Determinants Of Dividend Payout Ratios-A Study Of The Indian Banking Sector

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INTRODUCTION

Banking sector is a major contributor to the development of the Indian economy. It aids in mobilizing savings from various sectors which are foundation for growth and overall development of the country. **The Indian Banking Industry, which is governed by the Banking Regulation Act, 1949, can be broadly classified into two major categories, non scheduled banks and scheduled banks. Scheduled banks comprise of commercial banks and the cooperative banks. In terms of ownership, commercial banks can be further grouped into nationalized banks, the State Bank of India and its group banks, regional rural bank and private sector banks (old/new domestic and foreign). These banks have around 67000 branches spread across the country (researchandmarkets.com)**. The first bank in India was established in 1786. From 1786 till today, the journey of the Indian Banking System can be segregated into three distinct phases. They are mentioned below:

- Early phase from 1786 to 1969 of Indian Banks.
- Nationalization of Indian Banks upto 1991 prior to Indian banking sector reforms.
- New phase of Indian Banking System, with the advent of Indian Financial and Banking Sector Reforms after 1991.

The Reserve Bank of India (RBI), as the central bank of the country, closely monitors developments in the whole financial sector. The banking sector is dominated by Scheduled Commercial Banks (SCBs). As of March 2002, there were 296 Commercial banks (SCBs). As at end-March 2002, there were 296 Commercial banks operating in India. This included 27 Public sector banks (PSBs), 31 Private, 42 Foreign and 196 Regional Rural Banks. Also, there were 67 scheduled cooperative banks consisting of 51 scheduled urban cooperative banks and 16 scheduled state cooperative banks.

State Bank of India is still the largest bank in India with the market share of 20 percent. ICICI and its two subsidiaries merged with ICICI Bank, creating the second largest bank in India with a balance sheet size of ₹ 1040 bn. **Higher provisioning norms, tighter asset classification norms, dispensing with the concept of 'past due' for recognition of NPAs, lowering of ceiling on exposure to a single borrower and group exposure etc., are among the important measures in order to improve the banking sector.** A minimum stipulated Capital Adequacy Ratio (CAR) was introduced to strengthen the ability of banks to absorb losses and the ratio has subsequently been raised from 8 percent to 9 percent. It has been increased to 12 percent (from the year 2004) on the Basel Committee recommendations. Retail Banking is the new mantra in the banking sector. The home loans alone account for nearly two third of the total retail portfolio of the bank. According to one estimate, the retail segment is expected to grow at 30-40 percent in the coming years. Net banking, phone banking, mobile banking, ATMs and bill payments are the new buzz words that banks are using to lure customers. With a view to provide an institutional mechanism for sharing of information on borrowers/potential borrowers by banks and financial institutions, the Credit Information Bureau (India) Ltd. (CIBIL) was set up in August 2000. The Bureau provides a framework for collecting, processing and sharing credit information on borrowers of credit institutions. State Bank of India and Housing Development and Finance Corporation are the promoters of CIBIL. The RBI is now planning to transfer its stake in the State Bank of India, National Housing Bank and National Bank for Agricultural and Rural Development to private players. Also, the government has sought to lower its holding in PSBs to a minimum of 33 percent of total capital by allowing them to raise capital from the market. Banks are free to acquire shares, convertible debentures of corporates and units of equity oriented mutual funds, subject to a ceiling of 5 percent of total outstanding advances (including commercial paper). The finance ministry spelt out structure of the government-sponsored ARC called the Asset Reconstruction Company (India) Limited (Arcil).

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This pilot project of the ministry would pave way for smoother functioning of the credit market in the country. The government will hold 49 percent stake and private players will hold the remaining 51 percent-the majority being held by ICICI Bank (24.5 percent). Therefore, it would be interesting to know how dividend distribution pattern of this sector has changed and the various factors influencing the Dividend Payout ratio of the banking sector of the Indian economy.

There are a number of decisions that are vital to the performance and target accomplishment in the banking sector. The area of corporate dividend has been widely researched and a number of theories and models have been formulated. Dividend policy is one of the most intriguing topic in the area of finance. Three decades ago, Black (1976) wrote, *"The harder we look at dividend, the more it seems like a puzzle with pieces that just don't fit together."* Black (1976) in his study concluded with this question, *"What corporations do about dividend policy? We don't know."*

In the Indian context, a few studies have analyzed the dividend behavior of corporate firms. Krishnamurty and Sastry (1971), Mahapatra and Sahu (1993), Bhat and Pandey (1994), Narasimhan and Asha (1997) and Narasimhan and Vijayalakshmi (2002), Mahakud (2005) and Jayesh (2006) are the good examples of empirical research carried out in India in the field of dividend decisions.

This paper tries to explore the dividend decisions of banks in a competitive global economy. Dividend decisions may enhance the market value of the firm if seen positively by investors, but at the same time, it may mean less availability of internal funds and more reliance on external sources for expansion. Moreover, while deciding on the dividend payment, the management tries to strike a balance between shareholders' expectation and firm's long term goals. Such analysis is useful because these decisions impact the value of the firm.

REVIEW OF LITERATURE

Researchers have proposed many different theories about the factors that influence a firm's dividend policy. A number of factors have been identified in the previous empirical studies to influence the dividend policy decisions of the firm such as profitability, risk, cash flows, growth, taxes, price earning ratio, debt equity ratio etc. Profitability of the firm has long been regarded as the main indicator of the firm's ability to distribute dividends to the shareholders. Since the literature available in the field under reference is wide in nature and scope, the literature found in the form of popular write-ups, working groups, research studies/ articles of researchers/ economists and the comments of economic analysts are reviewed here in this particular section. The most important theoretical and empirical studies related to dividend decisions have been reviewed here.

Miller and Modigliani (1961) viewed dividends as irrelevant, and believed that in a world without market imperfections like taxes, transaction costs or asymmetric information; dividend policy should have no effect on its market value. However, since the capital market is neither perfect nor complete, the dividend irrelevance proposition needs to be re-visited, especially focusing on the effects of information content of dividends, agency cost and institutional constraints. The market imperfection of asymmetric information is the basis for three distinct efforts to explain corporate dividend policy. The mitigation of the information asymmetries between managers and owners via unexpected changes in dividend policy is the cornerstone of dividend signaling models. Agency cost theory uses dividend policy to better align the interests of shareholders and corporate managers. The free cash flow hypothesis is an ad hoc combination of the signaling and agency cost paradigm; the payment of dividends can decrease the level of funds available for perquisite consumption by corporate managers.

The signaling theories posit dividend policy as a vehicle used by corporate managers to transmit private information to the market **(Bhattacharyya, 1979; Miller and Rock, 1985; Williams, 1988; John and Williams, 1985)**. Agency cost models begins with the agency problems emphasized by **Jensen (1986)**. Agency problems result from information asymmetries, potential wealth transfers from bondholders to stockholders through the acceptance of high-risk and high-return projects by managers, and failure to accept positive net present value projects and perquisite consumption in excess of the level consumed by prudent corporate managers. Large dividend payments reduce funds available for perquisite consumption and investment opportunities and requires managers to seek financing in capital markets. The efficient monitoring of capital markets reduces less than optimal investment activity and excess perquisite consumption and hence reduces the costs associated with ownership and control separation **(Easterbrook, 1984)**.

Moreover, **Lintner (1956)** made an empirical attempt to explain corporate dividend behavior by means of conducting interviews of personnel of large firms of United States of America. It was established that the primary determinants of

changes in dividends paid out were the most recent earnings and past dividends paid. It was found that management is concerned with change in dividends rather than the amount and it tries to maintain a level of dividends. Also, there was propensity to move towards some target payout ratio but speed of adjustment varies among companies. There exist many empirical studies in India and abroad that identify the pattern and factors affecting dividend policy. Some of the well established empirical studies have been summed up here under:

❁ **Bauer and Bhattacharyya (2006)** established that empirical modeling of dividends has been dominated by **Lintner (1956)**. The study established that Lintner's model is also poorly specified when earnings are serially correlated. In time series testing, the model fits the empirical reality at least 75% of the time. Moreover, for firms with longer data series of 35 years or more, it described the empirical data succinctly in 96% of the cases.

❁ **Li, Feng, Song and Shu (2006)** analyzed the decision-making of dividend policy and the reasons for dividends policy selection in non-state-owned listed companies in China by using structural equation modeling. The main research findings are as follows: **(1)** The dividend policy of non-state-owned listed companies in China can be interpreted by the western agency theory for dividend, and they found that if compared with the manager, the owner is a more important variable that influences the dividend policy, **(2)** Four motives such as investment opportunities, refinancing ability, stock price and potential repayment capacity are all important factors for decision makers to determine the dividend policy.

Frankfurter and Wood (2002) established that a number of conflicting theoretical models lacking strong empirical support define current attempts to explain the puzzling reality of corporate dividend behavior. The outcome is consistent with the contention that no dividend model, either separately or jointly with other models, is supported invariably. **DeAngelo, DeAngelo and Skinner (2000)** analyzed the information content of special dividends. The research concluded that special dividends were not displaced by stock repurchases, indicating that most specials failed to survive on their own accord and not because managers discovered the tax advantages of repurchases. **Slovin, Sushka and Poloncheck (1994)** assessed the information conveyed by commercial bank announcements of dividend reductions. It has been established that valuation effects on announcing banks are negative and significantly greater than for industrial firms. Cross-sectional regressions used in the study indicates that the size of dividend reductions is crucial but there is no evidence of clientele effects. **Dhameja (1978)** in his study tested the dividend behavior of Indian companies by classifying them into size group, industry group, growth group and control group. The study found that there was no statistically significant relationship between dividend pay out, on the one hand and industry and size on the other. Growth was inversely related to dividend pay out and was found to be significant. The main conclusions are that dividend decisions are better explained by Lintner's model with current profit and lagged dividend as explanatory variables. **Fama and Babiak (1968)** studied the determinants of dividend payments by individual firms during 1946-64. For this purpose, the statistical techniques of regression analysis, simulations and prediction tests were used. The study concluded that net income seems to provide a better measure of dividend than either cash flow or net income and depreciation included as separate variable in the model.

Smith (1963) studied factors influencing corporate saving decision of firms. The factors have been classified into two broad categories, first being factors involved in investment decisions and second arising from stability of dividends. It was concluded that income, previous levels of dividend played a very important role in corporate savings in the short run but demand for investment funds had somewhat smaller role in deciding behavior of corporate savings. But in the long run, demand for investment funds played a crucial role in estimating corporate savings. In the Indian context, a few studies have analyzed the dividend behavior of corporate firms.

Krishnamurty and Sastry (1971) analyzed dividend behavior of Indian chemical industry for the period 1962-1967 and took cross sectional data of 40 public limited companies. The results revealed that Lintner model provides good explanation of dividend behavior.

Mahapatra and Sahu (1993) find cash flow as a major determinant of dividend followed by net earnings. **Bhat and Pandey (1994)** undertook a survey of managers' perceptions of dividend decisions and found that managers perceive current earnings as the most significant factor. **Narasimhan and Asha (1997)** observe that the uniform tax rate of 10 percent on dividend as proposed by the Indian union budget 1997-98 alters the demand of investors in favor of high payouts.

Mohanty (1999) found that firms, which issued bonus shares, have either maintained the pre-bonus level or only

decreased it marginally, thereby, increasing the payout to shareholders. **Narasimhan and Vijayalakshmi (2002)** analyzed the influence of ownership structure on dividend payout and found no influence of insider ownership on dividend behavior of firms. **Linter (1956)** conducted a classic study on how US managers make dividend decisions. He developed a model based on the survey of 28 well established industrial US firms, which is considered to be a finance classic. According to him, the dividend payment pattern of a firm is influenced by the current year earnings and previous year dividends.

Higgins (1972) shows that payout ratios are negatively related to a firm's need to finance growth opportunities. The purpose of his paper was to derive and test a model of the dividend saving decision for a shareholder wealth-maximizing firm. Starting with the basic proposition that shareholders should prefer capital gains income to dividend income in a world of differential taxes and transactions costs, dividends are viewed as basically a residual in the corporate decision process. The term ***residual*** does not imply that there is no dividend decision or that dividend policy *does not* affect the worth of the firm since, as argued, the selection of an optimal level of dividends in an uncertain environment still involves the forecasting of future investment needs and the selection of a dividend-saving program to finance these needs at minimum cost. The relevant costs in this context relates to the possible accumulation of excess liquidity resulting from insufficient dividends on the one hand and the possible need for external equity financing resulting from excessive dividends on the other. Results of empirical tests implied by this theory generally confirm its consistency with the data. In particular, evidence indicates that intertemporal differences in corporate dividends can be attributed largely to differences in profitability and investment needs.

Baker, Farelly and Edelman (1986) surveyed 318 New York exchange firms and concluded that the major determinants of dividend payments are anticipated level of future earnings and pattern of past dividends.

Pruitt and Gitmann (1991) asked the financial manager of 1000 large US companies and reported that current and past year's profits are important factors influencing dividend payments.

Pruitt and Guitmann (1991) found in another study that risk (year to year variability of earnings) also determine the firm's dividend policy. A firm that has relatively stable earnings is often able to predict approximately what its future earning will be. Such a firm is more likely to pay a higher percentage of its earnings as dividends rather than a firm with fluctuating earnings.

In other studies, **Rozeff (1982), Loyd et. al (1985), and Colins etal. (1996)** used beta value of a firm as an indicator of its market risk. They found statistically significant and negative relationship between beta and dividend payout. The liquidity or cash flows position is also an important determinant of dividend payouts. A poor liquidity position means less generous dividends due to shortage of cash.

Partington (1983) elaborated that firm's use target payout ratios, firm's motives for paying dividends and the extent to which dividends are determined are independent of investment policy. **Alli etal. (1993)** reveal that dividend payments depend more on cashflows, which reflect the company's ability to pay dividends, than on current earnings, which are less heavily influenced by accounting practices. They claim current earnings do not really reflect the firm's ability to pay dividends. **Green etal. (1993)** questioned the irrelevance argument and investigated the relationship between the dividends and investment and financing decisions. Their study illustrated that dividend payout levels are not totally decided after a firm's investment and financing decisions. The results however do not support the views of irrelevance of dividend given by **Modigliani and Miller (1961)**.

D. Souza (1999) showed a positive but insignificant relationship in the case of growth and negative but insignificant relationship in case of market to book value with dividend payout ratio. **K. Jayesh (2006)** investigated the association between corporate governance and dividend payout policy for a panel of Indian corporate firms over the period 1994-2000. He found a positive association of dividend trends. Debt equity ratio was also identified to be negatively associated, whereas, past investment opportunities exert a positive impact on the dividends payout in level and corporate ownership is negatively related in square. **Mahakud J. (2005)** examined the influence of shareholding pattern on dividends payout ratio of Indian Companies which belong to manufacturing industries and were listed on the Bombay Stock Exchange (BSE) during the period 2001-2004. The study found a positive association of dividend with lagged dividend, earnings, sales and size of the company. Debt to equity ratio is found to be negatively related with dividend. Institutional shareholders have greater impact or influence on the determination of dividend payout ratio and it influences dividend policy inversely.

Pourheydari. O (2006) investigated the views of Chief Financial Officer (CFOs) of Iranian firms listed on the Tehran Stock Exchange about the factors influencing dividend policy. The findings showed that the most important determinants of a firm's dividend policies are the stability of cash flow, the availability of profitable investment opportunities and stability of profitability. Also, industry type appeared to influence that respondents placed on one determinant of dividend policy. **Twaijri . A and Abdurrahman. A (2007)** studied the variables with an expected influence on dividend policy and payout ratio. They randomly selected 300 firms from Kuala Lumpur Stock Exchange. They had found that the current dividends were affected by their past and their future prospects. Dividends were associated to a lesser extent with net earnings. Payout ratios were not found to have strong effect on the company's future earning growth, but had negative correlation with the company's leverage.

METHODOLOGY

DATA AND SAMPLE

In order to have a good benchmark of Indian Banking sector, BSE Bankex sector index has been chosen. BSE Bankex is the Banking index product from BSE stable and is used as a proxy of the banking industry as it represents 12 stocks which account for 90 percent of the banking stocks market capitalization on BSE stock index. Thus, tracking its performance would be a good indicator of the banking industry's performance.

A few important features of Bankex are given below:

- BANKEX tracks the performance of the leading banking sector stocks listed on the BSE.
- BANKEX is based on the free float methodology of index construction.
- The base date for BANKEX is 1st January 2002.
- The base value for BANKEX is 1000 points.

The BANKEX has underperformed the market since February 16, 2009 with a decline of 11.6 percent compared to 4.5 percent fall in the benchmark BSE Sensex due to global downturn.

The period under study is 2000-2008. It covers both boom and recessionary phase of the Indian Banking Sector. The data has been sourced from secondary source Prowess database of CMIE. There are 20 banks under consideration. Yes Bank has been excluded from the analysis due to non availability of data. The data was made suitable for analysis as per the methodology defined for the purpose.

DETERMINANTS FOR DIVIDEND POLICY

Dividend decision in the corporate sector is governed by a large number of determinants. The review of literature reveals that profit after tax, capital expenditure, current ratio; debt equity ratio, sales, share price behavior, and cash flow are expected to have a direct bearing on the dividend policy decision of the firms. These determinants are expected to have the following relation with dividend payout ratio:

Price Earning Ratio	Positive
Earning per share	Positive
Beta (Risk)	Negative
Sales	Positive
Debt Equity Ratio	Negative
Cash from operation	Positive
Corporate Tax	Negative

MODEL FORMULATION

The variables considered have been identified and stated as follows:

Y= Dividend Payout Ratio

X_1= Beta (Risk)

X_2= Earning per share

X_3= Earnings (Earnings before interest and taxes/Total Assets)

X_4=Taxpbt (Corporate tax/profit before tax)

X_5=Debt equity ratio(DE)

X_6= Cash Flow from operations (CFO)

For the analysis of pooled data for nine years i.e. 2000 to 2008, correlation matrix was constructed and the technique of multiple linear regression analysis was used. An attempt was made to develop a multiple regression equation using identified key variables. The dividend payout **(Y)** was used as dependent variable and other variables (x_1, x_2, x_3, x_4, x_5, x_6) were used as independent variables defined in the above section. On this basis, under mentioned multiple linear regression equation was developed.

$$\mathbf{Y=\alpha+ b_1x_1+b_2x_2+b_3x_3+b_4x_4+b_5x_5+b_6x_6}$$

Where, **α** is the regression constant and $\mathbf{b_1, b_2, b_3, b_4, b_5}$ **and** $\mathbf{b_6}$ are regression coefficients. The regression coefficient indicates the amount of change in the value of dependent variable with a unit change in independent variable. $\mathbf{r^2}$-the coefficient of determination, gives an estimate of the proportion of variance of dependent variable accounted for by the independent variable. It suggests the covariance between changes in dividend rate and earnings rate. The value of r^2 varies between 0 and 1. An r^2 of zero means that the predictor accounts for none of the variability of 'Y' by 'X'. An r^2 means perfect prediction of y by x and that 100 percent of variability of 'Y' is accounted for by 'X'. The higher the value of r^2, the closer the relationship between the variables.

RESULTS AND DISCUSSIONS

From correlation matrix in Table 1, it can be highlighted that there is significant correlation of dividend payout ratio with beta, Earning per share, taxpbt and cash flow from operations. Also, a weak correlation exists with earnings and debt equity ratio. The results of multiple regression analysis are given in Table 3. Earning per share is most significant factor determining dividend policy in Indian banking industry; level of significance is 1 percent. Earnings and beta are also significant for dividend payout ratio; the level of significance is 5 percent. Taxpbt is significant for DP ratio at 10 % level of significance. Debt Equity ratio (DE) and Cash Flow from Operation (CFO) are not significant for dependent variable as contradiction to Mahapatra (1993).

Table 1: Correlation Matrix Of Independent & Dependent Variables

	Y	X1	X2	X3	X4	X5	X6
Y	1	-0.202*	0.849**	-0.157	0.197*	-0.106	0.178*
X1		1	-0.137	0.092	-0.21*	0.168*	-0.139
X2			1	-0.071	0.255	-0.205*	0.151
X3				1	-0.10	0.094	-0.109
X4					1	-0.326	0.059
X5						1	0.105
X6							1

**Significant at 5 % level of significance*

***Significant at 1% level of significance*

CFO which has significant correlation as shown in Table 1 is no longer significant for the dependent variable in the regression table. CFO or liquidity as such may have a positive relationship with the dividend payout ratio but such a result has not been found in the case of the banking sector. Table 2 reveals that existing models explain about 74 percent variability in the dividend payout ratios in the banking sector. The F statistic for ANOVA in regression is also significant (p-value<0.001) suggesting overall applicability of the existing model.The results of the study show positive and significant association between EPS and DP ratio. Thus, EPS is an important determinant of DP ratio with the increase in EPS, the firm's ability to pay dividend also increases. Stock beta has been found to have a negative but significant relationship with the Dividend payout ratio in the banking sector. The results disclose insignificant relationship with cash flow from operations, Debt equity ratio and tax to profit before tax ratio.

Table 2: Regression Results Of Empirical Model

R	R Square	Adjusted R Square	D-W Statistic
0.863	0.745	0.733	1.76

Table 3: Regression Coefficient And Their Significance

	Regression coefficients	Prob values
	B	
(Constant)	40.99	0.00
Beta	-14.75	0.03*
EPS	1.35	0.00**
Earnings	-166.02	0.04*
Taxpbt	24.88	0.08
DE	0.81	0.35
CFO	0.01	0.76

**Significant at 5% level of significance*
***Significant at 1% level of significance*

CONCLUSION AND SUGGESTIONS

This study analyses the determinants of dividend payout ratio for BSE BANKEX listed companies in India. It can be concluded that existing variables as per available literature do not explain the dividend payout pattern of the banking sector. EPS, beta and PBIT/Total asset has been found to be noteworthy determinant. Year to year variability in earnings has been regarded as one of important factors influencing dividend payout of an organization. A negative relationship was found to exist between payout ratios and firm betas in studies by Beaver, Kettler and Scholes (1970), Ben-Zion and Shalit (1975), and Lee, Liaw and Rahman (1986). The thinking behind this theory stems from how variances in dividends affect the timing of an asset's cash flows.

Since, constant term is significant in the model, it shows stable dividend policy for the banking industry. The period undertaken for the study i.e. 2000 to 2008 cover both booming and recessionary phase. Till 2007, there had been the boom period in the banking sector and the year 2008 has been marked by recessionary trend due to global downtrend. The average payout of the banking sector from 2000 to 2007 was found to be 36.49 and the average payout in the year 2008 was 63.55 percent. The one explanation of this pattern could be that the years from 2000-2007 have been marked by expansion, mergers and acquisition in the banking sector, thus, banks preferred to plough back their earnings into business.

From the year 2000 to 2007, SBI paid 80 %, ICICI bank 49 % and Bank of Baroda paid 46 % dividends which were among the highest paying banks. In the year 2008, SBI, PNB, ICICI bank was among the highest dividend paying banks of 215 %, 130 % and 110 %. This suggests the listed banks are not smooth in paying their dividends. Since the existing variables explain 74 % of the Indian banking sector dividend behavior, future research can be focused on discovering variables that may explain the remaining 30 % of the behavior. Examining the impact of other variables such as price earning ratio, debt equity ratio, sales growth on dividend policy would be an interesting exercise. However, this is left for future research. Further, for the policy makers of the Indian Banking Industry, the study may prove to be useful for re-sketching their dividend policy, keeping in view the results and discussions.

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