-0.04), PE (-0.06).

**Karnataka Bank Ltd** has perfectly positive correlation with return on equity, positive correlation with debt equity ratio (0.95), no correlation with net cash flow from operations and negative correlation with EPS (-0.13) and PE (-0.19).

**Kotak Mahindra Bank Ltd** has negative correlation with return on equity (-0.92), net cash flow from operations (-0.09) and positive correlation with debt equity ratio (0.37), EPS (0.27), PE (0.08).

**RBL Bank Ltd** has positive correlation with return on equity (0.68), negative correlation with debt equity ratio(-0.18), PE (-0.11) and no correlation with net cash flow from operations and EPS.

**South Indian Bank Ltd** has positive correlation with return on equity (0.27), Debt-Equity Ratio (0.66), PE (0.16), negative correlation with EPS (-0.03) and no correlation with Net Cash Flow from Operations.

**YES Bank Ltd** has positive correlation with return on equity (0.38), EPS (0.12), PE (0.08), negative correlation with Debt-Equity Ratio (-0.38) and no correlation with Net Cash Flow from Operations.

In case of Public Sector Banks, **Allahabad Bank** has positive correlation with Return on equity (0.09), EPS (0.24), PE (0.53) and negative correlation with Debt-Equity Ratio (-0.68) and Net Cash Flow from Operations (-0.02).

**Andhra Bank** has positive correlation with Return on equity (0.94) and negative correlation with Net Cash Flow from Operations (-0.78) and Debt-Equity Ratio (-0.32), EPS (-0.53) and PE (-0.26).

**Bank of Baroda** has positive correlation with return on equity (0.64), Debt-Equity Ratio (0.80), Net Cash Flow from Operations (0.03), PE (0.18) and negative correlation with EPS (-0.13).

**Bank of India** has positive correlation with Net Cash Flow from Operations (0.18), EPS (0.18), perfectly positive correlation with PE and negative correlation with return on equity (-0.32) and Debt-Equity Ratio (-0.65).

**Bank of Maharashtra** has positive correlation with return on equity (0.13), Debt-Equity Ratio (0.11), PE (0.35), negative correlation with EPS (-0.20) and no correlation with Net Cash Flow from Operations.

**Central Bank of India** has negative correlation with return on equity (-0.30), Debt-Equity Ratio (-0.54), Net Cash Flow from Operations (-0.92), PE (-0.88) and positive correlation with EPS (0.48).

**Corporation Bank** has positive correlation with return on equity (0.08), EPS (0.17), PE (0.11) and negative correlation with Debt-Equity Ratio (-0.71) and Net Cash Flow from Operations (-0.09).

**Dena Bank** has negative correlation with return on equity (-0.57), Net Cash Flow from Operations (-0.03) and positive correlation with Debt-Equity Ratio (0.61), EPS (0.90) and perfectly positive correlation with PE.

**IDBI Bank Ltd** has negative correlation with return on equity (-0.79), PE (-0.43), positive correlation with Net Cash Flow from Operations (0.05) and perfectly positive correlation with Debt-Equity Ratio and EPS.

**Indian Bank** has positive correlation with return on equity (0.02), Debt-Equity Ratio (0.23), Net Cash Flow from Operations (0.87) and negative correlation with EPS (-0.04) and PE (-0.22).

**Indian Overseas Bank** has perfectly negative correlation with return on equity, perfectly positive correlation with EPS, PE and positive correlation with Debt-Equity Ratio (0.11) and Net Cash Flow from Operations (0.13).

**Oriental Bank of Commerce** has positive correlation with return on equity (0.01), Debt-Equity Ratio (0.81), EPS (0.11), PE (0.15) and no correlation with Net Cash Flow from Operations.

**Punjab and Sind Bank** has negative correlation with return on equity (-0.12), PE (-0.69), positive correlation with Debt-Equity Ratio (0.28) and has no correlation with Net Cash Flow from Operations.

**Punjab National Bank** has positive correlation with return on equity (0.23), PE (0.14), negative correlation with Debt-Equity Ratio (-0.44) and no correlation with Net Cash Flow from Operations and EPS.

**State Bank of India** has negative correlation with return on equity (-0.12), PE (-0.11), positive correlation with Debt-Equity Ratio (0.27) and no correlation with Net Cash Flow from Operations.

**Syndicate Bank** has positive correlation with return on equity (0.34), Debt-Equity Ratio (0.49), EPS (0.12), PE (0.11) and has no correlation with Net Cash Flow from Operations.

**UCO Bank** has negative correlation with return on equity (-0.19), positive correlation with Debt-Equity Ratio (0.19), EPS (0.19), PE (0.32) and no correlation with Net Cash Flow from Operations.

**Union Bank of India** has negative correlation with return on equity (-0.34), Debt-Equity Ratio (-0.34), PE (-0.29) and positive correlation with EPS (0.29) and no correlation with Net Cash Flow from Operations.

**United Bank of India** has negative correlation with return on equity (-0.51), Debt-Equity Ratio (-0.18), positive correlation with EPS (0.11), PE (0.07) and no correlation with Net Cash Flow from Operations.

**Vijaya Bank** has negative correlation with return on equity (-0.18), PE (-0.75), positive correlation with Debt-Equity Ratio (0.29), EPS (0.48) and no correlation with Net Cash Flow from Operations.

**Zoroastrian Co-Op. Bank Ltd** has negative correlation with return on equity (-0.67), positive correlation with Debt-Equity Ratio (0.16) and no correlation with Net Cash Flow from Operations, EPS and PE.

**3.2Regression Analysis**

<b>COMPANIES</b>	<b>R-Square</b>	<b>Significance F value</b>
<b>PRIVATE BANKS</b>		
Axis Bank Ltd.	0.922207106	0.024447029
City Union Bank Ltd.	0.496412040	0.607792216
Dhanlaxmi Bank Ltd.	0.631458835	0.391206856
Federal Bank Ltd.	0.351753236	0.807691361
H D F C Bank Ltd.	0.154099899	0.970964513
I C I C I Bank Ltd.	0.631293529	0.391474349
Indusind Bank Ltd.	0.937780633	0.015895323
Jammu & Kashmir Bank Ltd.	0.992815260	0.000224219
Karnataka Bank Ltd.	0.622930433	0.405024913
Karur Vysya Bank Ltd.	0.564708547	0.499575056
Kotak Mahindra Bank Ltd.	0.836825380	0.098075484
Lakshmi Vilas Bank Ltd.	0.721923067	0.249334811
Nainital Bank Ltd.	0.844859294	0.019100567
R B L Bank Ltd.	0.802476477	0.070289134
South Indian Bank Ltd.	0.642284468	0.373725473
Tamilnad Mercantile Bank Ltd.	0.485231464	0.279377666
Yes Bank Ltd.	0.592959045	0.453742606

COMPANIES	R-Square	Significance F value
<b>PUBLIC BANKS</b>		
Allahabad Bank	0.835549340	0.099474023
Andhra Bank	0.846094832	0.088150778
Bank Of Baroda	0.801505822	0.139468758
Bank Of India	0.882160347	0.053753813
Bank Of Maharashtra	0.852084926	0.081962412
Bank Of Rajasthan Ltd. [Merged]	0.342515600	0.068503120
Bharatiya Mahila Bank Ltd. [Merged]	0.000000000	0.000000000
Canara Bank	0.877552900	0.057751124
Central Bank Of India	0.726837401	0.242028015
Centurion Bank Of Punjab Ltd. [Merged]	0.000000000	0.000000000
Corporation Bank	0.732065213	0.234317896
Dena Bank	0.892363396	0.045343118
Greater Bombay Co-Op. Bank Ltd.	0.544759160	0.209146666
I D B I Bank Ltd.	0.991822231	0.000290193
I N G Vysya Bank Ltd. [Merged]	0.969028237	0.004067497
Indian Bank	0.969371679	0.003979183
Indian Overseas Bank	0.839152124	0.095545272
Kapol Co-Op. Bank Ltd.	0.367449537	0.454957646
Kokan Mercantile Co-Op. Bank Ltd.	0.917113655	0.005141049
N K G S B Co-Op. Bank Ltd.	0.794679141	0.034853062
New India Co-Op. Bank Ltd.	0.078726608	0.960219238
Oriental Bank Of Commerce	0.815707002	0.122178595
Patan Co-Operative Bank Ltd.	0.848590379	0.018137644
Punjab & Maharashtra Co-Op. Bank Ltd.	0.603091157	0.151992478
Punjab & Sind Bank	0.953265378	0.009112910
Punjab National Bank	0.815433518	0.122503655
Saraswat Co-Operative Bank Ltd.	0.712081450	0.073303304
Shamrao Vithal Co-Op. Bank Ltd.	0.883153482	0.010502342
Shri Arihant Co-Op. Bank Ltd.	0.909373322	0.006184748
State Bank Of Bikaner & Jaipur [Merged]	0.962593697	0.005894264
State Bank Of Hyderabad [Merged]	0.787495478	0.037554080
State Bank Of India	0.362059288	0.795326418
State Bank Of Mysore [Merged]	0.560450907	0.506451261
State Bank Of Patiala [Merged]	0.841483249	0.019995874
State Bank Of Travancore [Merged]	0.723603807	0.246829553
Syndicate Bank	0.968638839	0.004116876
T J S B Sahakari Bank Ltd.	0.532240159	0.222895445
Uco Bank	0.736896699	0.227252290
Union Bank Of India	0.913945772	0.029655823
United Bank Of India	0.744491920	0.216267187
Vijaya Bank	0.661377294	0.343120263
Zoroastrian Co-Op. Bank Ltd.	0.304780009	0.566457986

Table 2

### 3.3 Interpretation of Regression Analysis

As shown in table, High R Square value in Private Banks like Axis Bank Ltd, Dhanlaxmi Bank Ltd, ICICI Bank Ltd, IndusInd Bank Ltd, Jammu & Kashmir Bank Ltd, Kotak Mahindra Bank Ltd, Lakshmi Vilas Bank Ltd, Nainital Bank Ltd, RBL Bank Ltd, South Indian Bank Ltd shows that the independent variables like Return on equity, Debt-Equity Ratio, Net Cash Flow from operations, EPS and PE explains a major portion of private sector banks which has R Square value quite high on the other hand City Union Bank Ltd, Federal Bank Ltd, HDFC Bank Ltd, Karur Vysya Bank Ltd, Tamilnad Mercantile Bank Ltd and Yes Bank Ltd has R Square Value quite low.

In case of Public sector banks, R Square Value was high in Allahabad Bank, Andhra Bank, Bank of Baroda, Bank of India, Bank of Maharashtra, Canara Bank, Central Bank of India, Corporation Bank, Dena Bank, IDBI Bank Ltd, ING Vysya Bank Ltd, Indian Bank, Indian Overseas Bank, Kokan Mercantile Co-Op Bank Ltd, N K G S B Co-Op Bank Ltd, Oriental Bank of Commerce, Patan Co-Operative Bank Ltd, Punjab and Sind Bank, Punjab National Bank, Saraswat Co-Operative Bank Ltd, Shamrao Vithal Co-Op Bank Ltd, Shri Arihant Co-Op Bank Ltd, State Bank of Bikaner and Jaipur, State of Hyderabad, State Bank of Patiala, State Bank of Travancore, Syndicate Bank, Uco Bank, Union Bank of India and United Bank of India where as Bank of Rajasthan Ltd, Bharatiya Mahila Bank Ltd, Centurion Bank of Punjab Ltd, Greater Bombay Co-Op Bank Ltd, Kapol Co-Op Bank Ltd, New India Co-Op Bank Ltd, Punjab & Maharashtra Co-Op Bank Ltd, State Bank of India, State Bank of Mysore, T J S B Sahakari Bank Ltd, Vijaya Bank and Zoroastrian Co-Op Bank Ltd has low R Square Value.

While analyzing significance F-value of **Private Sector Banks** it was found that F-value was statistically significant for banks like Axis Bank Ltd, Jammu & Kashmir Bank Ltd, Kotak Mahindra Bank Ltd, Nainital Bank Ltd and IndusInd Bank Ltd has **F-value < 0.05** thus Null hypothesis was rejected and alternative hypothesis was accepted.

Where as in **Public Sector Banks** it was found that F-value was statistically significant for banks like Bharatiya Mahila Bank Ltd, Centurion Bank of Punjab Ltd, Dena Bank, IDBI Bank Ltd, ING Vysya Bank Ltd, Indian Bank, Kokan Mercantile Co-Op Bank Ltd, N K G S B Co-Op Bank Ltd, Patan Co-Operative Bank Ltd, Punjab & Sind Bank, Saraswat Co-Operative Bank Ltd, Shamrao Vithal Co-Op Bank Ltd, Shree Arihant Co-Op Bank Ltd, State Bank of Bikaner & Jaipur, State Bank of Hyderabad, State Bank of Patiala, Syndicate Bank and Union Bank of India has **F-value < 0.05** thus Null hypothesis was rejected and alternative hypothesis was accepted.

### 4 : Findings of the Study

1. Frequency of Perfectly Positive Correlation to Perfectly Negative Correlation movements is identified in the last 10 years of aforesaid variables.
2. The analytical results of the study reveals that the EPS of 9 out of 17 private banks such as Axis Bank Ltd, City Union Bank Ltd, Dhanlaxmi Bank Ltd, IndusInd Bank Ltd, Jammu &

- Kashmir Bank Ltd, Karnataka Bank Ltd, Karur Vysya Bank Ltd, Laxmi Vilas Bank Ltd and RBL Bank Ltd has negative correlation with dividend payout ratio.
3. In private banks like Federal Bank Ltd and Karnataka Bank Ltd where as in public banks like ING Vysya Bank Ltd shows perfectly positive correlation between return on equity and dividend Payout ratio.
  4. In private banks like ICICI Bank Ltd and Lakshmi Bank Ltd where as in public banks like Indian Overseas Bank shows perfectly negative correlation between return on equity and dividend Payout ratio.
  5. In public and Private sector banks there is no bank which shows no correlation between return on equity and dividend payout ratio.
  6. In private banks like Axis Bank Ltd, Federal Bank Ltd, Jammu & Kashmir Bank Ltd, RBL Bank Ltd and Yes Bank Ltd where as in public banks Allahabad Bank, Andhra Bank, Central Bank of India, Punjab National Bank, State Bank of Patiala and United Bank of India are weakly negative correlated.
  7. This study reveals that out of 5 independent variables (Return on Equity, Debt-Equity Ratio, Net Cash Flow from Operations, Earnings Per Share and Price Earnings Ratio) Debt-Equity has least influence on Dividend Policy in Indian Banking Sector.
  8. Private Sector banks like Dhanlakshmi Bank Ltd, ICICI Bank Ltd, IndusInd Bank Ltd, Jammu & Kashmir Bank Ltd, Laxmi Vilas Bank Ltd, Kotak Mahindra Bank Ltd and in Public Sector banks like Corporation Bank, Dena Bank, IDBI Bank Ltd, Indian Bank, Oriental Bank of Commerce and Punjab & Sind Bank has significant influence on dividend policy.
  9. Out of 10 years some banks in Private sector banks like Karur Vysya Bank Ltd, Nainital Bank Ltd and Tamilnad Mercantile Bank Ltd and in public sector banks like Bank of Rajasthan, Bharatiya Mahila Bank Ltd and Centurion Bank of Punjab Ltd has not distributed dividend because they had suffered losses or they had retained the earnings for future investments.
  10. State Bank of Patiala, State Bank of Bikaner & Jaipur, State Bank of Hyderabad, State Bank of Mysore, State Bank of Travancore and Bharatiya Mahila Bank Ltd Merged with State Bank of India in 2016. Post Merger State Bank of India showed higher returns due to which there is positive correlation between return on Equity and Dividend Policy, EPS and Dividend Policy.
  11. Individual Bank returns of both Public and Private Sector Banks are correlated with Equity and EPS with dividend policy.
  12. In Private Sector Banks like Axis Bank Ltd, Jammu & Kashmir Bank Ltd, Kotak Mahindra Bank Ltd and in Public Sector Banks like IDBI Bank Ltd, Indian Bank, Dena Bank, Punjab & Sind Bank, Pre-merged State Banks has significant influence on dividend policy.



13. Private Sector Banks like City Union Bank Ltd, Federal Bank Ltd, HDFC Bank Ltd, Yes Bank Ltd where as in Public Sector Banks like Bank of Baroda, New India Co-Op Bank Ltd, State of India doesn't have significant influence on dividend policy.
14. As per theory a higher profitable companies pay higher dividend but in this study it is observed that higher profitable companies pay lower dividend and company with lower return pay high dividend.
15. The selected companies is showing dividend payment record during the selected time period for study purpose which is of last 10 years and general trend is observed that dividends have either remained constant, increased and declined

## **5 : Conclusion and Limitations**

### **5.1 Conclusion**

The results provide some interesting results about dividend payments. The minimum significance of the relevant variables selected by the dividend company is that, in many cases, the results support the theoretical expectations related to the dividend policy, and there is a different number of results inconsistent with the theoretical results. This study suggests that the most irrelevant variable has no effect on the dividend policy of the banking sector in India, and in some companies, the most irrelevant variable does affect the dividend policy.

According to the theory, the yield of equity and the dividend rate should have a positive correlation, but in this study, it is revealed in some cases it is the opposite. In the case of anyone or to determine the level of significant p values of significance by the F value, the benefit per share and the return of equity play a crucial role in the analysis of correlation and regression.

This study aims to exclude or accept the null hypothesis or alternative hypothesis through the hypothesis test, which found that the impact between independent variables and independent variables.

Through this analysis, the first objective of the study has shown that there is sufficient data to know the impact of the dividend policy on the independent variables. The study also shows that statistics on the proportion of dividend payments from banks vary from year to year.

By using the value  $F < 0.05$  such an important level of regression analysis helps to understand the R-square value of private banks Axis Bank Ltd, Dhanlaxmi Bank Ltd, ICICI Bank Ltd, IndusInd Bank Ltd, Kotak Mahindra Bank Ltd and Lakshmi Vilas Bank Ltd and so on.

### **5.2 Limitations:**

- 5.2.1 The study is based on secondary data collected by using Prowess database of Centre for Monitoring Indian Economy (CMIE) data source, and websites of various firms concerned. Therefore, the quality of the study depends upon the accuracy, reliability, and quality of secondary data source.

- 5.2.2 In the study, a sample of 59 out of 240 Banking Sector Companies has been considered for analyzing the “Determinants of dividend policy”. In future, researchers can consider inclusion of more firms to take up a study with large sample units to explore more possible results.
- 5.2.3 In the study, basic financial ratios, correlation, and regression are only used for analysis, therefore inclusion of some or more predictor variables may change the result of determinants of dividend policy of the Banking Sector Companies in India.
- 5.2.4 This research is an event study with event used is the date of publication or date of submission of annual financial statements of the period 2008 – 2017

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