



## How Does Capital Structure Influence the Dividend Policy? A Comparative study of both Commercial and Islamic Banks: A Time Series Analysis (2006-2021)

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### Abstract

The impact of the capital structure on the dividend policy is discussed in this study. Keeping in view the both commercial and Islamic banks of Pakistan. Using the secondary panel data from the time 2006 to 2021 was compiled from the State Bank of Pakistan yearly published reports. Those are available on its official website. Therefore, the two separate regression models have been developed to ensure the dividend payout policy. For analyzing the data, the SPSS latest version 26 have been used. But before analyzing the regression model, some assumptions for the normality of the data were checked. Keeping in view the results of the skewness and kolmogorov-smirnov level of significance. Thereafter the empirical analysis further begun to check the normality of financial data through variance inflation factors (VIF). Finally, the results of our models show of the both banking industries that the dividend payouts positively and significantly are determined by size, profitability, and deposits. Since the Investment opportunities from both banking sectors didn't explain the significant association with dividend payments. Also the institutional borrowing of both sectors having negative coefficients sign. This mean based on their respective negative coefficients -.004 and -.040 which separately indicate that the One unit increasing in institutional borrowing will decrease respectively .004 and .040 units in dividend payout by the both conventional and Islamic banks.

**Keywords:** Capital Structure, Dividend Policy, Commercial and Islamic Banks

### 1. Introduction

The concepts of capital structure and dividend payouts are fundamental and closely linked. Therefore to increase the wealth of the corporation shareholder's, the firm's requires having both an ideal capital structure and an effective dividend policy. While the decision of capital structure does mean the sources of investment for a project. The company uses a variety of funding sources to complete a certain project. Therefore, the long-term debt and hybrid securities along with stockholder's equity are the company's key components of capital structure (Schepens, 2017) and the funds collected from these securities considered taking into the account the cost and benefit expected from them (Serfling, 2016).

The significance of a firm's capital structure concerning its dividend payout policy. The different literature of corporate finance presented diverse theories like the birds in the hands theory Linter 1962, models of dividend relevance Gordon (1963), trade-off and packing orders theories (Myers, 1984), signaling and irrelevance theories and residual of dividend policy by (Modus & Litzenberger, 1973).

According to Sindhu, (2016), most researchers' attention is inclined toward the policy of dividends however authors explain the dividend payout as the part of earnings being paid to the firm's stockholders, and some of the percentages are retained in the company to finance for the future investments this trend signaling the value for the firms to the outsider's stakeholders (Zia, 2017; Omri, 2022 ).

However, the policy of dividend and capital structure decisions are each other interrelated. Some of the authors in the literature talk about the profit disbursement to the owners while other speak about the means of finance to invest for a profitable business. This interrelationship gets more interesting and researchers note varying opinions about the financing arrangement and dividend distribution. (M. I. Sindhu, Hashmi, S. H., & Ul Haq, E., 2016; Shahbaz, 2015).

This study examines the correlation between such activities in companies with substantial debt, such as banks, whose managers try to inject additional deposits to boost the bank's investment portfolio, while directors other side issue dividends permanently to satisfy investors. Banks are distinct from other businesses due to the nature of their operations. Loans to lenders are the major product of banking sector firms. According to the State Bank of Pakistan's (SBP) financial statement analysis for the fiscal year 2014, bank loans and advances account for 45.25 percent of the banking industry's total assets in Pakistan.

Different theories of capital structure address the issue of both optimal dividend policy and capital structure of the firms therefore in light of these theories, different behavior of firm capital and dividend-paying policy is discussed.

#### 1.1. The Trade-off Theory (TOT)

One of the main goals of the trade-off theory of capital structure is how businesses are often financed with a mix of debt and equity. According to the trade-off theory, there are two benefits to debt financing as we start using it, such as tax shield benefits, and the total debt cost is minimized, as well as two drawbacks, such as agency costs and the costs of financial distress. This theory simply decides to reach such capital structure which may minimize both financial distress cost (i.e. cost of bankruptcy, insolvency, and cost of capital) and agency cost along with minimizing the benefit/value of firm/debt; this simply is called the optimal level of a particular capital structure this is due to because when the leveraged firm uses debt beyond a certain limit.

Capital structure is considered one of the important decisions usually done by the companies and technically determines the careful balance of both equity and debt that is being used by the businesses to finance its assets, for daily operations and future growth. Thus, the ideal capital design involves an adequate degree of debt to expand the ultimate return of investors without

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causing unnecessary risk and the ideal balance between boosting the prosperity and increasing the company's value while lowering its capital expenditures (Wali, 2015; Ngo, Duong, Nguyen, & Nguyen, 2020).

### **1.2. Pecking Order Theory (POT)**

This theory suggests the preference hierarchy through which internal financing is opted by most firms such as retained incomes to outside funding and prefers liability to equity. This means that firms first finance their capital structure through retained earnings then issue debt and finally issue equity this happens when any bad signals goes to the share market by the investors due to overvalued selling share price from the financial managers. Retain earnings refers to the portion of the firms net income that is reinvested back into a business. If a company chooses to finance its operations with retained earnings then there may be several benefits and drawbacks.

Generally, a company payout policy states the sum of dividends paid to the equity holder with the investor's proportion they have invested and especially happens when the company earns a profit at that time decision being made either to retain this profit may disburse the amount to the shareholders through the cash dividends. However, the decision of disbursement of dividends and retention of residual earnings approved by the board of directors for the holders keeping in view the different factors and this policy may affect the firm value because policy must serve the interest of both the firm and shareholders this mean to the future growth perspectives of company and its investment projects which are upcoming or running (Barros, Verga Matos, & Miranda Sarmiento, 2020). Firms usually make three main decisions related to corporate finance which are the investment, financing, and dividend policy decisions. The decision on dividend policy dictates the amount of profit allocated to shareholders and the portion intended for reinvestment.

### **1.3. Signaling Theory**

This theory explain signaling indicators to the investors market while issuing debt and equity however the issuance of debt means the confidence of both investors and firm in business to get an adequate cash flow to manage interest and principal borrowed and is expected as a sound health signal of the future expected cash flow and contrary to this the bad news signal is assumed while issuing the equity due to asymmetric information (information lacking) to the investors which affect the investors' confidence due to the overvaluation of the stock prices, therefore, managers prefer debt.

Laurence Booth (2017) holds the dividends irrelevance argument that the firm dividend payout doesn't add value to the firm's share price and this irrelevance theory of dividend propose that the company is affected by the dividend since better the money to be reinvested in the firm because in the real world market.

The firm doesn't pay a dividend as per the no-dividend policy to the shareholders. Therefore whatever profit is earned will be reinvested into the business for the firm's future growth. Since has been experienced companies that don't pay dividends are continuously rising and expanding therefore in such companies investors rather like to invest with an expectation of increasing stock value. it is worth noting that stock price appreciation is more precious than dividend payout to the investors (Susilawati & Suryaningsih, 2020).

Previous research aimed to explore how financing decisions affect dividend policies. However, the current study aims to fill this research gap recommended by both (Baker, 2016) (Saif ul Rahman, 2017) They delved into their research to examine how the decisions regarding capital structure affect the dividend policy within conventional banks and their recommendations. This broadens the scope for future researchers to delve into the dividend practices of both successful and unsuccessful banks, across developed and developing countries, aiming to uncover distinctions among them. This study will only focus on the dividend-paying behavior of both commercial and Islamic banks from 2006 to 2021 in Pakistan makes this research unique. In the future, banks should determine their dividend payments by taking into account their "size, profitability, deposits, institutional borrowings, and opportunities for investment". Four subsections make up the other part of this document as follows. In part two, we reviewed some past studies that have been conducted in this field to provide theoretical and research support for our topic. The approach used to examine the hypotheses of this study is presented in section three. The primary test results have been discussed in section four. Section five summarizes the findings of the study, makes recommendations to bank directors and upper management, and points researchers in the direction of future research opportunities.

Many studies separately investigating the issues relating to both firm's capital structure and its payout policy. However this study is novel filling that gap to investigate the financial decisions of both commercial and Islamic banks while looking an effect of their capital structure on dividend policy and their impact on the maximizations of shareholders value.

### **1.4. Objectives of the Research**

- To explore the impact of commercial banks capital structure on the its dividend policy.
- To examine the impact of islamaic banks capital structure on the dividend policy.

### **1.5. The Novality of Research**

The most of research mainly focused on non financial sector of the Pakistan keeping in view their capital structure and the dividend policy (Liaqat, Khan, & Popp, 2021).But very few studies in term of financial sectors focused the capital structure and their dividend policy separately (Liaqat, Khan, & Popp, 2021).However this research using the comparative study of both commercial and the Islamic banks in term of their capital structure and their dividend policy using the most recent data from the tome perod of 15 years from 2006 to 2021.

## **2. Literature Review**

This review in this section delves into the association between a corporation's capital structure besides its dividend distribution approach from 2016 to 2021. It considers both financial and nonfinancial firms registered on the Karachi Stock Exchange (KSE).Regardless the number of different similar studies that have been conducted separately yet no uniform answer to the questions.

The interest collected on loans accounts for a significant portion of a bank's total revenue. Interest earnings surpass non-interest revenue by a time of 2.24, according to a 2014 SBP financial sector analysis. By looking at these numbers, one can see how important lending and borrowing are to banks. Banks' capital structure is distinct from that of other businesses due to their constant borrowing and lending. According to the State Bank of Pakistan's analysis of financial statements, specifically examining the financial sector from 2010 to 2014, the concluding figures for the financial year indicate that the aggregate amount of bank equity amounted to 975 billion PKR. In contrast, the overall liabilities reached 10,947 billion PKR during this timeframe, indicating a liability portion approximately ten times larger than the equity component. The majority of these obligations encompass deposits, diverse accounts, outstanding invoices, and loans acquired from other institutions (Nguyen, Nguyen, & Business, 2020).

Now the questions raise why do banks pay dividends when they heavily rely on funds? Does this conflict with the pecking order theory? Despite substantial debt, why distribute dividends? What drives wealthy banks to pay dividends over taxed capital gains? What factors influence dividend amounts? Does a bank's dividend policy link to its capital structure and deposits? Does borrowing impact dividend payments, with institutions relying more on borrowing paying lower dividends? (Liaqat, Khan, & Popp, 2021).

Myers (1984) introduced the theory of capital structure known as the pecking order theory. Myers, who focused on firms' preferences for debt and equity. They believe that internal sources of finance are preferable to external sources of debt or equity. As a last alternative, the companies seek funding through the issuance of shares. The pecking order theory of capital structure outlines how managers prioritize using internal funds over external sources of finance. As a result, this theory is the most applicable to our field of study. The dividend policy of an organization is influenced by capital structure decisions. A business is less likely to distribute dividends to its shareholders if it requires greater debt to finance its operations.

Khan, Ahsan, and Malik (2016) From 2006 to 2014, a Pakistani study analyzed ownership's impact on capital and dividends across fifty non-financial manufacturing firms in the KSE 100 index, spanning sectors such as Oil and Gas and Food Producers. Leverage and dividend payout ratio were the dependent variables, with managerial and institutional ownership as independents. The study also considered control variables like profitability and firm size. Notably, it departed from past research by examining these strategic decisions collectively rather than separately.

Andiema, Atieno, and (2016) A study from Kenya delved into the correlation between a company's payment strategies, its capital structure, and the impact on stockholders' worth, an area that lacked significant empirical research. Their focus centered on 11 commercial banks listed in the Nairobi Securities Exchange (NSE) between January 2008 and December 2014. Their findings suggested that banks should adopt greater flexibility in their financing decisions to ensure they don't compromise the ultimate benefits for investors expecting dividends, rather than solely prioritizing the banks' holdings. Typically, yield projects carry higher variability risk, although certain investors have a lower tolerance for this level of risk.

Among different decisions, stock investment is one of the major decisions made by investors due to so many risks and unpredictable variations. Keeping in view this (Susilawati & Suryaningsih, 2020).from Jakarta turned the focus on their research regarding the impact of profitability in terms of ROE, capital structure in terms of debt to equity ratio (DER), dividend policy in terms of EPS, and the firm value in terms of Tobin's Q analysis towards the share price based on the data from 35 companies of the annual reports of four years from 2015 to 2018.

Nowadays most listed companies in China use new semi-mandatory dividend financing behavior Nonetheless, external funding typically allows businesses to issue payouts in cash, as a result of a rise in debt (Wenyun, Zhang, & Hu\*, 2020) They utilized exogenous policy in their study to assess how new policies affected financier behavior, and they also observed that more research must be done in the future on the fundamental mechanisms and effects of dividend financing behavior.

Although Allen et al. (2012) according to them external borrowing in the form of deposits is the most important determinant of profitability in the banking industry this means higher deposits help banks enhance profitability this is same according to (Demirgüç-Kunt, 1999), further similar findings were reported by (Athanasoglou, 2008). The inclusion of a higher percentage of deposits in a bank's capital structure boosts profitability which increases the likelihood of dividend payouts. The key study's hypothesis is the liability part of a bank's capital structure affects dividend disbursements to shareholders. It shows that banks with higher interbank financing reduces the likelihood of dividend payments. than banks with outside depositor borrowing (Aivazian, 2006).

Strategies of firms payout initiatives are not simply influenced by an organization's financial decisions (M. I. Sindhu, 2014), but free cash flow may have an impact on dividend payout. Rather, scholars are looking into a variety of factors that influence dividend policy. Dividend payment, for example, is the outcome of dividends and net income after taxes. given during former year, according to the (Lintner, 1956) model. Investment opportunities, regulation, size, and signaling elements are used by (Barclay, 1997a) to explain industrial corporations' dividend policy. In a study of the petroleum business, (K. M. Casey, & Theis, J. D., 1997) discovered that support for The connection between dividend policy and challenges related to agency and risk is established, while there is no correlation with investment opportunities or company size. Casey and Dickens (2000) explored the influence of investment possibilities (as indicated by Sindhu, 2014) and agency issues on dividend policy, excluding risk or size as predictors.

Investment possibilities, capital adequacy, size, signaling, ownership, dividend history, and risk were all used by (K. M. Casey, & Dickens, R. N., 2002) to explain dividend payments. However, earnings per share, dividend per share, market to book value, capital to assets ratio, size, risk, and cash flow per share were all considered by (Al-Ajmi, 2010) to determine dividend distributions. Also (Imran, 2013) examined firm earnings, size, previous dividends, and cash flow per share as drivers of dividend policy in their recent study. These are the most essential factors of dividend distribution policy, and their significance cannot be overstated.

Manager decision on the dividend policy is affected by the activist shareholders in term of corporate decisions regarding performance and profitability (Barros, Verga Matos, Miranda Sarmento, & Rino Vieira, 2021) but yet degree of such success have not been completely understood in the existing literature although the major part of literature focusing on the performance but the activist shareholders' attention is nowadays followed by the other firms and this research specifically is based on US-based targeted firms. Further future research direction was given in which other variables related to activists were suggested those were not retained due to the data availability constraints, therefore these new issues influence have to be addressed by future research.

Rahman, Sindhu, Khadim, and Malik (2017) from Pakistan tried to investigate how capital structure influences the dividend policy of the banking sector and the yearly data of 31 commercial banks regulated under the State Bank of Pakistan were considered those were continuously paying dividends from the period 2008 to 2016. This study has two main objectives first bank with larger financial leverage translated as deposits pay higher dividend than others because deposits enhances the investment portfolio and enable those banks to gain higher profits ultimately raising dividend payment to their investors. The second objective was that the banks those unable to manage external deposits and largely relied on institutional borrowing in their capital structure tended to pay less dividends by paying back expensive loan costs to their lenders and this was proved in their research recommendations, they suggested that future research should study how both successful and unsuccessful banks in both developing and developed countries handle paying dividends. This research could consider differences among banks, like their size, profitability, deposits, loans from institutions, and future investment opportunities.

To measure the link to capital structure and the bank payout policies, and used these important variables that determine an organization's dividend policy as control variables in the study's model. like the Size, profitability (measured respectively through the total assets and earnings per share), deposits, institutional borrowings, and investment opportunities will be the control/independent variables for our study, as previously noted by (Barclay, 1997b),(Casey and Dickens,2000): (Bodla, 2007): (Al-Ajmi,2010) and (Imran, Usman, and Nishat 2013).

### 3. Research Methodology

This research examines the dividend-paying behavior of both commercial as well Islamic banks in Pakistan keeping in view their capital structure, the targeted hypothesis is developed. To achieve the objectives of this research, an empirical analysis will be conducted using a sample of selected banks. Annual data from a total of 14 renowned banks, comprising 7 from both conventional and Islamic banking sectors, will be considered over a 15-year period. (2006-21). Around 210 total observations based on the sample of this study are examined. In this study the two main classes of variables are used these are dependent (Y) and independent (X) variables.

Different models are using these variables because of their importance in the process of forecasting the banks' dividend payouts.. However, in the literature, researchers such as Casey and Dickens (2000), (Bodla, 2007), and (Al-Ajmi,2010) have used similar variables in the same model (2010). Further to this research,dividend payout performance of the banking firms is exploring via a multivariate generalized least square regression approach. For both conventional and Islamic banks equations (i) and (ii) Explain the econometric models created to validate the connection between the dependent and independent variables in the study.

$$DIVP = \alpha + SIZ \beta_1 + Prof \beta_2 + DPST \beta_3 + IB \beta_4 + IO \beta_5 + \mu \quad (I)$$

Another Multivariate least square regression model is created to examine an effect of capital from Islamic banks on its dividend policy. Equation (ii) depicts the model's symbolic representation.

$$DIVP = \alpha + SIZ \beta_1 + Prof \beta_2 + DPST \beta_3 + IB \beta_4 + IO \beta_5 + \mu \quad (II)$$

Divp = Dividends paid by individual bank i in year t.

$\alpha$  = Represents the constant for equation (i) and (ii).

Siz= Size of individual bank i

Prof = Profitability of individual bank

Dpst= Deposit of individual banks

IB= Institutional borrowing of banks.

IO = Investment Opportunity of individual bank

$\beta_1$  to  $\beta_5$  = Represents the values of coefficient of respective variables

$\mu$ = Error term.

### 4. First Step in Empirical Analysis

**Table 1: Descriptive Statistics**

	Dividend_CB	Dividend_IB
N	210	210
Valid	0	0
Missing		
Mean	8.3555	7.4043
Median	7.2316	9.4696
Mode	6.47 <sup>a</sup>	10.16
Std. Deviation	2.32516	3.28050
Skewness	.156	-.775
Std. Error of Skewness	.289	.481

a. Multiple modes exist. The smallest value is shown

Empirical analysis begins by checking the typical behavior of financial data and the statistical summary of its characteristics including mean, median, mode, and skewness values, indicate whether the sample data is normal in research analysis. The dependent variables' (Dividend\_CBL & Dividend\_IBL), Table I displays the skewness values for both conventional and Islamic banks, indicating the normal data. The standard deviation is presented as a measure of the risk associated with data deviations from the mean values.

Further, to ensure the normality of data another Kolmogorov-Smirnov (KS) test was run the result of the test shows the significant P-value of both the dependent variables is above .05 therefore this shows the normal behavior of the data also showing in table 2.

**Table 2: Test of Normality**

	<i>Kolmogorov-Smirnov<sup>a</sup></i>		Shapiro-Wilk			
	<i>Statistics</i>	df	Sig.	Statistics	df	Sig.
Dividend_CB	.291	23	.079	.791	23	.027
Dividend_IB	.259	23	.069	.837	23	.017

a. Lilliefors Significance Correction

Dividend\_CB: Conventional Banks' Dividend

Dividend\_IB: Islamic Banks' Dividend

#### 4.1. Second Step in Empirical Analysis

**Table 3: Co-Linearity Statistics**

Model 1 Conventional Banks			Model 2 Islamic Banks		
Co-linearity Statistics			Co-linearity Statistics		
	Tolerance	VIF		Tolerance	VIF
1 (Constant)			1 (Constant)		
Size (Total Assets) CB	.014	8.482	Size (Total Assets) IB	.143	9.380
Earning Per Share CB	.341	2.930	Earning Per Share IB	.812	1.231
Investment opportunities CB	.102	9.823	Investment opportunities IB	.039	7.849
Deposits CB	.749	5.447	Deposits IB	.063	6.910
Institutional Borrowing CB	.101	9.908	Institutional Borrowing CB	.224	4.458

The second stage of empirical analysis commenced by assessing the normality of financial data, examining the variance inflation factors (VIF) for banks within both sectors.. According to the statistical assumption if the VIF values of independence vary from 1 to 10 then this means in such data there will be no issue of multicollinearity however meeting these assumptions all the data shown in Table # 3 is within the normal ranges. There may be other probable sources to check the normality of data through linearity and homoscedasticity. The regression analysis is used for hypothesis testing to check that the data is normal. Models 1 and 2 were created to examine the effect of capital structure on bank dividend payouts. Table 4 and 5 shows the results of both models.

#### 4.2. The Third Step in Empirical Analysis:

**Table 4: Regression Analysis**

Model 1 Regression Analysis			Model 2 Regression Analysis		
Standardized Coefficients			Standardized Coefficients		
	Beta	Sig.		Beta	Sig.
1 (Constant)		.031	1 (Constant)		.203
Size (Total Assets) CB	.230***	.000	Size (Total Assets) IB	.260***	.000
Earning Per Share CB	.107***	.033	Earning Per Share IB	.105***	.031
Investment opportunities CB	-.623	.389	Investment opportunities IB	.423	.289
Deposits CB	1.133***	.000	Deposits IB	1.023***	.000
Institutional Borrowing CB	-.004***	.051	Institutional Borrowing CB	-.040***	.052
R <sup>2</sup>	0.590		R <sup>2</sup>	0.600	
N	210		N	210	

Dependent variable: Dividend

#### 4.3. The Fourth Step in Empirical Analysis

Both models of the research study revealed approximately the relevant results. However, the R<sup>2</sup> of models 1 & 2 respectively are 0.59 and .600 which indicates separately the 59% and 60% variation in dividend payouts are affected by the size, profitability, investment opportunities, and deposits of both banking sectors. However, the Size, Profitability, deposits, and institutional borrowings significantly contribute to forecasting the dividend distribution by both banking sectors. Since the Investment opportunities from both banking sectors didn't explain the significant association with dividend payments and the coefficients of size from both models respectively 230 and .260 are significant at level 1%. This describes that a 1 unit increase in size will cause receptively .230 and .260 units increases in dividend payouts further a similar case is with the profitability and deposits from both banking sectors except the institutional borrowing of these both sectors having negative coefficient sign this mean based on their

respective negative coefficients -.004 and -.040 which separately indicating that the One unit increasing in institutional borrowing will decrease respectively .004 and .040 units in dividend payout by both conventional and Islamic banks.

## 5. Conclusion

Dividend payouts improve the image of a company in the eyes of investors. The amount of dividends paid is determined by several factors. The results of our models show that in the banking industry, dividend payouts are determined by the availability of deposits held on the liabilities side of the bank, this means that more deposits pay a bigger dividend. These deposits enable banks to expand their investment portfolios, allowing them to generate bigger profits. Our research shows that as a bank's profitability improves, it pays bigger dividends to its shareholders. The size of a bank is the third most important factor in deciding dividend payouts. In this study, it was also discovered that banks with a larger size /capital base paid higher dividends to their shareholders. The reasoning for this outcome is that large-size banks typically have a broader portfolio to invest in and, as a result, make higher returns, so they have a larger chunk to split to their owners. The level to which banks have borrowed money from other banks or organizations is the fourth most important factor in deciding dividend payouts. In the study, it was discovered that banks with a higher proportion of institutional borrowing are less likely to pay dividends. High institutional borrowing hinders dividend payments to investors. Banks prioritize reducing such borrowing by repaying expensive short-term loans, leaving them unable to distribute dividends.

Investment opportunities don't really affect dividends much in the banking business. It means that, in banking, most profitable projects aren't paid for with their own money; instead, bankers prefer using external funds like deposits. This goes against the usual idea that banks give dividends to owners and gather deposits from the public for their projects, as suggested by the pecking order theory.

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