

# CORPORATE DIVIDEND PAY-OUT BEHAVIOUR IN AN EMERGING MARKET: A CASE STUDY OF PAKISTAN

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## 1. Introduction

Dividend pay-out decisions are one of the crucial components of the corporate policy. The decision and extent of dividend affects the value of the firms. The dividend declaration is so important in some economies that firms are even forced to pay dividend through external finances (Mookerjee, 1992). Also, dividend pay-out reduces the liquidity and at the same time increases the external financial obligation of a firm (Kumar and Khurana, 1984). The investors behaviour is also directly influenced by the dividend declaration which as a result ensures the availability of capital through equity for productive investment. Moreover, it is also documented that demand for shares is positively related to firm's dividend pay-out behaviour, followed by the upward increase in the share prices (Friend and Packett, 1964; Pettit, 1972; Watts, 1973; Fama and Babiak, 1968; Nishat, 1991).

Due to global upsurge in emerging equity markets in recent years, Pakistani market has also been successful in attracting more investment from both internal and external sources (Pakistan Economic Survey, 1993-94). The level of investment indicates an encouraging pattern of investment in Karachi Stock market during the last few years.<sup>1</sup> In contrast, the level of dividend pay-out ratio is low as compared to other emerging markets (IFC, 1993). Only 50 percent of the firms registered with the Karachi Stock Exchange declared dividend during the last few years (Nishat and Saghir, 1991).<sup>2</sup> In Pakistan the return on stock is mainly reflected in capital gains rather than the dividend. The entire stock market activity was suppressed during eighties due to highly regulated government policies. The level of dividend stagnated at about 8-10 percent while the stock price indices changed significantly.<sup>3</sup> However with liberalisation of capital market in late 80's, the capital market is expected to become competitive and firms are possibly inclined to signal their value to the investors through regular payment of dividends.

In the past no attempt has been made to identify the factors which explain the dividend behaviour in Pakistan. Very few studies based on micro level data relate the behaviour of the firms to variables such as share price and dividend pay-out etc. (Nishat and Saghir,

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1. Market capitalisation increased from Rs. 2,691 million during 1964 to Rs. 6,710 million during 1980. During 1990 market capitalisation increased to Rs. 68,439 million (Economic Survey, 1993-94. Ministry of Finance Government of Pakistan).

2. One of the reasons for low dividend pay-out ratio may be that during early 70's and 80's the corporate sector consisted of significant public sector. The public sector always had allocation from the government budget. They did not have tendency to declare dividend. For example, during 80's the public sector, on average declared only 2-5 percent of dividend as compared to private sector, who declared dividend pay-out average as 8 to 10 percent.

3. During 1964-1990 the Stock Price Indices changed from 66.7 to 296.0 (1980=100).

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1991; Nishat, 1992; Nishat and Bilgrami, 1990). The present study aims to fill this gap in the research on capital market in Pakistan. The study will also identify any change in dividend pay-out behaviour due to institutional and financial reforms of 80's.

The rest of the paper is organised as follows. The following presents the theoretical framework. The third section describes the data followed by interpretation of results in section four. The concluding remarks are given in section five.

## 2. The Theoretical Framework

The aggregate dividend behaviour is tested by Lintner (1956). The original dividend model developed by Lintner (1956) is modeled as:-

$$D_t^* = a_0 + C(D_{t-1}) + \mu_t \quad (1)$$

where,  $D_t$  is the current level of pay-out dividend,  $D_t^*$  is the unobserved targeted dividend payment,  $C$  is the speed of adjustment coefficient between the targeted dividend payment and the last year's actual dividend payment ( $D_{t-1}$ ),  $a_0$  is a constant term and  $\mu_t$  is the error term.

$$\Delta D_t = a_0 - cry_t - CD_{t-1} = \mu_t \quad (2)$$

For operational purposes  $D_t^*$  of equation (1) is proxied by  $ry_t$  in equation (2), where  $r$  is the fraction of current earnings ( $y_t$ ). The basic Lintner Model in equation 2 was modified by Nakamura and Nakamura (1985) and is given as equation (3). They established it as the 'rational model'. In their view the dividend payments are rational if the coefficient of the lagged earnings variable  $a_2$  is significant and has the hypothesized negative sign. As formulated by Pandit (1984) and Rao and Sharma (1984), Mookerjee (1992) estimated the following model to explain dividend behaviour for Indian economy as;

$$\Delta D_t = a_0 + a_1 Y_t - a_2 Y_{t-1} - CD_{t-1} + dE_t = \mu_t \quad (3)$$

He included external finance ( $E$ ) as an additional explanatory variable in the modified model of Nakamura and Nakamura. He argued that firms in India pay dividend by borrowing mainly from banks at subsidized rates, rather than from their own profits.

The model modified by Mookerjee (1992) cannot be tested for Pakistan as Pakistani firms are legally not allowed to pay dividend through borrowing. They can only pay dividend

from their profits (The Companies Ordinance, 1984). In the Pakistani institutional set-up the entire game is played in terms of share prices which reflect capital gains. Therefore we include surplus<sup>4</sup> and change in share price index (CHSPI) as additional explanatory variables in the Lintner Model instead of external finance. The justification of including lagged surplus ( $S_{t-1}$ ) is that, surplus retained for investment if actualized, would positively effect the profit of the firm and hence would increase the chances for dividend (Nishat and Bilgrami, 1994). As far as change in the share price index is concerned it is likely that shareholders may pursue long-term objectives (Feldstein and Green 1983). In their portfolio choice they may trade-off short-run dividend payments in favour of long-term capital gains (Rao and Sharma, 1984). This is mainly due to the institutional setup, like differential tax treatments of dividend and capital gains.<sup>5</sup> The other reason may be due to the costs of short-run resale of shares (Gupta, 1969). However, if their motivations are long-run, the shareholders would not be satisfied unless they consider the secular trends in share prices and the net worth to be satisfactory. In such a contingency they may insist on getting a stable short-run dividend payment though perhaps at a somewhat lower level compared to what they desire if their objectives are purely short-run (Rao and Sharma, 1984).

Based on above discussion the following modified Lintner Model - Nakamura (NN) is tested on Pakistani data follows:

$$\Delta D_t = a_0 + a_1 y_t - a_2 y_{t-1} - CD_{t-1} + dS_{t-1} = dCHSPI_t + DIRE = \mu_t \quad (4)$$

### 3. Data

The annual data used in the OLS regressions relate to the period of 1964-1990 for the aggregate corporate sector. The data on post-tax profit, dividend and surplus is taken from the "Balance Sheet Analysis of Joint Stock Companies" listed with the Karachi Stock Exchange for the years 1964-70, 1965-71, 1972-77, 1976-81, 1980-86 and 1984-1990 published by the State Bank of Pakistan. The data for share price index is taken from the Annual Reports, published by the State Bank of Pakistan. It is important to mention that due to the non-availability of firm-wise data for the period 1964-72, the study is based on aggregate corporate sector data for the period of 1964-1990.

4. The causality issue was empirically tested by undertaking the Granger causality using two lags for surplus.

5. Historically, the capital gains is exempted from taxation, and part of dividend payments are also exempted from income tax.

#### 4. Interpretation of results

The single equation least square estimates for dividend behaviour is presented in Table 1. The overall equation explains 72 percent of the variation in dependent variable. The F-Statistics justifies the overall significance of the regression model. Looking at the estimates we find that most of the included variables have significant impact on aggregate dividend behaviour except last year's post-tax profit though the sign of the coefficient is correct. The correct sign of lagged post-tax profit perhaps suggests a lack of rational behaviour concerning dividend on the part of firms in Pakistan. The current year's profit indicate a positive and significant impact on dividend pay-out behaviour. It indicates that *one unit* increase in post-tax profit will cause a change in dividend by 22 percent. As expected last year's dividend has a negative and significant impact on dividend behaviour. It indicates that if last year's dividend is higher then the change in dividend will be less and firms are likely to pay targeted dividend this year. The positive and significant coefficient of the last year's surplus variable suggest that the last year's surplus retained for investment, may positively influence the profit level of the firm and hence increases the chances for dividend. Moreover, firms declare dividends from the accumulated surplus even if the profit level is low, basically to keep the market value of their share attractive for investors. It indicates that unlike other emerging markets (Mookerjee, 1992), the firms in Pakistan, pay dividend mainly from internal sources due to different institutional set-up.<sup>6</sup> The Pakistani firms do not have any problem of getting capital from either banks or from public for investment purpose so they did not have to give dividend declaration signal to the investors. Whereas in case of India (Mookerjee, 1992), the firms are forced to pay dividend through subsidised external borrowing.

The positive and significant impact of institutional development after 1980, (DRIF) indicates that due to liberalised financial policies, the market has become more competitive. The firms have started giving some positive signal in terms of dividend as a proxy for their performances to attract more capital investment. The observed positive and significant constant term is an indication of significant role of institutional investors in capital market and because dividend payments are subject to favourable tax treatment in Pakistan.<sup>7</sup>

6. as the law does not allow the firms to pay dividend through external borrowing as observed in other emerging markets, like India.

7. Due to tax exemption on dividend after a specified limit which varies over time, the firms keep the pay-out dividend at lower level to benefit the shareholders. Instead, additional dividend is paid in terms of bonus and right shares.

Table 1: Corporate Dividend Pay-Out in an Emerging Markets

Variables <sup>a</sup>	
Constant	220.93 (58.63)*
PAT <sub>it</sub>	0.22 (0.06)*
PAT <sub>it-1</sub>	0.07 (0.08)
DIV <sub>it</sub>	-1.01 (0.29)*
SUPS <sub>it</sub>	0.04 (0.02)**
CHSPI	-1.34 (0.91)***
DIRF	122.11 (72.70)***
R <sup>2</sup>	0.72
SER	90.22
F-Statistics	7.97
D-Watson	1.72

The figures in parentheses are standard errors.

\*Significant at 95 percent level.

\*\*Significant at 90 percent level.

\*\*\*Significant at 85 percent level.

8. Read variables as follows: PAT = profit after tax, PAT<sub>it-1</sub>=lagged profit after tax, DIV<sub>it</sub>=lagged dividend, SUPS<sub>it</sub>=lagged surplus, CHSPI=change in share price index, DIRF=dummy for industrial reforms.

## 5. Conclusion

This paper attempts to empirically investigate the corporate dividend pay-out behaviour in an emerging capital market like Pakistan. The modified Lintner model of aggregate corporate dividend pay-out behaviour is applied to the aggregate corporate sector firms listed with Karachi Stock Exchange. The findings suggest that for firms in Pakistan the dividend decision is based on the availability of surplus funds and higher profits. Unlike the dividend behaviour in other emerging markets where the magnitude of dividend highly depend on the availability of external finances, as they are accessible to bank borrowings at subsidized rates in a different institutional setup. In Pakistan's case the empirical findings validate the theoretical prediction for negative and significant impact of last year's dividend. The results also suggest that firms who retain surplus for investment purposes declare less dividend. However, surplus retained for investment when actualized may result in higher profit and hence more dividends. In Pakistan all corporate share activity



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is reflected in capital gain rather than in dividend. Moreover, it is interesting to note that the institutional reforms during 1980's have significant impact on dividend behaviour. In Pakistan the investors are more sensitive to share price changes, rather than the change in dividend due to complete exemption from capital gain tax, even if the dividend is poor.

The findings further suggests that in Pakistan the firms prefer retention of profit rather than pay dividend. This preference may be due to the concentrated ownership pattern.<sup>9</sup> The dividend decision is not crucial for management in order to reduce antagonism from the shareholders. Also the corporate sector do not have severe financial constraints in terms of borrowing from institutional sources. We expect that due to additional financial reforms introduced during 1990's, the firms would further change their dividend pay-out behaviour as a signal to attract more investors.

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9. Ownership pattern is observed as; 27.8 percent individual, 33.0 percent financial institutions, 17.5 percent government, semi-government bodies, 20.2 percent joint stock companies, 1.5 percent others (World Bank, 1987). Since data for rest of the years are not available, the same could not be tested empirically.

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**Abstract**

*The modified Lintner dividend model is applied to firms in the emerging capital market of Pakistan with a purpose to empirically explain the aggregate corporate dividend pay-out behaviour during 1964-90. The post-tax profits and change in share price index explain the aggregate dividend behaviour significantly. Institutional reforms observed during the 80's impact positively on dividend behaviour. However in Pakistan, firms are under less pressure to declare dividend due to easy accessibility of capital through institutional sources.*

**LE COMPORTAMENT DE LA SOCIÉTÉ DANS LA DISTRIBUTION DES DIVIDENDS DANS UN MARCHÉ EMERGENT: LE CAS DU PAKISTAN****Résumé**

*Le "Lintner dividend model" est appliqué aux sociétés du marché émergent du Pakistan avec le but d'expliquer empiriquement le comportement global des entreprises dans la distribution des dividendes dans les années 1964-90. Le profit après-taxes et le changement de l'indice des prix des actions expliquent significativement le comportement global des sociétés dans la distribution des dividendes. Les réformes institutionnelles observés pendant les années '80 influencent positivement l'orientation des sociétés dans la distribution des dividendes. En tout cas, en Pakistan, les sociétés sont moins sollicitées à déclarer les dividendes à cause de la facilité d'accès au crédit des sources institutionnelles.*

