Predictability power of firm’s performance measures to stock returns: A comparative study of emerging economy and developed economies stock market behavior.

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Abstract

The stock market returns are the readily available tool for the investor to make investment decision and stock market return are affected by many accounting variables. Dividend policy measures and stock return relationship has been examined from decades but result is still a dilemma. This study is a step forward to solve this dilemma by considering Karachi stock exchange, Pakistan and Nordic stock markets and conducting a comparative study to also provide a knowledge base to readers. Dividend yield ratio, dividend payout ratio and other accounting variables are examined to find their effect on stock return. Pooled least square regression has been used on the data ranging from 2005-2008 and findings are different in different markets. Dividend policy measures (dividend yield ratio and dividend payout ratio) have significant effect on the stock return and in most countries there is significant negative relationship.

Key words: Dividend policy measures, accounting variables, stock return
CHAPTER 1

Background

The power of accounting information and firms performance measures\(^1\) in predicting the stock returns\(^2\) is remained a source of controversy despite empirical research of decades. Accounting information is useful for the investor to assess the performance of the business and to make investment decision. Accounting information from financial reports can describe firm’s condition. Some of earlier researches have used financial information to examined stock prices volatility and elaborated the firm’s future financial performance as well. In this study we are focusing on dividend policy measures along with other accounting variables to examine the stock return which is not very much explored.

Fama (1991) and Fama and French (1992) examined the relationship between dividends, earning, investment and industrial production and stock returns and found significant relationship. Baskin (1989) had followed different way to determine the relationship between divided policy measures and stock price volatility rather than stock returns. It is very important to notice that while conducting a study to identify the relationship between dividend policy measures\(^3\) and stock price or stock returns, there are also many other factors which affect both dividend policy and stock returns. So we have considered other major accounting variables\(^4\) along with dividend policy measure to stock returns.

Baskin (1989) had suggested the following variables to examine the relationship between dividend yield and stock price volatility: operating earnings, size, and degree of leverage, payout ratio and the growth of the firm. These variables affect both dividend policy as well as stock returns significantly. Gordon (1963) analyzed the Paying large dividends reduces risk and thus influence stock price which have direct influence over stock returns. Earlier researches stated that many factors affect the share prices and are associated with the valuation of stock returns i.e.

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\(^1\) Performance measures are referred to as elements of firms accounting information i.e from income statement, Balance sheet and P&L account. These variables can be the such as firms liquidity, profitability, total assets, liabilities, income, sales, expenses etc. which provide the true picture of the organization to the readers.

\(^2\) Stock return is the return on stock with reference to change in price of the stock.

\(^3\) Dividend policy measures are the firm’s financial information elements which represents the dividend policy of the organization i.e. Dividend yield and Dividend payout.

\(^4\) In this study major accounting variables or other accounting variables are referred to the other major accounting information contents other than dividend policy measure.
dividend yield, dividend payout ratio, size of the firm, growth and earnings of the firm (Rappoport, 1986 and Wilcox, 1984). Early researches used profitability, leverage, liquidity, asset turnover, size, growth, ROI, dividend per share and cash flow to examine the relationship between financial information and stock returns (Johnson and Soenen, 2003 and Daniat and Suhairi, 2006; Susanto and Ekwati, 2006; Meythi, 2006 and Gordon, 1963).

Earlier researches stated dividend as a proxy for future earnings and proposed that dividend announcements reveal the true information which is missing and provide a measure to the investor to assess the returns. There is also a tendency of investor to show confidence if reported profits are backed by dividend announcements. Dividend is a proxy for the future earnings (Baskin, 1989 and Miller and Rock, 1985). In earlier studies generally a positive relation has been found between equity returns, earning yields, cash flow yield and dividend yield. There is negative relation between equity return and size (Cook and Rozeff, 1984 and Ritter and Chopra, 1989).

Gordon (1963) stated that the investors are very keen to evaluate the returns of the firms which have low dividend yield and dividend payout ratio, although such firms have greater investment opportunity with higher price volatility. On the other hand firms with high dividend yield will have shorter life and investment opportunities with low price risk. Brigham and Ehrhardt (2002) highlighted the importance of dividend policy measures for both investors and firm’s strategy makers. Their study proposed that if the firm pay more dividends, the price of share will raise but the firm will have less available cash which would lead growth of company downwards and would cause a decline in share prices. So it is very important to have a balance in dividend policy of the firm to attain and maintain company performance. Furthermore, dividend policy decisions lay the path to attract investment with a balance between current dividends and future growth.

Early researches used profitability, leverage, liquidity, asset turnover, size, growth, ROI, dividend per share and cash flow to examine the relationship between financial information and stock returns (Johnson and Soenen, 2003 and Daniat and Suhairi, 2006; Susanto and Ekwati, 2006; Meythi, 2006 and Gordon, 1963). Even after research of decades results are different in different economies due to different legal system, stock market behavior and development stage of the country.
In this study we have considered a developing economy market (Pakistan) and developed market of Europe (Nordic countries). Pakistan is a rich resources economy but facing continuous financial crisis and poor economic conditions. The results of the study aimed for the financial institutions, investors and for further research to understand the stock market behavior of Pakistan in comparison to European economies due to following reasons. First, there are critical economic conditions in Pakistan which leaded the managers to adopt different strategies to cope with such economic conditions and this study will provide much evidence to help them to assess the major factors affect on stock return and further how they can design a best dividend policy to attract and retain investment with good business development. Crisis leads the investor to be more precise and keen to evaluate return and resource behind the changes in returns. So this study will be a true asset for the investor in local as well as in international market to make the right investment decision.

Secondly, we believe for the best future of Pakistan which have rich resources and low labor cost (cost of production) which is leading now a day’s developed countries to invest in developing economies. So, it will be very useful to find out how Karachi stock exchange, Pakistan responds to firm’s performance measures during crisis to assist local as well as foreign investors to make decisions. As Karachi stock exchange is a high risk and high return market and foreign investors have a good opportunity to attain good profit if they are well aware about the stock market. Thirdly, there are very few researches conducted in Pakistan with respect to firm’s performance measures and stock returns and stock prices (see i.e. Nishat 2001, 2003). Furthermore, findings of these researches are mixed and not somehow conclusive. There are also no studies available with a comparison to European stock market.

On the other hand Nordic economies are well developed and investors in Pakistan are moving their investment to other countries due to poor law and order situation. So we believe that this is a real need (specially many investors are holding investments due to poor economic conditions and lack of knowledge or exposure to European market) to compare the stock market behavior of European countries and Pakistan to provide a thorough knowledge to investors of both economies for their investing decision.

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5 Nordic countries are consisted of four economies which are considered in our study as Sweden, Norway, Denmark and Finland.
At the same time it is very important to understand the behavior of emerged stock markets i.e., Nordic countries. We think furthermore the comparison of the both emerging and emerged market behavior with respect to performance measures and stock return will lead the stakeholders (investors, financial institutions etc.) of both sides to have better future decisions.

Stock returns are the most important indicator readily available to the investors for their decision to invest or not in a particular share. Many researchers have worked out to understand the effects of dividend policy measures and other accounting variables on stock market returns but there are no conclusive findings. Also the findings of the researchers vary for different stock markets in different countries due to their different financial systems and economic conditions. Also, the dividend policy is very important for the investors due to their preferences and that is the main task for the management of the companies to manage the interests of all the stakeholders (shareholders, lenders, managers, employees, investors, etc.).

Moreover, this study will be providing interesting information to the policy makers, managers, investors, etc., so as to make rational decisions regarding the firm’s performance measures and stock return. Furthermore, this study will provide theoretical support to the financial researchers.

1.1 Problem
Dividend policy measures are one of the most crucial factors which can affect the whole structure of the organization and also managers are very careful in dividend policy decisions. Earlier research of decades is still unable to conclude the relationship of dividend policy measures and stock returns and stated that many other accounting variables also affect dividend policy as well as stock return. Earlier research has made a lot of improvement in understanding the behavior of developed and developing economies stock market returns to dividend policy because dividend policy and stock returns are one of readily available tool for the investors in making investment decision (Walmarans, 2003 and Irfan and Nishat, 2001 and Wilcox, 1984 and Rappoport, 1986). Earlier studies conducted in Pakistan have used few variables along with dividend policy measures to examine the stock returns and furthermore none of them have compared the finding with other international markets to provide reader with the full knowledge. We believe that it is very important to do a study which examined dividend policy and stock return by including other major accounting variables which can affect both dividend policy and
stock returns and also to make a comparison of developing as well as developed stock market behavior.

1.2 Specific Research Question
The following specific research questions will be answered in this research:-

a) Is stock return affected by the changes in dividend payout ratio and vice-versa?

b) Is stock return affected by the changes in dividend yield ratio and vice-versa?

c) Is stock return affected by the changes in dividend to total assets ratio and vice-versa?

d) Is stock return affected by the actual cash dividends and vice-versa?

e) Is stock return affected by the level of growth (in terms of sales) and vice-versa?

f) Is stock return affected by the profitability and vice-versa?

g) Is stock return affected by the level of size (in terms of assets) and vice-versa?

h) Is stock return affected by gearing and vice-versa?

i) Is stock return affected by liquidity and vice-versa?

j) Is dividend policy is affected by profitability, size, growth, gearing and vice-versa?

1.3 Conceptual Framework
Earlier literature stated that there are many accounting variables which affect the stock prices and are associated in the valuation of stock returns. Furthermore these variables have influence on both dividend policy measure i.e. dividend yield and payout and also on stock prices volatility which resulted the stock returns (Irfan and Nishat (2001), Ariff and Khan (2000), Wilcox (1984) and Rappoport (1986). We believe that dividend policy measures along with other accounting variables have affect on stock returns. So we have used the independent variables in this study as the dividend policy measures e.g., dividend payout ratio (DPR), dividend yield ratio (DYR) and other major accounting factors e.g., profitability (P), size (SZ), growth (GRW), and gearing (GRG) as control variables.
1.4 Research Design

This study is quantitative in nature and variables are statistically measureable and quantifiable. The study is conducted to test the hypothesis that the dividend policy measures (other variables) affect the stock returns. Stock market returns are dependent variable on dividend policy variables other accounting variables (independent variables). Companies listed on Nordic countries stock markets and Pakistani stock exchange markets have been used as unit of analysis. The annual data has been used for the purpose which covered the period from 2005 to 2008 for 25 listed companies of each Nordic country and 100 from Pakistan stock exchanges (Karachi stock exchange). The data has been availed from the annual reports of the KSE listed companies, publications of the state bank of Pakistan and the websites of the Business recorder, Amadeus and ecowin. Analysis has used cross sectional pooled least squares regression and the basic test was regressing the stock returns against dividend policy measures along other accounting variables.

1.5 Research objective

The main objective of the study is to provide knowledge base to the management, investors and financial institutions of developing and developed economies to analyze the relationship between dividend policy measures and stock returns. This study is aimed to provide a unique picture of dividend policy measures (along with other major accounting variables) and stock return variation by comparing the results of Nordic countries with Pakistan and enable the reader to understand and plan for future investment (local and foreign).

1.6 Definitions of key terms

Following are the definitions of the variables used in our research:

Dividend Payout Ratio (DPR)

It is the portion of the earnings, which is paid out to the shareholders therefore it is calculated by dividing the dividends to earnings of the firm during a period. This procedure is also useful to stop the problems of severe values during the periods the periods where firms are facing the negative or low earnings. This ratio is only used when the dividend exceeds the profit of the period.
Dividend Yield Ratio (DYR)

Basically this ratio is calculated by the investors (current and potential) to check the return of their investment for the each share. So it is calculated by dividing the dividends paid to the shareholders with the market value of the share. The value of the share is taken as the average value of the share during the year.

PROFITABILITY (PR)

There are different steps to calculate this variable. In the first step we will use the average of the net profit after interest and taxes for the available years to shareholders equity and it is also know as the return on equity

Size (LSZ)

Different definitions are available for the size like it is explain by the sales volume, employees, assts of the firm etc. In this research we will use the total assets of the firms and take the average of the all available years.

Growth (GR)

This variable is calculated as the ratio of change in the sales in a year and then as an average of the available years.

Gearing (GG)

In this variable we have calculated the portion of debt in the firms financing. It is calculated by taking the ratio long term debt to the long term funds available to the firm for each year, it is also known as the debt equity ratio. Then we will take the average of the available years.

Stock Return (SR)

Stock return will be calculated by dividing stock current price with previous price and taking log. This is very simple and reliable way to find the stock return.
CHAPTER 2

LITERATURE REVIEW

The examination of financial information can give a foresight of the future of the firm and can help the stakeholder to make good decisions. Earlier research stated many factors of accounting information have affected stock prices and stock returns. Much research has done on dividend policy measures but stock returns are not only affected by dividend policy measures, on the other hand there are many factor which can affect stock return as well as dividend policy measures. The value of firm is not affected only by factors such as yield and dividends but many other factors affect the value of the firms i.e. size, leverage, growth, and other macroeconomic factors like inflation, exchange rate, law and order etc. It is very important to explore first theories associated with dividend policy and its affect on stock return and prices.

2.1 Dividend policy and Theories

Dividend policy is one of burning issue of all times and still there are no conclusive findings and results are somehow mixed. The researches of decades have provided many new aspects and theories of dividend policy but dividend relevance and dividend irrelevance are two major theories of dividend. Gordon (1959) and Lintner (1956) are the founders of dividend relevance theory with a view that dividend policy and market value of the firm have a direct relationship. This theory had proposed the direct affect of dividends on the individual investor as well as on the organization. Dividend relevance theory was backed by the findings that future earnings are perceived riskier by the investors than current dividends and thus investors tend to buy more stocks which lead an increase in prices and market value (Boyrie, 2001 and Gordon, 1959) Dividend relevance theory is further supported by many researches. Wolmarans (2003) supported the theory by proposing that firms with persistent dividend payment ratio, the ensuring year dividend payment would equal a constant proportion of earnings per share.

Dividend relevance theory examined by Modigliani (1982) and Siddiqi (1998), they have examined tax affects on the value of investors. According to them some investors are highly taxed due to payment of dividends and which decreased the value of the stockholders. Dividend relevance model provides a very good explanation of the dividend but there are several researchers who argued on certain matters i.e. marginal tax rates and ex-dividend day price drop
comparison to dividend per share (Kalay, 1982). Research of the literature reveals that the dividend relevance theory is an issue of growing interest and the contradiction is ongoing. The activity related to the subject is evidence of its relevance.

Miller and Modigliani (Dividend Irrelevance Theory), after the 1950’s a debate began relating to dividend policy, Merton Miller and Franco Modigliani (MM) show that the value of a firm is unaffected by dividends. MM argue that these effects are the result of the information converged by these dividend changes and not due to the dividend itself. Miller and Modigliani posited that dividends were irrelevant. They based this hypothesis, which they proved mathematically, on a literary of assumptions. The dividend irrelevance theory involves the following criteria e.g., (1) Dividend policy has no effect on either the value of a firm's stock or its cost of capital. (2) M&M argues that the value of the firm depends on the income it produces from its assets, and not by how this income is divided between dividends and retained earnings. (3) Their assumptions were e.g., (a) No personal or corporate taxes. (b) No floatation or transaction cost.(c) Investors are indifferent between dividends and capital gains. (d) The investment decision is dependent of dividend policy. (e) There exists symmetric information (Boyrie, 2001).

This is in direct opposition to the bird in hand theory, which states that the firm's value will be maximized by high dividend payout ratio. M&M's irrelevance proposition is based on certain binding assumptions about investors and perfect capital markets. In actual stock market practices however, it has been observed that dividend policy does seem to matter, and relaxing one or more perfect capital market assumptions of M&M's, it has often formulate the basis for the emergence of rival theories of dividend policy. The bird in the hand theory posits, in modern financial terminology that, in the world of uncertainty and information asymmetry, dividend payments are valued differently to retained earnings (capital gains). Because of uncertainty of future cash flow, investors will often tend to prefer dividend income over retained earnings. In perfect markets as hypothesized by Miller and Modigliani (1961) characterized by no transaction costs, no taxes and no information asymmetry between the managers and the stockholders, it was argued that dividend policy was irrelevant to a firm's value. Much attention has been given to dividend policies of the firms in the emerging markets (e.g., see Aivazian et al., 2003 and Allen and Veronica, 1996). Furthermore, it is very important to highlight efficient market hypothesis which possess three efficiency categories.
There are three forms of informational market efficiency e.g. weak, semi-strong and strong which have been well explored by different researchers in the field of stock markets throughout the world. Weak form of efficiency states that current stock market prices fully reflect all the historical past prices and refuses the utility of technical analysis. Semi strong form of market efficiency deals with the speed with which publicly available information is digested assimilated by the market and incorporated in market prices. The third form of market efficiency (strong from) asserts that even inside information which is not publicly available is reflected in market prices very rapidly. This hypothesis is usually tested by evaluating the performance of mutual funds whose managers can be expected to have some degree of inside information. This has been found that the stock market was by and large efficient in responding to the information content of issuance of bonus and rights shares respectively (Ramachandran, 1985 and Srinivasan, 1988). A closely related question was that to which extent stock prices reflect (publicly known) fundamentals. This has been presented by Dixit (1986) that dividend was the most important determinant of stock prices. This has been consistent with standard theories of fundamental value presented by different researchers.

This study will be conducted in the light of efficient market hypothesis. The efficient market hypothesis (EMH), in its strong form, assumes that every investor has awareness to all information available in the market. Consequently, the current share price of an individual stock (and the market as a whole) shows all information available at time t and accordingly, if dividend policy affects stock returns, then an efficient stock market immediately digests and incorporates all available information about fundamentals variables. The rationale behavior of stock market investors proves that past and current market information is fully reflected in current share prices and so stock value. As such participants are not able to develop trading rules and regulations and therefore, may not consistently earn abnormal returns. If lagged changes in dividend policy cause variation in stock prices and past fluctuations in stock prices cause variations in dividend policy and other relevant accounting factors, then bi-directional causality is implied between the two series. This behavior indicates stock market inefficiency.

Some researchers have focused on the importance of information content of dividend payment (Born, Moser and officer, 1983; Asquith and Mullin, 1983). Baskin (1989) stated dividends as a proxy for the future profits. This has been suggested that dividend payments provide the missing
pieces of information about the firm and permits the market to estimate the current earnings of
the firm (Miller and Rock, 1985). BMS (1997) argued that earnings and share prices can behave
as if they are endogenously determined because of the fact that they are jointly affected by
information that is very hard to specify explicitly. Jensen (1986) and Nickolaos Travlos and
Nikos Vafeas (2001) concluded the signaling effect of dividend on stock prices. Irfan and Nishat
(2001) with reference to Pakistan found the significant effect of dividend payout and dividend
yield on stock price volatility due to the information effect which is consistent with the results of
studies conducted in developed markets as well as developing markets e.g., USA, Canada, U.K,
Australia, Japan, Singapore, Malaysia and Turkey. Furthermore it is very important to go
through different models which have been used to examine the dividend policy of the firms i.e.
agency costs, signaling and clientele models (Bhattacharya, 2007).

For shareholders in public companies, agency problems or agency costs arise from the separation
of ownership and control. Managers make decisions every day about what to do with the
company's earnings. But these earnings belong to the shareholders, not the company. If managers
have priorities that differ from the shareholders, these decisions are costly to the firm's owners.
Despite the idea of dividend irrelevance to a firm's wealth as suggested by Miller and Modigliani
(1961), the literature offered theoretical explanation into the fact that how the finance managers
are likely to approach the issue of dividend policy (Baker et al, 2002). One of the central
assumptions in Miller and Modigliani (1961) is that, managers take steps in the best interests of
the owners of the firm, and therefore, tries to maximize shareholders' value. This shows that
firms with diffuse ownership, other things remain constant, will have the same stock price as the
firms owned and controlled largely by insiders.

Agency cost theory proposed that managers, who work as 'agents' for shareholders, are not
necessarily motivated to work in the shareholders' best interests (Jensen and Meckling 1976).
Agency cost argument, as developed by Jensen and Meckling (1976) proposed that dividend
payments reduce costs and motivates managers to distribute cash rather than investing at below
the cost of capital or wasting it on organizational inefficiencies (Rozeff, 1982 and Easterbrook,
1984). Jensen provides evidence that managers are reluctant to pay dividends-reluctant to give up
control over earnings. He writes of firms that have abundant cash flow: The problem is how to
motivate managers to disgorge the cash rather than investing it at below the cost of capital or
spending it on organizational inefficiencies. As Rozeff (1982) and Easterbrook (1984) argued agency cost theory to manager’s dividend policy decisions another theory (Signaling theory or information content of dividend) will help us to understand the power of dividend policy measures in predicting the stock returns.

Miller and Modigliani (1961) suggest that dividend payments might spread information about the future profits of the firm, if management followed a stabilized dividend policy, and used changes in the dividends payout to convey a change in their views about the future profitability of the firm. According to Signaling theory, managers have inside information about a firm that they cannot or do not wish to pass on to the shareholders, for example, better estimates of future profits. Dividends could be considered the most cost effective way of the management to reduce the element of uncertainty as supposed by the investor about the wealth of the company (Bhattacharya, 1979). This has been proposed that outside investors have imperfect information about firms' earnings and thus dividends announcements function as a signal of expected cash flows (Miller and Rock, 1985).

The importance of information content of dividend payment has been presented by many researchers (See e.g., Born, Moser and officer, 1983; Asquith and Mullin, 1983). This has been presented that announcements of dividend provide the missing pieces of information about the firm and permits the stock market to estimate the current earnings of the firm (Miller and Rock, 1985). Stockholders may have greater confidence that reported profits reflect economic profits when these announcements are accompanied by dividends. If investors are more certain in their opinions, they may respond less to questionable sources of information and their expectation of value may be insulated from irrational influence.

Another theory of much importance in dividend literature is cliente effect theory. Black and Scholes (1974) and Allen et al. (2000) suggested cliente theories underlying dividend policies of the firms. Baker and Wurgler (2004) proposed that there are some reasons for the existence of the cliente effects. First, there is a widespread popular thinking that dividend paying firms are less risky. Second, market imperfections, such as taxes, transaction costs and institutional investment constraints result in dividend clienteles. Third, some stockholders might consider dividend payments to determine investment plans of the managers. They may conclude
dividends omission as an evidence of strong growth and investment opportunities, and take dividend payments as an evidence of weaker opportunities.

There are two types of inflows generated from stocks e.g., dividends and capital gains. Both dividend income and capital gains are taxed at different rates in different countries as per their tax laws. Investors consider taxes when making their investment decisions. If the dividends are taxed preferably then they will appreciate dividend than future capital gain that would be taxed at higher rates and vice-versa. For example, in some countries of the world like Pakistan, India, Turkey, Japan, U.K., Cyprus, etc., the dividends received (beyond an exempt amount) are taxed at an individual's personal income tax rate and the shareholders may respond to their investment decisions by considering the differential marginal tax rates of dividends and capital gains due to the tax clientele. In USA, capital gains are taxed preferably than dividends and in Cyprus the capital gains are not taxed at all. In such situations, the shareholders prefer capital gains and don't like dividends and the market prices of the dividend paying stock declines as compared to non-dividend paying stocks.

Gordon (1963) proposed a very important aspect of dividend as rate of return effect which stated the sensitivity of stock prices to changes in estimates of rates of returns. Companies having free cash flows can have different options e.g., can pay dividend to its shareholders or make investments in inside the business by way expansion through the acquisition of new plant and equipments or invest outside the business in different projects. The dividend policy (dividend payout and dividend yield) and investment and growth opportunities are directly affected by each other. Rate of return effect, as presented by Gordon (1963), is that the firms having low payout ratio and dividend yield may be valued more in terms of future growth and investment opportunities (Donaldson, 1961). As a result, its stock market price may be more sensitive to changes in estimates of rates of return over different time periods. Therefore, firms with higher rate of expansion, although may have lower payout and dividend yield ratios, resultantly show price stability. This may be because dividend payout and dividend yield ratios serve as proxies for the value of projected growth and investment opportunities. In case the estimates of earnings from growth and investment opportunities are less reliable than estimates of returns on assets in place, then firms with low payout and dividend yield ratios may have higher stock price volatility.
Last but not the least is duration effect which illustrated the consistency and stability of dividend policy overtime with stock price volatility and duration. The market price of the share is directly affected by the dividend payments (dividend payout and dividend yield). This is presented that duration effect reveals that higher dividend yield provides more near term cash flows. In case dividend policy is stable and consistent, then high dividend stocks will have a shorter duration and vice versa. Gordon Growth Model can be used to determine that high-dividend will be less sensitive to changes in discount rates and thus ought to display lower stock price volatility. According to duration effect, the dividend yield and not the payout ratio is the relevant variable as compare to the rate of return effect which implies that both dividend payout and dividend yield matter. Dividend policy may serve as a proxy for growth and investment opportunities. Both the duration effect and the rate of return effect assume differentials in the timing of the underlying cash flow of the business.

2.2 Dividend yield and Stock return

Dividend yield is the result of dividend per share divided by the market price of the share and dividend can be used on annual basis, quarterly or monthly. Earlier researches stated different approaches to use stock market prices to calculated dividend yield i.e. closing price in the month preceding the dividend payment (Litzenberger and Ramaswamy, 1979 and Stevens, 1993). One approach to calculate dividend yield used by earlier studies is; dividends of the last twelve months divided by the stock prices at the beginning of considered twelve months (Blume (1980), Chen, Grundy, and Stambaugh (1990) and Morgan and Thomas (2000). On the other hand Black and Scholes (1974) used ending share price of the considered period. They calculated dividend yield by dividing the dividend paid over one year by stock price at the end of such year.

Fama and French (1988) concluded that the use of share price at the beginning of the period is better approach to calculate dividend yield as compared to closing price. They used both opening and closing price to divide total dividends paid over the year and calculated dividend yield. In Pakistan study conducted by earlier studies used average stock market prices in order to calculate dividend yield i.e. Irfan and Nishat (2001). They used annual cash dividends paid over the time periods devided by average price of the shares in the periods.
After a detailed discussion on how to calculate dividend yield, here comes the literature about the affect of dividend yield on stock returns. Literature stated much research have done on the subject but Black and Scholes (1974) are one the first researchers who stressed the dividend yield variable consideration in examining the stock return rather than only dividend paid to owners. They examined the diversification affects and used the modified capital asset pricing model (CAPM). Black and Scholes included dividend yield variable in the model and also used portfolios instead of single stocks. They have considered the data of New York Stock Exchange (NYSE) from 1926 to 1966 and concluded that the affect of dividend yield on the expected returns is not continuously on the same level of significance. Furthermore, their study on the tax affects of dividend on the stock price by taking into consideration two different tax laws and sub periods resulted; maximizing the portfolio return while taking into consideration dividend yields may result in poorly diversified portfolio with a lower expected return.

Later on Litzenberger and Ramaswamy (1979) examined the relationship between dividend yield and expected returns by using modified version of CAPM for NYSE stocks. They examined the affects of dividend taxation on returns and found that there existed strong and positive relationship between dividend yield and expected returns (before tax) for the period from 1936 to 1977. For the similar period stocks data, Blume (1980) examined NYSE dividend paying and not paying firms stock return variation. He took in consideration the data from 1936 to 1976 and proposed that taxation does not significant impact on the relationship between dividend yields and returns (pre-tax). According to his study average returns of dividend paying stocks are lesser than stocks of not paying dividends, given beta coefficient. Thus it reveals that, stock with low payout have greater returns as compared to stocks with high dividend payout ratio. We can conclude that Blume´s point of view was that stocks with high dividend yields show higher returns on average and relationship between dividend yield and pre- tax returns is not affected by taxation.

We believe that New York Stock Exchange was one of the growing and well studied stock exchanges in 1980’s due to bundles of researches available. So, further Keim (1985) took in consideration the similar data period (from 1930 to 1978) for NYSE and proposed that tax effects cannot explain the relationship between stock return and dividend yield. He considered size of the firms also and concluded that small size firms came up with both low and high
dividend yield but on the other hand big size firms are not high dividend yield corporations. In late 1980’s Fama and French explored the dividend yields to future returns and took into account the time horizons. They used regression on current dividend yield to future returns ranging from 1927 to 1986. Fama and French (1988) found that the longer the time horizon resulted in the larger variation in returns.

London Stock Exchange (LSE) was studied by Levis (1989) to find the relationship between stock returns and dividend yields by examining the data from 1961 to 1985. He proposed a strong relationship between dividend yield, price to earnings ratio (PE ratio) and market value and share price (Irfan and Nishat, 2001). NYSE is further studied by Christie (1990) to explore the variation in the returns of dividend paying firms and non-paying dividend firms and the conclusion was; returns of non paying corporations are negative by the beginning of 1946. Chen, Grundy, and Stam-Baugh (1990) used slightly different approach to analyze the stock returns and financial measures relationship by creating portfolio in terms of dividend yield and market price while they excluded zero dividend stocks. They found that dividend yield and returns have a correlation with each other but risk measure can play a vital role at certain levels i.e. dividend yield has a strong and positive effect on the return when beta coefficient is sole risk measure and dividend yield is an additional regressor. On the other hand when sensitivity of the return to excess return of junk bonds was incorporated as another risk measure; the significance in the affect of dividend yield on return was missing.

Later on in 1990’s after the study of Chen, Grundy, and Stam-Baugh, discussion began on the dividend yield’s affect on stock return along with different risk measures. Clinebell, Squired, and Stevens (1993) tried to identify the relationship between dividend and systematic risk (beta coefficient) but were unable to reach any conclusion. In the same year Gombola and Liu (1993) explored the relationship between dividend yield and systematic risk as well as the stability of the dividends. They found positive relationship between dividend yield and return when the market is bearish and negative relationship when the market is bullish. They concluded that there are market sentiments which affect strongly the dividend yield and return relationship. They also proposed positive alpha for firms with stable dividend yields and high payout as well as a negative correlation between systematic risk and dividend yield.
Furthermore, U.K. stock exchange and NYSE data on yearly and monthly basis respectively studied by Goetzmann and Jorion (1995) to identify whether dividend yield have the power to explain long term stock returns. They concluded; there is not strong evidence that dividend yield can forecast the long term stock returns and furthermore when the survivorship is a concern conclusion analysis considering long time series data can produced biased results. Morgan and Thomas (2000) examined U.K. stock exchange and came up with a negative relationship between total return (considering capital gains and dividends as well) and dividend yield due to taxation effect. They concluded that negative relationship is strongly influenced by the high tax rate on capital gains in comparison with dividend income.

Research of dividend yield and stock return was still under discussion and findings were still different in different economies with different time periods. So, the year 2000 came up with further highlights on the subject with the study of Gwilym, Morgan, and Thomas (2000). Their findings on dividend and systematic risk relationship were similar to the findings of earlier study of Gombola and liu (1993). They found that systematic risk increases if there is decrease in the stability of dividends and they found higher systematic risk for the zero-dividend portfolio. Antje Henne, Sebastian Ostrowski, and Peter Reichling (2007) examined the German stock market to find the influence of dividend yield and dividend stability on the risk, return and performance of individual stocks and stock portfolios. This study found a negative relationship between dividend yield and risk and also proposed no influence of dividend yield on excess returns. Furthermore they concluded that diversification weekend the influence of dividend yield on risk. These findings are consistent with the earlier studies (see i.e. Gombola and liu (1993) and Gwilym, Morgan, and Thomas (2000). With reference to Karachi Stock Exchange, Irfan and Nishat (2001) found the negative relationship between dividend yield and stock price volatility. They suggested that this negative correlation is due the size effect. They were of the view that the big size firms with high dividend yield leads to less volatility in the stock market prices. As earlier literature form developed as well as from developing economies concluded that stock returns are not only affected by the dividend yield but by many other factors of financial information of the firms. So, it is very important to discuss some other important measures which can affect the future performance of the business such as dividend payout ratio.

2.3 Dividend payout and Stock return
Earnings distributed to shareholders are known as dividend. Dividend payout ratio is the payment of dividend out of earnings in terms of percentage. Dividend payout ratio can be calculated as;

\[
\text{Dividend Payout Ratio} = \frac{\text{Total amount of dividend}}{\text{Total amount of earnings (after interest and tax)}} \times 100
\]

\[
\text{Dividend Payout Ratio} = \frac{\text{Dividend per share}}{\text{Earnings per share}} \times 100
\]

The dividend policy of the firms is one of the most challenging areas for the management strategic point of view as well as investor’s point of view to make an investment in the business. The basic purpose of the management is to maximize the wealth of the owners and that is very much dependent on managers investing and financing decisions. Investing activities need careful analysis and consideration of the projects with positive net present value while financing activities involves the decision made for the consideration of those projects and in such capital structure that leads to minimal cost of capital (HP Wolmarans, 2003). Apart from investing and financing activities managers are also responsible to decide whether to hold the profit within the organization or to distribute the profits to the owners and use it as a signal of firm’s performance. As managers use dividends as a source of inside information to outsiders (share holders) who are
not well aware of firm’s current position only by prices and to reduce agency problem as well (Jensen and Meckling, 1976).

As dividend payout decision is very complicated and managers have to be very careful because it has direct impact on the financial structure of the firm. Dividend payout decision has implications for firm’s financing as well as investing decision. If the firm pay more dividend, there will be less cash available for financing future projects and might lead to hurdles in the future growth of the firm. Furthermore, the firm may need to issue new share to attract capital at the time when shareholder’s are not foreseeing future growth due to lack of available funds (see, for example, Bhattacharya, 1979, John and Williams, 1987, and Miller and Rock, 1985).

Furthermore we can discuss dividend payout policy’s in the light of signaling theory and its importance with the help of pros and cons in the light of literature. Managers are perceived to be well aware of the true position of the business and in this imperfect capital market prices might not reflect true financial picture of the firms to outsiders (shareholders). As a result, managers may need to share their private knowledge with outsiders in order to bring the market value of the firm closer to its real value. In such a situation the management can use dividends as a tool to provide the shareholders with true inside information. In one of very earlier study on dividend policy Lintner (1956) proposed that US firms prefer to have a stable dividend policy because managers believe that dividends payout policy of the firms can convey positive and negative reputation of the firms. Managers do not make any sharp increase or decrease in dividends unless there are enough grounds available to sustain in the near future. Any change in dividend payout was backed by change in earnings or earnings potential and manager were hesitate to decrease dividends payout due to the possibility of conveying poor reputation of the firm to the shareholders (Lintner , 1956).

According to previous studies, managers can use dividends as a signaling device to convey their inside information to the market. The theory of dividend signaling asserts that the market perceives dividends as a signal of a management's view about the firm's future profitability and share prices respond accordingly. It well examined and proposed that increase in dividend payouts lead to increase in prices and vice versa. Although certain cost are documented for dividend payout i.e. cost of attracting external financing, distortion of firms investing decisions and cost related with unfavorable tax treatment of dividends (see, for example, Bhattacharya,
Dividend payout policy need to be very balanced and might be useful for certain high performing firms due to costs associated with dividend payout. In other words we can say that if the firm is not at its best and payout dividend to provide false information, will most probably be unable to have a balance in investing and financing activities. Furthermore, the firm will not be able to attract external financing for future projects and the growth of the company will probably be in danger and it will lead to the failure of maintaining the required level of dividends.

Signaling hypothesis is very much examined all over the world in developed as well as developing economies but findings are not still conclusive. For developed stock markets, see Fama (1974) for the US, Allen and Rachim (1996) for Australia. For emerging stock markets, see Mishra and Narender (1996) for India, Adaoglu (2000) for Turkey, Pandey (2001) for Malaysia, Omet (2004) for Jordan, Irfan and Nishat (20001) for Pakistan. All these studies supported the Lintner´s dividend relevance theory but one aspect is still ambiguous that whether dividend payout would necessarily increase the shareholder´s value or not. Here comes a myth in finance literature; dividend payout serves the owners but weekend the firm’s capital structure and thus can be linked to growth and investment opportunities negatively. Gordon (1959 and 1962) presented the dividend relevancy idea, which has been formalized into a theory, which postulates that current share price would represent the present value of all expected future dividends. (Porterfield (1959) argued dividend payment to shareholders as something given to its real owner and that will be offset with price decrease. Further Miller and Modigliani (1961) in their ideal world (being without taxes and any restrictions) claimed no impact of dividend payments on shareholder´s wealth.

Dividend relevance theory has been at the hot spot in research till 1960´s unless Miller and Modigliani’s (1961) came up with another theory by stating that it’s not only about relevance and signaling tools but there are many other factors need to be well studied. At the same time much of earlier work was done in developed economies markets and results were; increase in dividend announcements are strongly and positively correlated with increase in excess stock market returns. Providing different microstructure and different tax and control system with different information can propose different effects dividend policy. Litzenberger and Ramaswamy (1982) studied the dividends, tax effect ans systematic risk and concluded that shareholders will not
prefer dividend if marginal tax rate is greater than zero furthermore after-tax expected rate of return depends on the systematic risk and dividend yield. So, investors will tend to avoid dividends if taxable because dividend might have some tax-induced impact to their personal income.

Earlier researches of decades in using data from United States, Singapore and Japan stock markets, a number of studies found that stock price has a Significant positive relation with dividend (Gordon, 1959; Ogden; 1994; Kato and Loewenstein; 1995 and Lee, 1995. While others showed a negative relation Loughlin, 1989; Easton and Sinclair 1989. Tax effect can lead to a negative relationship between dividend announcement and stock price but researcher’s proposed positive relationship of stock price and dividend payments due to information content of dividend payments. As signaling theory proposed that dividend provides the information of firm’s future cash flows which are to be reflected in the market prices of the shares (Bhattacharya, 1979). But share prices are also affected due to tax treatment (with dividend and capital gain) which have influence on the firm’s dividend policy. In different countries there exists different dividend and capital gain tax treatments i.e. capital gains are treated more favorably in U.S. than dividends. In Cyprus capital gains are tax exempted and dividend income is taxed at personal income tax rate after crossing the exemption limit. As a result most of the shareholders ultimately prefer the capital gains rather than dividends.

Later on focus of researches tends towards dividend and CAPM beta coefficients after Beaver ET. Al., (1970). This study took into consideration the data of 307 US firms and found a strong correlation between dividend payout ratio and beta. Earlier study results were supported by Rozeff (1982) who examined 1000 USA firms and found high correlation between dividend payout ratio, beta and CAPM.

At the end we would like to discuss literature of south Asian stock markets with reference to dividends and stock returns. Indian stock market has been studied by Dr. P. Thirumalvalavan and K. Sunitha (2004) by considering the data of 22 companies listed on Bombay Stock Exchange 500 index. They examined the data set from 2002 to 2004 to identify the fluctuations in stock market prices during the dividend announcements. They proposed a very significant and positive relationship between dividend announcement and stock market prices and calculated 2.1% cumulative abnormal return within one day of the event and over five days of event cumulative
abnormal returns were approximately 1.45% which is very high. Md. Hamid Uddin (2003) examined Bangladesh stock market by considering 137 listed companies of Dhaka stock exchange to find out the relationship between dividend announcement and stock returns. He took data of 30 days before and after the announcement of dividends and found that investor were in losses during the period up to 19.52 % of stock value.

Pakistan stock market has been studied by Irfan and Nishat (2001) by considering 160 listed companies of Karachi stock exchange from the period from 1981 to 2000. They examined the relationship between dividend policy measure after controlling other accounting variables such as earnings, size leverage and assets growth. They concluded a strong relationship between dividend yields, dividend payout ratio even after controlling other accounting variables.

2.4 Gearing and Stock Return

Firm’s capital structure also affects the share prices; therefore level of debt financing has a major effect on the value of a firm. Sharpe (1964) and Hamada (1972) have worked on the capital structure of the firm. Moreover a firm with higher level of debt financing (higher risk) must return higher as well as consistent return according to the expectations of the investors hence the high leveraged firm have a higher rate of change in the share prices. Thus a change in capital structure is directly related to the stock price volatility. Modigliani and Miller (1958) with the focus of competitive financial market stated that, there is no effect of financial structure on the firm’s value. But in imperfect market (taxes, transaction, agency costs and asymmetry information) the capital structure of firm matters for the stock prices.

Firm’s have different types of resources (Current assets and Fixed assets) to run its operations. Similarly to finance these resources firms mainly have two sources (Equity and Debt financing i.e. short and long term). There are different strategies to finance these resources. First, if the mangers want the optimum utilizations of the business resources. They finance the current assets with short term borrowings and fixed assets through long term funds (equity and long term debts) this strategy is called “matching maturity approach”. In second strategy managers may finance the long portion of the current assets as well with the long term funds. This is called a “conservative approach”. In this strategy firm’s asset remains underutilized and results in a low profitability, which affects the stock prices adversely. In Third strategy (aggressive approach)
current assets as well as portion of fixed assets is financed through the short term borrowings. Managers choose this strategy when a firm is trying to boost sales with minimum resources due to cash flow problems. In this condition firms are struggling to survive and ultimate result is decline in the share prices.

In sources the debt financing is called the leverage as well, the degree of which is changes due to issuance or repayment of debt, new equity shares or preference shares and also due to the increase or decrease in the value of firm. The most important thing is the volatility in the share prices due to the degree of leverage in the firm’s capital structure. Black and Scholes (1973) and Merton (1974) discussed the impact of leverage on stock price behavior in their articles. Based on the Modigliani and Miller (1958) principle; a fundamental asset of a company is the whole firm. The securities like share, bonds and other certificates are just a source ownership division of these assets. Further black and schools found that stock return variation totally comes from the changes in the total value of firm. Because in capital structure of a firm, the debt holders liability is only limited to the face value of the instruments but the major portion of the fluctuation is suffered by the equity holders.

Stephen Figlewski and Xiaozu Wang (2000) conducted a study with the help of COMPUSTAT to find the relationship of leverage and stock price volatility. They found the increase or decrease in leverage due to the change in value of the firm is positively related to the stock price changes. They further found the change in leverage due to change in capital structure of the firm due to the debt have a little or no impact on the volatility of stocks. Moreover they found no evidence of leverage effect, when the leverage is increased due to change in outstanding stock. Further Jensen (1986) took the debt financing as a substitute of the dividend to reduce the agency cost of free cash flow. It means firms by taking debts make a fixed commitment to creditors, which limit the necessary funds to managers and at the same time analysis of the debt suppliers. It also finds the high leveraged firms are expected to have low dividend payouts.

As there is a direct relation among the leverage, dividend policy and stock prices to understand this relation there is a need of further study of dividend policy and the relationship of capital structure and dividends of the firm. We have already discussed the financial structure i.e. equity and debt financing is referred as capital structure of the firm. Whereas the debt financing is known as financial leverage due to which firms enjoy the tax advantage and it also cause the
increase in the shareholder’s return on equity. But there are so many risks related to the debt i.e. binding of principal payments, interest charges and in the case of default a firm may be forced to go into liquidation (Omet, 2004).

Another risk of higher level of financial leverage may force the firm to pay low dividend payout because firms have to maintain their cash flows to meet their financial obligations rather than distribution to shareholders. A negative relation is found between debt and dividends because creditors wants themselves secure in the sense of exploitation from share a holder that’s why there is sometime restriction on dividend payments. Further many researcher found a negative relationship between debt and dividends (Jensen et. al, 1992 and Aivazian et al, 2004). Some of the previous researchers found a positive relationship between debt and stock prices e.g. (Christie 1982; Irfan and Nishat 2001).

2.5 Growth and Stock returns

Many Researchers found direct link with firm’s growth, stock market prices and its dividend policy. The first indicator for growth and investment is firm’s sales. This indicator is being widely used in the literature (see e.g. Abarbanell and Bernard, 1992; Kasznik and McNichols, 2002; Skinner and Sloan, 2002). Second indicator is the market to book ratio (Perfect and wiles, 1994; Barclay et al, 1995; Cleary, 1999; Travlos et al.2001; Deshmukh, 2003 and Aivazian et al, 2004). Third indicator of growth often suggested in the literature is the firms’s price earnings ratio (Rozeff, 1982).

In this study we will take the percentage change in the sales as an indicator of growth. In the short run due to the growth and investment opportunities firms may suffer by the liquidity problem but in the long run due to the profits and other inflows these problems minimized. There are many benefits of growth are found by the researchers and managers. For instance to remain vital and competitive growth is necessary (Drucker, 1973; Robins and Wiersema, 1995). However the other side of the growth relates to the complexities and managerial problems. Many researchers found the excessive growth can damage shareholders value by affecting the profitability (Baumol, 1962; Hedberg, Nystrom, and starbuck, 1976; Whetten, 1984). A positive linear relationship is found by e.g. Miedich and melicher (1985) while Marksman and Gartner (2002) concluded no significant relation at all between growth and stock return/price. Further
Markman and Gartner (2002) in response to the previous findings suggest classifying the firms or industries according to the growth rates i.e. normal, high and abnormal growth. Many other researchers related the firm’s growth with its resources and market conditions (Penrose, 1959; Porter, 1980; Slater, 1980). So we can say growth is more likely related to firm’s specific characteristic rather than general.

Mishina, Pollock and Porac (2004) in the field of finance found that firm’s ability to grow is depended on the available resources. Cooper et al., 1994; Bamford et al, (1999) discussed the human resources and financial resources as the two major resources. Moreover financial requirements for firm’s growth are mostly dependent on the shareholders expectations about the long run earnings, which are based on the firm’s current market value (Koller et al, 2005). Research studies also found the reward and penalties of meeting or failing the expectations (Kasznik and McNichols, 2002; Skinner and Sloan, 2002). There is a positive relation between the expectations and higher rate of return (Kasznik and McNichols, 2002; Skinner and Sloan, 2002). Therefore expected sales growth is used as the measure of the minimum growth requirement and if the growth level remains consistently below the expected sales level it affects firm’s return negatively. According to the Van Horn (1997) sustainable growth is an annual increase in a sales while considering the dividend payout target, debt and operating capacity. Whereas if a firm grows more than the sustainable rate, it means the growth is more than the financial resources which could be a dangerous and may lead the firm towards the bankruptcy. So it is suggested for these firms to decrease the dividends, issue new equity or borrow funds to cope this danger (Probst and Raisch, 2005).

As the research studies shows there is a strong relation among the firm’s sustainable and expected growth. Therefore studies also found that both overreaction and under reaction can lead to unreasonable price variation (De Bondt & Thaler, 1985; Abarbanell & Bernard, 1992). On the other hand if the sustainable growth remains below the expected sales growth, firms may go towards the two optimal strategies: First, the firm may limit the actual sales to the sustainable growth which will ultimately frustrate the shareholders and the end result of this will be declining in the prices (Kasznik and McNichols, 2002; Skinner and Sloan, 2002). On the other hand in the second option firm may focus to grow above the expected growth, by focusing on the short run at increasing cost of the long run risk. Simply, when the sustainable growth exceeds the
expected sales growth firms seems better, only if the sustainable growth is according to the shareholders expectations.

According to Miller and Modigliani (1961), in perfect capital market the growth and investment as well as dividend decisions are independent. But if the markets are imperfect i.e. (taxes, flotation costs and agency costs) both dividend and investment decisions could be interdependent or closely related. Moreover the relationship of investment and dividend policies can be seen in the sense of decrease in the retained earnings and availability of funds both are the result of dividend payments. So we can say that investment and dividend is competing for low cost internal funds as compare to debt and new equity issues funds (Elston, 1996). It shows that in imperfect capital markets there may be a link between dividend and investment but in reality the firms with higher growth opportunities need more internal funds to finance the growth and investments, therefore these firms pay less or no dividend. On the other hand a firm which doesn’t or has less growth opportunities pays more dividends. It is also relevant with free cash flow theory i.e. if the companies do not or have low investment opportunities may face over capitalization problem to cope this management payout the dividends (Jensen, 1986).

As the firms attain the maturity level their investment requirements also reduces. Therefore firms have more cash available to pay the dividends, generally these type of firms are older and do not have any interest in the piling up the reserves due to the low growth opportunities. Whereas firms during their growth stage focus more on the provisions and reserves to fulfill their growing needs. That’s why these firms payout low or no dividends. In support of their low dividend strategy they refer the increase in dividend is the signal of change in life cycle of the firm. That’s why firms payout more dividends, is a signal for the investors decline in the investment and ultimately growth and profitability (Deshmukh, 2003). Many of the researchers like Rozeff (1982), Jensen et al., (1992), Ali et al., (1993), and Deshmukh (2003) found a negative relation between the firm’s dividends and growth. Barclay et al. (1995) found the growth and investment opportunities as determinant of the dividend policy. In the recent studies, like Fama and French (2001) found the firms with better growth and investment have a lower dividends payout.

2.6 Effect of firm's profitability on stock return
1. Excess of revenue over expenditure during the accounting period is called surplus or profit of the business. 2. Net increase in the value of the shareholders is called earnings. This includes revenue and capital gains. 3. The total income from operating as well as investing activities. In past many of researchers have found the accounting earnings as a major factor which can affect the market price of the firm, similarly many researchers have investigated the effect of profitability on the stock market prices. As there are many ways to explain the earnings of the firm therefore different researchers used the different accounting variables i.e. earnings before interest and taxes, earning after interest and taxes, operating profit, return on assets (operating profit/total Assets), earning per share (Net income/shares outstanding) e.g. return on capital employed (earnings before interest and taxes/net capital employed) used by the Irfan and Nishat, 2001 and 2003 return on equity etc. However in this research we will follow the (Kaufmann, Gordon and Owers, 2000) and use the return on shareholders’ equity (earning after interest and taxes/shareholders equity) as a measure of the profitability of the firm.

Dividend policy and stock market prices affect the profitability as well as affected by the profitability. Because profitability of the firm has a strong effect on the investor’s decision making i.e. if the profitability is higher than the expectations of the shareholders it will increase their confidence and it will have a positive effect on the stock prices otherwise vice versa. Profitability is the base of dividends and has an important role in the dividend decision of the firms. In theory we can find the mostly dividends are pays out when there is profit and in the case of losses firms unlikely to pay dividends. Deangelo and Skinner (1992) found the annual loss is the necessary condition of the reduction in the dividends, even for the firms with established earnings and dividend record.

In his study Lintner (1956) found the profitability as the vital factor in determining the dividend changes. Many other researchers have found the positive relation of dividend payouts and profitability (Fama and French, 2002). In emerging markets we can see the same results, in Turkey Adaoglu (2000) found that profitability as the main factor in determine the dividend policy. In Malaysia Pandey (2001) has arrived the similar result. In recent comparative study, Aivazian (2003) while studying the behavior of the emerging market firms and USA firms towards the profitability and dividend found that in both the markets profitability has a significant impact on the dividend payouts. In financial literature we can found the firms prefer
the internal financing and if the external financing is required then debt financing is preferred over the equity to minimize the various costs like transaction costs and information asymmetry (myers, 1984). This might also have effect on the dividend decision. Therefore the firms having low profits or in loss hesitate to pay dividends when these costs are difficult to avoid. The firms with high profit payout more dividends and generate the internal funds to invest.

In the past studies also the focus was to determine the relationship between returns or stock prices and earnings. Some of the studies found the regressed relation between returns or prices and earnings, some time regression was reversed. It is confirmed by the Beaver, Clark and Wright (1979) that earnings have the power to explain the relationship. It is also studied by the beaver, lambert and Morse (1980) the relationship between profitability and stock prices has the information effect. Whereas researchers like Easton, Harris and Ohlson (1992) studied the percentage change in the prices. Easton, Harris and Ohlson (1992) found that stock returns are better explained by the earnings over long run. Ohlson (1992) also conclude that earnings in the ideal conditions are the suitable variable to explain the returns.

By using the simultaneous equation system, Beaver, Mcanally and stinson (1997) found the price and earning relationship and found that there may be other factors as well explaining the earning and prices. That’s why conclude the stock prices are not affected by the earnings. In order to find the relationship between security prices and accounting earnings (D.E.Allen, S. Cruickshank and Nigel Morkel-Kingsbury, 1999) by taking the earnings as independent variable and stock prices dependent variable. They used the unit root test and establish the integration of each series. They also used the VAR system to control the endogeneity and then Vector Error Correction Model in order to find short term and long term relationship between price and earnings. By using the generalized impulse response analysis and generalized variance decomposition found that market data 98% variation due to the other factors and earnings cause only 2% variation in the prices. Wenling yang, David and S. curickshank (1999) by using the time series econometric method they have explored the short and long run relationship between stock prices and earnings. They also used the bivariate vector auto regression model and found in long run there is more variation in the earnings than the prices while by using the price series they found random walk and the earning series are dependent on the past behavior. Second thing in the short run they found casual relation of prices and earnings. It means that prices have a stronger effect on the earnings
than the earnings have on the prices. They also found in 20 years, price variation is 99% result of
the other factors and due to the earnings only 0.121. These results are also similar with the
research of Shiller (1981), Campbell and schiller (1987), who also found that earnings and
dividends are not sufficient to explain the variation in the stock prices.

In Norway by examining 37 companies traded on the Oslo stock exchange from 1990 to 1995,
Aasmund eilifsen, Kjell henry Knivsfla and Frode Svttem 2001) found that there is more
variation in the Norwegian stock prices than the UK and USA. Based on the weighted market
index, the standard deviation of stock returns was 24% and in the UK 12%, USA 13%. They also
found that earning announcements reduce the stock price variation. Since from the Ball and
Brown (1968) many researcher have found the information relevance of earning announcement.
Studies also found the association between the earning release and the variance of the stock
return distribution and found that the price variance is larger during the announcement period
than the no announcement (Beaver, 1968; Hagerman, 1973; Morse, 1981; McNichlos and
Manegold,1983; Patell and Wolfson,1984; Brookfield and Morris, 1992; Pope and Invangetis,
1992). On the other hand by taking the large sample of earnings of firms from the Korean
Chaebols, found that price variation is reduced after the earnings announcement (Gil S. Bae,
Examination of Australian stock behavior, found the positive relation between the earnings,
dividends and prices.

Johansen (1988) by using the augmented Dickey-Fuller test, trivariate version of cointegration
test found that the stock price variation is also due to the non fundamental variables. These
findings are also in align with the Marsh and Merton (1987) and Brealey and Myers (1988).
Similar results are also found in the U.S., Singapore and Hong Kong markets. It means like other
developed financial markets in the Australian equity market prices are influenced by the non
fundamental factors as well. It also implies that the price variation due to the unexpected factors
is also the important consideration like due to the earnings or the dividends (Shiller, 1981).

Gil Sadka (2006) based on the data of returns, dividends and returns conduct a study to
investigate the implication of accounting profitability rather than the dividend growth as the cash
flow. As the earlier studies found that the cash flows cannot be predicted through the dividend
yield. But implications of this study are about the predictability of accounting profitability.
Further the results in the dividend-price ratio considered as the profitability growth rather than the dividend growth. Although as Miller and Modigliani (1961) found the dividend as immaterial and also found negative correlation between the expected returns and expected earnings growth. As the dividend yield is used the base to forecast about the profitability and returns. Therefore there is some dependence between the two and it is found that the variation in the dividend yield also leads the variation in the expected profitability. Irfan and Nishat, M (2003) while checking the effect of fundamental variables (dividend yield, payout ratio, size, asset growth, leverage and earning volatility) on the stock prices. By using the weighted least squares regression found the negative and at a lower level impact of earnings i.e. earnings omly explain the 0.02% variation in the stock prices.

2.7 Effect of size on stock return

Size plays an important role on the stock price volatility. But there are different ways of measuring the size like sales, assets, employees and capitalization. Different measures are used by the different researchers, Ang and Paterson (1984) and Aivazian (2004) have used the Total Assets, whereas market capitalization is used by the Eddy and Seifert (1988), Irfan and Nishat (2001) and Deshmuck (2003).

In this research we will use the total assets as the size of the firm. Earlier researchers found the size as a significant tool in the explanation of share prices. Benishy, (1961) found the positive effect of size on the stock prices. He also found that the large firms are better diversified and less risky than the small firms. Another researcher found, as the size of the firm increases their price volatility decreases (Atiase, 1985). Moreover larger firms can raise funds at lower cost as compare to the smaller firms due to higher degree of tangibility of small firms. Creditors also have a greater confidence on the large firms, that’s why large firms do not have much rely on the internal finance. Therefore large firms maintain their consistent payout ratio and it shows the size has a positive relation with the dividend payouts.

By using the signaling effect, Ghosh and woolridge, (1988); Eddy and Seifert (1988) and Deshmukh (2003) examined the stock market reaction towards the announcement of the dividends and linked it with the size. Deshmukh, (2003) found the firms paying dividends has a positive relation with the size. Eddy and Seifert, (1988) found the similar results. Some of the
researchers use the information asymmetry as the proxy of size, Vermaelen, (1981); Atiase, (1985); Bhushan, (1989), and Deshmuck, (2003).

As the large firms face fewer constraints compare to the small firms while borrowing funds. Moreover large firms can afford the distribution of dividends at higher level. Further empirical studies also found the size is the major factor of the firm’s dividend policy and that has the positive correlation with the dividend payments Lloyd, (1985); chang and Rhee, (1990); reeding (1997); Holder (1998); Fama and French, (2000) and Aviazian (2004). Irfan and Nishat (2001) found the positive effect of the reforms but pre- reforms found the negative on the stock price variation.

**Summary**

The earlier studies, theories and models discussed in this chapter will be used to analyze the results of our study. Furthermore we will use this chapter’s material to compare our results and to provide a base knowledge to the reader in understanding the findings of our study.
CHAPTER 3

Methods

3.1 Data

This study has used the data from 2005 to 2008 and stock market and the relationship between dividend policy measures have been examined by considering Nordic countries and Pakistan markets. The data was taken from the “Balance Sheet Analysis of Karachi Stock Exchange Listed Companies” and the websites of Business Recorder, Blackwell Synergy, Ebsco, Amadeus and Ecowin. Dividend policy measures are dividend yield, dividend payout ratios and other accounting variables are considered due to their importance proposed by earlier researches such as profitability (P), gearing (GRG), size (SZ) and growth (GRW) of the firm. The data has been analyzed at two different stages i.e. Descriptive statistics and Model of Baskin (1989) by modifying as per needed to adjust multicollinearity (problem if exited) and variables differentiation.

3.2 Descriptive Statistics

This study has first tested the validity of the cross sectional data of both dependent and independent variables by different statistical tools. We have used mean, median, standard deviation and correlation at the very first stage of the analysis. Furthermore the relationship between variables and the significance will be analyzed to further proceed to final analysis. Moreover these statistical tools application will help us to determine the fact that our decision to include our variables to study the relationship with stock returns is based on reliable data sets to run our regression model.

3.3 Regression Model

In our study we have used generalized least squares regression which is usually used to run analysis on cross sectional time series data. Baskin (1989) has used this model for the first time to find out the relationship between price volatility and dividend policy measure. He regressed dependent variable stock price volatility against independent variables i.e. dividend payout ratio (POR) and dividend yield (DY), dividend to total assets (DTA) and actual cash dividends (ACD). The following regression model will be adopted:
This model was used by Baskin (1989) and he proposed a negative relationship between dividend policy measures and stock prices. Furthermore in Pakistan, Irfan and Nishat (2001) had used the modified version of this model due to certain difficulties. As earlier discussed literature had stated dividend policy affect the stock prices and so stock market return but many other factors are also associated with the variation in stock prices as well as dividend policy. So to examine and control the affect of other accounting variables on stock market return and dividend yield and dividend payout certain modification in the model are need to be made.

We have modified the model in our study in the following way:

\[ SPV_j = a_1 + a_2DY_j + a_3POR_j + a4DTA_j + a5ACD_j + e_j \]  \hspace{1cm} (1)

\[ SR_j = a_1 + a_2DPR_j + a_3Dyr_j + a_4PR_j + a_5LSZ_j + a_6GG_j + a7GR_j + e_j \]  \hspace{1cm} (2)

We have used pooled least square regression to run the model and to identify the relationship between dividend policy measure along with other major accounting variables and stock return.
CHAPTER 4

ANALYSIS

In this chapter we will discuss the findings at three levels. First descriptive statistics followed by correlation analysis and finally results from pooled least square regressions. The findings of our study are compared with the earlier discussed literature. In the summary of the chapter we will present the comparative findings of Pakistani and Nordic stock markets behavior with respect to dividend policy measures and stock return.

4.1 Descriptive Statistics

4.1.1 Nordic

This table contains the descriptive details for the six variables having an effect on the stock return of 92 companies traded on the stock exchanges of four Nordic countries. First variable profitability ranges between the -28,000 to 656,000 with the mean of 24,260,870, standard deviation 69,153,2570 and the variance 4782,173. Gearing is the second variable ranges from 0 to 896 having the mean value of 107,923,913 along with the standard deviation 69,153,2570 and the variance 12183,126. In our model size is the third variable ranges from 511800 to 5,264,900 where as the mean value is 5,690,429 and the standard deviation is 8,792,369 and variance 7,731,13. The Nordic table also shows the fourth variable Growth has a range from -18,000 to 8269,000, mean value of the growth is 108,035,609, standard deviation of the growth is 860,929,294 and variance 741,199,482.
the variance is 741199.482. In our model dividend yield is the fifth variable which effects the stock return its range is between 0 to 244,000 mean value of the yield is 10.89, standard deviation is 38.84 and its variance is 1508.923. The last dependent variable in our model is the dividend payout ratio who has the range from 0 to 4993, mean value is 192.1847, where as standard deviation is 802.8321 and its variance is 9935.341.

4.1.2 Pakistani

This table presents the descriptive details for the six variables having an effect on the stock return of 100 companies traded on the Karachi stock exchange of Pakistan. First variable profitability ranges between the -361 to 100 with the mean of 5.37, standard deviation 45.722 and the variance 2090.518. Gearing is the second variable ranges from 0 to 532 having the mean value 33.01 along with the standard deviation 58.424 and variance 3413.364. In our model size is the third variable ranges from 52 to 39014 whereas the mean value is 4902.18 and the standard deviation is 7655.433 with variance of 5.861E7. The table also shows the fourth variable Growth has a range from -59 to 270, mean value of the growth is 16.60, standard deviation of the growth is 31.894 and the variance is 1017.212. In our model dividend yield is the fifth variable which effects the stock return its range is between 0 to 5843 mean value of the yield is 124.91, standard deviation is 594.923 and its variance is 353932.951. The last dependent variable in our model is the dividend payout ratio who has the

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Range</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Profitability (%)</td>
<td>100</td>
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<td>-361</td>
<td>100</td>
<td>5.37</td>
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<td>2090.518</td>
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<td>532</td>
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<td>58.424</td>
<td>3413.364</td>
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<td>52</td>
<td>39014</td>
<td>4902.18</td>
<td>7655.433</td>
<td>5.861E7</td>
</tr>
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<td>Growth (%)</td>
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<td>329</td>
<td>-59</td>
<td>270</td>
<td>16.60</td>
<td>31.894</td>
<td>1017.212</td>
</tr>
<tr>
<td>Dividend yield ratio</td>
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<td>0</td>
<td>5843</td>
<td>124.91</td>
<td>594.923</td>
<td>353932.951</td>
</tr>
<tr>
<td>Dividend payout ratio</td>
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<td>31692</td>
<td>0</td>
<td>31692</td>
<td>1101.52</td>
<td>3884.540</td>
<td>1.509E7</td>
</tr>
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<td>-8</td>
<td>9</td>
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</tr>
</tbody>
</table>
range from 0 to 31692, mean value is 1101.52, where as standard deviation is 3884.540 and its variance is 1.509E7.

4.1.3 Danish

This table contains the descriptive details for the six variables having an effect on the stock return of 25 companies traded on the stock exchanges of Denmark. First variable profitability ranges between the 2,0000 to 142,0000 with the mean of 762,083, standard deviation 27,6058569 and the variance 762,083. Gearing is the second variable ranges from 0 to 896 having the mean value 184,160000 along with the standard deviation 184,6175506 and variance 34083,640. In our model size is the third variable ranges from 542160,0000 to 4,2686E7 where as the mean value is 3,586855E6 and the standard deviation is 8,3287453E6 and variance 6,937E13.

The table also shows the fourth variable Growth has a range from -1,0000 to 8269,000, mean value of the growth is 359,960000, standard deviation of the growth is 1.6479820E3 and the variance is 2715844,623. In our model dividend yield is the fifth variable which effects the stock return its range is between 0 to 244,000 mean value of the yield is 26,160000, standard deviation is 68,6626293 and its variance is 4714,557. The last dependent variable in our model is the
dividend payout ratio who has the range from 0 to 4993, mean value is 505,880000, where as standard deviation is 1,3664722E3 and its variance is 1867246,193.

4.1.4 Finish

This table shows the descriptive details for the six variables having an effect on the stock return of 25 companies traded on the Finish stock exchanges. First variable profitability ranges between the -18 to 32 with the mean of 12,24, standard deviation 11,8899, and the variance 141,357. Geari

<table>
<thead>
<tr>
<th>N</th>
<th>Range</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Variance</th>
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<td>25</td>
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<td>50</td>
<td>-18</td>
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<tr>
<td>25</td>
<td>Gearing (%)</td>
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<td>30524000</td>
<td>5391721,36</td>
<td>6972465,319</td>
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<td>25</td>
<td>Growth (%)</td>
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<td>-11</td>
<td>42</td>
<td>11,28</td>
<td>12,178</td>
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<td>129</td>
<td>9,00</td>
<td>25,241</td>
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<tr>
<td>25</td>
<td>Dividen payout ratio (%)</td>
<td>3221</td>
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<td>3221</td>
<td>197,96</td>
<td>640,909</td>
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<tr>
<td>25</td>
<td>Stock return</td>
<td>16</td>
<td>-7</td>
<td>9</td>
<td>.12</td>
<td>3,700</td>
</tr>
<tr>
<td>25</td>
<td>Valid N (listwise)</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

14 to 160 having the mean value 74,80 along with the standard deviation 34,499 and variance 1190,167. In our model size is the third variable ranges from 511800 to 30524000 where as the mean value is 5391721,36 and the standard deviation is 6972465,319 with variance of 4,862E13. The finish table also shows the fourth variable Growth has a range from -11 to 42, mean value of the growth is 11,28, standard deviation of the growth is 12,178 and the variance is 148,293. In our model dividend yield is the fifth variable which effects the stock return its range is between 0 to 129 mean value of the yield is 9,00, standard deviation is 25,241 and its variance is 637,083. The last dependent variable in our model is the dividend payout ratio who has the range from 0 to 3221, mean value is 197,96, where as standard deviation is 640,909 and its variance is 410764,623.
4.1.5 Swedish

This table has the descriptive details for the six variables having an effect on the stock return of 25 companies traded on the stock exchanges. First variable profitability ranges between the 0000 to 656,000 with the mean of 46,043478, standard deviation 133,2620379 and the variance 17758,771. Gearing is the second variable ranges from 15,0000 to 145,0000 having the mean value 71,434783 along with the standard deviation 32,1174352 and variance 1031,530. In our model size is the third variable ranges from 686937,00 to 31076038,00 where as the mean value is 8,3352E6 and the standard deviation is 8,20062E6 with variance of 6,725E13. The Swedish table also shows the fourth variable Growth has a range from -7,0000 to 145,0000, mean value of the growth is 11,652174, standard deviation of the growth is 30,8745389 and the variance is 953,237. In our model dividend yield is the fifth variable which effects the stock return its range is between 0 to 8,0000 mean value of the yield is 3,347826, standard deviation is 2,2484074 and its variance is 5,055. The last dependent variable in our model is the dividend payout ratio who has the range
from 0 to 9,000, mean value is 1,695652, where as standard deviation is 2,704178 and its variance is 7,312.

4.1.6 Norwegian

This table shows the descriptive details for the six variables having an effect on the stock return of 25 companies traded on the Norwegian stock exchange. First variable profitability ranges between the \(-28,000\) to \(53,000\) with the mean of \(14,315789\), standard deviation \(18,844547\) and the variance \(355,117\). Gearing is the second variable ranges from \(31,000\) to \(196,000\) having the mean value \(95,368421\) along with the standard deviation \(42,851436\) and variance \(1836,246\). In our model size is the third variable ranges from \(807106,00\) to \(5,2649E7\) where as the mean value is \(5,649777E6\) and the standard deviation is \(1,1666560E7\) with variance of \(1,361E14\). The Norwegian table also shows the fourth variable Growth has a range from \(-18,000\) to \(261,000\), mean value of the growth is \(20,526316\), standard deviation of the growth is \(59,860363\) and the variance is \(3583,263\). In our model dividend yield is the fifth variable which effects the stock return its range is between 0 to 9,000, mean value of the yield is \(2,421053\), standard deviation is \(3,005842\) and its variance is \(9,035\). The last dependent variable in our model is the dividend payout ratio who has the range from 0 to 31,000, mean value is \(2,421053\), where as standard deviation is \(7,2289218\) and its variance is \(52,257\).

<table>
<thead>
<tr>
<th>Descriptive Statistics</th>
<th>N</th>
<th>Range</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Variance</th>
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<td>Profitability (%)</td>
<td>19</td>
<td>81,000</td>
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<td>53,000</td>
<td>14,315789</td>
<td>18,844547</td>
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<tr>
<td>Gearing (%)</td>
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<td>165,000</td>
<td>31,000</td>
<td>196,000</td>
<td>95,368421</td>
<td>42,851436</td>
<td>1836,246</td>
</tr>
<tr>
<td>Size</td>
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<td>807106,000</td>
<td>5,2649E7</td>
<td>6</td>
<td>1,1666560E7</td>
<td>1,361E14</td>
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<tr>
<td>Growth (%)</td>
<td>19</td>
<td>279,000</td>
<td>-18,000</td>
<td>261,000</td>
<td>20,526316</td>
<td>59,860363</td>
<td>3583,263</td>
</tr>
<tr>
<td>Divid yield ratio (%)</td>
<td>19</td>
<td>9,000</td>
<td>0.0000</td>
<td>9,0000</td>
<td>2,421053</td>
<td>3,0058423</td>
<td>9,035</td>
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<tr>
<td>Dividen payout ratio (%)</td>
<td>19</td>
<td>31,000</td>
<td>0.0000</td>
<td>31,0000</td>
<td>2,421053</td>
<td>7,2289218</td>
<td>52,257</td>
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<tr>
<td>Stock return</td>
<td>19</td>
<td>950,000</td>
<td>0.0000</td>
<td>950,000</td>
<td>50,000000</td>
<td>217,94494</td>
<td>47500,000</td>
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### Table 4.1 Correlations

<table>
<thead>
<tr>
<th></th>
<th>Profitability (%)</th>
<th>Gearing (%)</th>
<th>Size (%)</th>
<th>Growth (%)</th>
<th>Dividend yield ratio</th>
<th>Dividend payout ratio</th>
<th>Stock return</th>
</tr>
</thead>
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<tr>
<td><strong>Correlation (%)</strong></td>
<td>Pearson Correlation</td>
<td>$-0.119$</td>
<td>$0.210^*$</td>
<td>$0.255^*$</td>
<td>$0.253^*$</td>
<td>$0.248^*$</td>
<td>$-0.116$</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td>$0.239$</td>
<td>$0.036$</td>
<td>$0.011$</td>
<td>$0.011$</td>
<td>$0.013$</td>
<td>$0.251$</td>
</tr>
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<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td><strong>Gearing (%)</strong></td>
<td>Pearson Correlation</td>
<td>$-0.119$</td>
<td>$1$</td>
<td>$-0.010$</td>
<td>$-0.083$</td>
<td>$-0.045$</td>
<td>$-0.031$</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td>$0.239$</td>
<td>$0.919$</td>
<td>$0.410$</td>
<td>$0.656$</td>
<td>$0.757$</td>
<td>$0.763$</td>
</tr>
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<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td><strong>Size</strong></td>
<td>Pearson Correlation</td>
<td>$0.210^*$</td>
<td>$-0.010$</td>
<td>$1$</td>
<td>$0.134$</td>
<td>$0.405^{**}$</td>
<td>$0.501^{**}$</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td>$0.036$</td>
<td>$0.919$</td>
<td>$0.184$</td>
<td>$0.000$</td>
<td>$0.000$</td>
<td>$0.490$</td>
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<tr>
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<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td><strong>Growth (%)</strong></td>
<td>Pearson Correlation</td>
<td>$0.255^*$</td>
<td>$-0.083$</td>
<td>$0.134$</td>
<td>$1$</td>
<td>$0.002$</td>
<td>$0.041$</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td>$0.011$</td>
<td>$0.410$</td>
<td>$0.184$</td>
<td>$0.984$</td>
<td>$0.687$</td>
<td>$0.764$</td>
</tr>
<tr>
<td>N</td>
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<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td><strong>Dividend yield ratio</strong></td>
<td>Pearson Correlation</td>
<td>$0.253^*$</td>
<td>$-0.045$</td>
<td>$0.405^{**}$</td>
<td>$0.002$</td>
<td>$1$</td>
<td>$0.884^{**}$</td>
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<td>Sig. (2-tailed)</td>
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<td>$0.011$</td>
<td>$0.656$</td>
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<td>$0.984$</td>
<td>$0.000$</td>
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<td>100</td>
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<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td><strong>Dividend payout ratio</strong></td>
<td>Pearson Correlation</td>
<td>$0.248^*$</td>
<td>$-0.031$</td>
<td>$0.501^{**}$</td>
<td>$0.041$</td>
<td>$0.884^{**}$</td>
<td>$1$</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td>$0.013$</td>
<td>$0.757$</td>
<td>$0.000$</td>
<td>$0.687$</td>
<td>$0.000$</td>
<td>$0.944$</td>
</tr>
<tr>
<td>N</td>
<td></td>
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<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td><strong>Stock return</strong></td>
<td>Pearson Correlation</td>
<td>$-0.116$</td>
<td>$0.031$</td>
<td>$-0.070$</td>
<td>$-0.030$</td>
<td>$-0.013$</td>
<td>$-0.007$</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td>$0.251$</td>
<td>$0.763$</td>
<td>$0.490$</td>
<td>$0.764$</td>
<td>$0.897$</td>
<td>$0.944$</td>
</tr>
<tr>
<td>N</td>
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<td>100</td>
<td>100</td>
<td>100</td>
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<td>100</td>
</tr>
</tbody>
</table>

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Table 4.1 shows the correlation matrix of all the variables and present a picture of the significance and relationship of variables with each other. The first variable in the correlation table 4.1 is profitability which have negative relationship with gearing ($-0.119$) and have very significant ($0.239$) relationship at 0.01 level of significance. These results are contradictory to the
findings of Irfan and Nishat (2001) who found significant positive relationship between earning volatility and leverage. They proposed that higher debt firms have more earning volatility and further analysis will help us to conclude these contradictory findings. Profitability correlate positively with both size and growth which is opposite to the results of earlier research done on Karachi stock exchange Pakistan (M. S. Nazir and M.M. Nawaz and W. Anwar and F. Ahmad, 2010).

The second variable in correlation matrix is gearing which have significant negative relationship with total assets (size) and growth in sales respectively (-,010) and (-,083). This means that firms with high debt have poor growth rate and furthermore decreases the volume of total assets of the organization. These findings are need to be critically analyzed and examined in further analysis due because these finding are contradictory to earlier research of Irfan and Nishat (2001). They found significant positive relationship and further concluded that the debt leads positively growth rate of the firm and also enhance the size of the firm. There is also negative and very significant correlation between gearing and both dividend yield (-,045) and dividend payout (-,031). These findings are consistent with earlier research of Irfan and Nishat (2001) and Baskin (1989) which reveals that firms with high gearing level tend to pay lower dividends.

Size is the next variable which has insignificant positive correlation with the dividend yield, payout and negative relationship at very significant level with stock return, which means that the big size firms have more ability to gain profits and further to payout dividends than smaller firms. Furthermore there is less volatility in the prices of these firms which lead to constant or lower stock returns. One reason behind size and dividend yield and payout positive relationship in Pakistani market is probably that investor prefer current dividends rather than future.

Dividend yield is one of the most important factors of dividend policy of the organization and Table 4.1 shows significant positive relationship between profitability (.253), growth (.002), size (.405) and payout ratio (.884). There is negative and very significant relationship between dividend yield, gearing (-.045) and stock return(-.013). The next variable in the table 4.1 is payout ratio which states weak, positive relationship with profitability, size, growth and dividend yield. There is significant and negative relationship between dividend payout ratio and gearing (-.031), stock return (-.007).
The last variable in the table 4.1 is stock return which is independent variables of the study. Stock return has negative and significant correlation with dividend yield (-.013) which is highly significant at the 0.05 level (2-tailed). These results are similar to earlier researches (done with reference to dividend policy measures and stock prices) of (M. S. Nazir and M.M. Nawaz and W. Anwar and F. Ahmad (2010), Irfan and Nishat (2001) and Baskin (1989). But the significance and relationship level somehow differs and is lower in our study correlation results from all of above mentioned researches. Anyhow the results propose that the firms with high dividend yield will have low price volatility and thus will decrease the stock return volatility. Stock return have negative correlation with dividend payout ratio (-.007) which is highly significant at the 0.05 level (2-tailed). These results are also as per earlier research of M.M. Nawaz and W. Anwar and F. Ahmad (2010) and Irfan and Nishat (2001) which were (-0.138 (significant at 0.01)) and (-0.177, significant at 0.05) respectively. These findings can be concluded as the firms with high dividend payout ratio will have less variation in the stock prices and thus there will be low variation in stock return. Stock return has positive relationship with gearing and significant negative relationship with profitability, size and firms sales growth which is significant at the 0.05 level (2-tailed).

**Nordic**

<table>
<thead>
<tr>
<th></th>
<th>Profitability (%)</th>
<th>Gearing (%)</th>
<th>Size</th>
<th>Growth (%)</th>
<th>Dividend yield ratio (%)</th>
<th>Dividend payout ratio (%)</th>
<th>Stock return</th>
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<tbody>
<tr>
<td>Profitability (%)</td>
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<td>.061</td>
<td>-.054</td>
<td>-.024</td>
<td>.059</td>
<td>.080</td>
</tr>
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<td>.061</td>
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<td>-.091</td>
<td>.080</td>
<td>.648**</td>
<td>.537**</td>
</tr>
<tr>
<td>N</td>
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<td>92</td>
<td>92</td>
<td>92</td>
<td>92</td>
<td>92</td>
</tr>
<tr>
<td>Gearing (%)</td>
<td>Pearson Correlation</td>
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<td>.818</td>
<td>.577</td>
<td>.446</td>
<td>.962</td>
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<tr>
<td>Sig. (2-tailed)</td>
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<td>.387</td>
<td>.451</td>
<td>.000</td>
<td>.000</td>
<td>.924</td>
</tr>
<tr>
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<td></td>
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<tr>
<td>Size</td>
<td>Pearson Correlation</td>
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<td>-.091</td>
<td>1</td>
<td>.000</td>
<td>-.037</td>
<td>-.063</td>
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<tr>
<td>Sig. (2-tailed)</td>
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<td>.387</td>
<td>.996</td>
<td>.729</td>
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<td>.649</td>
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<td>92</td>
</tr>
<tr>
<td>Growth (%)</td>
<td>Pearson Correlation</td>
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<td>.080</td>
<td>.000</td>
<td>1</td>
<td>-.030</td>
<td>-.026</td>
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</table>
Table 4.2 shows the correlation results of all selected Nordic companies, the relationship and significance of the relationship of variables with each other. Profitability has positive relationship with gearing (,061) and have very significant (,562) relationship at 0.01 level of significance (2-tailed). These results are similar to the findings of Irfan and Nishat (2001) who found significant positive relationship between earning volatility and leverage. They proposed that higher debt firms have more earning volatility (which are contradictory to our Pakistani results of correlation) and further comparative analysis will help us to conclude these findings. Profitability correlate negatively with both size (-,054) and growth (-,024) which are consistent to the results of earlier research done on Karachi stock exchange Pakistan (M. S. Nazir and M.M. Nawaz and W. Anwar and F. Ahmad, 2010). The second variable in correlation matrix is gearing which showed significant positive relationship with sales growth (.080) which depicts that high gearing firms have a high growth rate which is consistent with the earlier research. The correlation between dividend yield, dividend payout ratio and leverage are positive and insignificant which proposed that firms with high gearing ratio tend to yield and pay more dividend than firms with low gearing ratio which are contradictory to Pakistani correlation results (Table 4.1).

In Nordic market table 4.2 stated positive relationship between size and growth and negative relationship with all other variables. These results predict that firms with big size will have more growth opportunity but tend to have low yield, payout and stock return. The next variable is
dividend yield ratio which has the highest positive correlation with dividend payout ratio (.837) significant at 0.01 level (2-tailed). Significant positive correlation between dividend yield, profitability, gearing and negative relationship with stock return revealed that firms with high gearing tend to have more profitability and pay more dividends which decreases the variations in stock prices. There is positive relationship between dividend payout ratio and gearing, profitability and dividend yield. Dividend payout ratio has negative relationship with size, growth and stock return.

Stock return has highly significant negative correlation with dividend yield ratio (-.024) and dividend payout ratio (-.024) at 0.01 level of significance (2-tailed). These results predict that firms with high yield and payout lead to low variation in the stock prices and decreases stock return. These findings are consistent with the earlier research in Karachi stock exchange and other markets of the world but the level of significance is somehow different may be due to different markets and economies of the world. In Nordic markets stock return has significantly positive relationship with gearing and profitability and significant negative relationship with size and growth in sales, significant at 0.01 (2-tailed).

**Danish**

**Table 4.3 Correlations**

<table>
<thead>
<tr>
<th></th>
<th>Profitability (%)</th>
<th>Gearing (%)</th>
<th>Size</th>
<th>Growth (%)</th>
<th>Dividend yield ratio (%)</th>
<th>Dividend payout ratio (%)</th>
<th>Stock return</th>
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</thead>
<tbody>
<tr>
<td>Profitability (%)</td>
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<td>-.113</td>
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<td>.549</td>
</tr>
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<td>.643</td>
<td>.590</td>
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<td>.004</td>
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<tr>
<td>Gearing (%)</td>
<td>Pearson Correlation</td>
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<td>.001</td>
<td>.003</td>
<td>.662</td>
<td>.567</td>
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<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td>.011</td>
<td>.998</td>
<td>.987</td>
<td>.000</td>
<td>.003</td>
<td>.397</td>
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<tr>
<td>Size</td>
<td>Pearson Correlation</td>
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<td>.001</td>
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<td>.062</td>
<td>.008</td>
<td>-.009</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td>.643</td>
<td>.998</td>
<td>.769</td>
<td>.969</td>
<td>.967</td>
<td>.666</td>
</tr>
<tr>
<td>Growth (%)</td>
<td>Pearson Correlation</td>
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<td>.003</td>
<td>.062</td>
<td>1</td>
<td>-.081</td>
<td>-.080</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
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<td>.987</td>
<td>.769</td>
<td>.701</td>
<td>.702</td>
<td>.800</td>
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</table>
Table 4.3 shows the correlation results of Danish market and stated that stock return have positive correlation with dividend yield and dividend payout ratio which depicts that with high dividend yield and payout there will be high volatility in stock returns. These results are contrary to previous findings of irfan and nishat (2001) and baskin (1989) who proposed high dividend yield and payout produce low variations in prices of stocks. There exist positive relationship between stock return and profitability, size, gearing and growth. These results show that firms with high gearing will have more profitability and pay more dividends which will increase stock returns. These findings are very mixed.

Dividend yield ratio has the highest positive correlation with dividend payout ratio (.972) significant at 0.05 level (2-tailed). Significant positive correlation between dividend yield, profitability, gearing and stock return revealed that firms with high gearing tend to have more profitability and pay more dividends which increase stock return. There is positive relationship between dividend payout ratio and gearing, profitability, stock return and dividend yield.

Dividend payout ratio has negative relationship with size and growth.

**Finish**

Table 4.4 Correlations

<table>
<thead>
<tr>
<th></th>
<th>Profitability (%)</th>
<th>Gearing (%)</th>
<th>Size</th>
<th>Growth (%)</th>
<th>Dividend yield ratio (%)</th>
<th>Dividend payout ratio (%)</th>
<th>Stock return</th>
</tr>
</thead>
<tbody>
<tr>
<td>Profitability (%)</td>
<td>Pearson Correlation</td>
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<td>-.569**</td>
<td>.135</td>
<td>.450</td>
<td>-.561**</td>
<td>-.145</td>
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</table>
Table 4.4 shows the correlation results of Finish market and stated that stock return has positive correlation with dividend yield ratio (0.033) and dividend payout ratio (0.004) highly significant at 0.05 level (2-tailed); which depicts that with high dividend yield and payout there will be increase in stock returns. These results are contrary to previous findings of Irfan and nishat (2001) and Baskin (1989) who proposed high dividend yield and payout produce low variations in prices of stocks thus decrease the stock return. There is significant positive relationship between stock return and profitability, size. Stock return has negative correlation with gearing and growth in sales (-0.056), (-0.064) respectively. Dividend yield ratio has the significant positive correlation with dividend payout ratio (0.013) significant at 0.05 level (2-tailed). There exist
positive correlation between dividend yield, gearing and stock return revealed that firms with high gearing tend to yield more dividends which increase stock return. There is positive relationship between dividend payout ratio and gearing, growth, stock return and dividend yield. Dividend payout ratio has significant negative relationship with size (−,091) and profitability (−,145).

Norwegian

<table>
<thead>
<tr>
<th>Table 4.5 Correlations</th>
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<tbody>
<tr>
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<tr>
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<tr>
<td>Pearson Correlation</td>
</tr>
<tr>
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<td>Gearing (%)</td>
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<tr>
<td>Pearson Correlation</td>
</tr>
<tr>
<td>N</td>
</tr>
<tr>
<td>Size</td>
</tr>
<tr>
<td>Pearson Correlation</td>
</tr>
<tr>
<td>N</td>
</tr>
<tr>
<td>Growth (%)</td>
</tr>
<tr>
<td>Pearson Correlation</td>
</tr>
<tr>
<td>N</td>
</tr>
<tr>
<td>Dividend yield ratio (%)</td>
</tr>
<tr>
<td>Pearson Correlation</td>
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<tr>
<td>N</td>
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<tr>
<td>Dividend payout ratio (%)</td>
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<tr>
<td>Pearson Correlation</td>
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<td>N</td>
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<tr>
<td>Stock return</td>
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</table>
Stock return has highly significant negative correlation with dividend yield ratio (-,114) and dividend payout ratio (-,081) at 0.05 level of significance (2-tailed). These results predict that firms with high yield and payout lead to low variation in the stock prices and decreases stock return. These findings are consistent with the earlier research in Karachi stock exchange and other markets of the world but the level of significance is somehow different may be due to different markets and economies of the world. In Norwegian markets stock return has significantly positive relationship with gearing (.111) and profitability (.227) and significant negative relationship with size (-,088) and growth in sales (-,059), significant at 0.01 (2-tailed).

The next variable is dividend yield ratio which has positive correlation with dividend payout ratio (.060) significant at 0.01 level (2-tailed). There is significant positive correlation between dividend yield and gearing and negative relationship with stock return revealed that firms with high gearing tend to have more dividend yield and payout, which decreases the variations in stock prices. There is positive relationship between dividend payout ratio, growth rate and dividend yield. Dividend payout ratio has negative relationship with profitability, gearing, size and stock return.

**Swedish**

<table>
<thead>
<tr>
<th>Table 4.6 Correlations</th>
</tr>
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<tr>
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<tr>
<td>Profitability (%) Correlation</td>
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<td>Sig. (2-tailed)</td>
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</tr>
<tr>
<td>Gearing (%) Correlation</td>
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<tr>
<td>Sig. (2-tailed)</td>
</tr>
<tr>
<td>N</td>
</tr>
<tr>
<td>Size Correlation</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
</tr>
</tbody>
</table>
**Table 4.6** shows the correlation results of Swedish market and stated that stock return has positive correlation with dividend yield ratio ($r = 0.538$) and dividend payout ratio ($r = 0.054$) significant at 0.01 level (2-tailed); which depicts that with high dividend yield and payout there will be increase in stock returns. These results are contrary to previous findings of Irfan and nishat (2001) and Baskin (1989). Stock return has significant negative correlation with profitability ($r = -0.269$) and gearing ($r = -0.092$) which depicts that firms with high gearing ratio tend to show lower profits and thus resulted in decrease in stock returns. Dividend yield ratio has the significant positive correlation with dividend payout ratio ($r = 0.048$) significant at 0.05 level (2-tailed). Dividend yield ratio has negative relationship with profitability, gearing, size and growth in sales. There is positive relationship between dividend payout ratio and size of the firm, growth in sales, stock return and dividend yield. Dividend payout ratio has significant negative relationship with gearing ($r = -0.473$) and profitability ($r = -0.131$).
Pooled Least Squares Regression

We have used pooled least squares regression to examine the validity of the correlation results. We have run this regression by including the control variables. The purpose is basically to test and compare our results with earlier findings and also to identify the effect of controlled variables on the relationship between dividend policy measures and stock return.

Table 4.7 shows that dividend policy measures (dividend yield and dividend payout) have significant relationship with stock return even after including other variables. Adjusted R-squared is (0.010791) which explains the power of variables in explaining the stock market return. The results of our study are quite interesting and contradictory and mixed.

The coefficient of dividend payout ratio is (2.13E-05) with its P. value (0.1553) which means that; the increase in dividend payout will increase the stock price return these findings are contradictory to previous work of Irfan and Nishat (2001). They proposed a negative relationship between dividend payout ratio and stock price volatility. The coefficient of dividend yield is (-8.29E-05) with probability of (0.3849) which stated a negative and significant relationship between dividend yield and stock market return. We can propose that increase in dividend yield leads decrease in stock prices changes and thus reduce stock return. These findings are consistent with earlier research with
reference to stock price volatility and dividend policy measures i.e., see (Irfan and Nishat, 2001 and Baskin, 1989). The coefficient of gearing is (-0.000104) with P. value of (0.8187) which shows significant negative relationship with stock return. According to table 4.7 there is negative and significant relationship between growth, size and stock return. Profitability has positive relationship with stock return which can be concluded as, the higher profits leads to higher return to stock holders.

Nordic

We have examined the Nordic stocks and used pooled least squares to identify the effect of dividend policy measures along with gearing, growth, size and profitability on stock returns. The coefficient of dividend payout ratio is (-0.002818) with its P. value (0.7584) which means that; the increase in dividend payout will decrease variation in the stock prices and thus stock returns will be reduced. These findings are consistent to previous work of Irfan and Nishat (2001). They proposed a negative relationship between dividend payout ratio and stock price volatility. The coefficient of dividend yield is (-0.081685) with probability of (0.7012) which stated a negative and significant relationship between dividend yield and stock market return. We can propose that increase in dividend yield leads to decrease in stock prices changes and thus reduce stock return. These findings are consistent with earlier research with reference to stock price volatility and dividend policy measures ( See i.e., Irfan and Nishat, 2001 and Baskin,
1989). The coefficient of gearing is (0.035110) with P. value of (0.4922) which shows significant positive relationship with stock return. According to table 4.8 there is negative and significant relationship between growth, size and stock return. Profitability has positive relationship with stock return which can be concluded as, the higher profits leads to higher return to stock holders.

**Finish**

Dividend payout ratio and dividend yield have negative relationship with stock return which is consistent with developed markets. We can conclude that with increase in dividend yield and payout the stock prices volatility decreases. Investors show more trust in holding the investment and there is less variation in the stock prices which leads to lower stock price return. Gearing and growth are also negatively correlated with the stock return but size and profitability have insignificant positive relationship with stock returns. We can propose that firms expand through debts and generate more sales will be reflected in stock prices. Big size firms have the more ability to generate more profits in

Finish stock markets and thus would be able to attract more investment. The positive relationship between size, profitability and stock return proposed in table 4.9 can be concluded as; increase profitability and size leads to increase in stock return.
Danish stocks and used pooled least squares to identify the effect of dividend policy measures along with gearing, growth, size and profitability on stock returns. The coefficient of dividend payout ratio is (-0.000157) with its P. value (0.0040) which means that; the increase in dividend payout will decrease variation in the stock prices and thus stock returns will be reduced. These findings are consistent to previous work of Irfan and Nishat (2001). They proposed a negative relationship between dividend payout ratio and stock price volatility.

Dividend yield ratio has (0.004731) with P. value (0.0001) which shows positive relationship and these findings are contradictory to earlier research of Irfan and Nishat (2001) and Baskin (1989). But these findings are similar to the findings of M. S. Nazir and M.M. Nawaz and W. Anwar and F. Ahmad, (2010). Gearing has negative relationship with stock return in Danish stock markets. Growth in sales, size and profitability has significant positive relationship with stock returns. We can conclude that increase in total sales leads to enhance profitability and thus earn the confidence of investors to hold the investment and reduce the stock prices volatility.
Norwegian

We used pooled least square regression to identify the effect of dividend policy measures along with gearing, growth, size and profitability on stock return for the Norwegian stock market. Table 4.11 shows the coefficient of dividend payout ratio is (1.001247) along with the (0, 7144) as a p value. It shows that as the dividend payout will increase there is a greater chance of positive increase in the price volatility and ultimately stock return will also increase. These findings are contradictory to the findings of earlier researchers (see i.e., Irfan and Nishat (2001) and Baskin (1989) and M. S. Nazir and M.M. Nawaz and W. Anwar and F. Ahmad, (2010). They proposed a negative relationship between dividend payout ratio and stock price volatility. Dividend yield ratio has (-845.5783) coefficient with P. value (0.1377) which shows negative relationship and these findings are consistent to earlier research of Irfan and Nishat (2001) and Baskin (1989). But these findings are contradictory to the findings of M. S. Nazir and M.M. Nawaz and W. Anwar and F. Ahmad, (2010). The coefficient of gearing is (0.909605) with P. value of (0.0568) which shows significant positive relationship with stock return. According to table 4.11 there is negative and significant relationship between growth, size and stock return. Profitability has...
positive relationship with stock return which can be concluded as, the higher profits leads to higher return to stock holders.

Dependent Variable: SR  
Method: Pooled Least Squares  
Date: 06/13/11  Time: 16:24  
Sample: 1 23  
Included observations: 23  
Cross-sections included: 7  
Total pool (balanced) observations: 161  

Table 4.12

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<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
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</table>

R-squared 0.517653 Mean dependent var 0.023471  
Adjusted R-squared 0.478543 S.D. dependent var 0.123475  
S.E. of regression 0.089164 Akaike info criterion -1.919385  
Sum squared resid 1.176627 Schwarz criterion -1.670576  
Log likelihood 167.5105 F-statistic 13.23607  
Durbin-Watson stat 1.616038 Prob(F-statistic) 0.000000

Swedish

Dividend yield ratio and dividend payout ratio has significant and positive relationship with stock return according to table 4.12. These findings are contradictory to earlier research of Irfan and Nishat (2001) and Baskin (1989) who proposed negative relationship between dividend yield, dividend payout and stock price volatility. Gearing and size has negative relationship with stock return in Swedish stock markets. Growth in sales and profitability has significant positive relationship with stock returns. We can conclude that increase in total sales leads to enhance profitability and thus earn the confidence of investors to hold the investment and reduce the stock prices volatility.
Conclusion

The results about dividend policy measures of the Nordic and Pakistani companies by using the pooled least squares regression model, shows that the dividend payout ratio has the significant positive relationship with the stock returns in Pakistani stock market. These findings are contrary to earlier research in Pakistan and developed markets (see i.e., Baskin, 1989 and Irfan and Nishat, 2001 and M. S. Nazir and M.M. Nawaz and W. Anwar and F. Ahmad, 2010). In Nordic stock markets stock return has a significant negative relationship with the dividend payout ratio which is consistent with the results of the Irfan and Nishat (2001) and Baskin (1989). The dividend yield ratio has negative relation with the stock return in both the markets, but the results also shows that in Nordic countries it is comparatively high and its significance is also high. Whereas in Pakistan these are very low and their significance is also very low.

Furthermore here is an overview of the dividend policy measures relationship with stock return in each Nordic country. The results of the dividend policy measures of the finish stock market in comparison to the overall Nordic market shows that dividend payout is negatively correlated with the stock returns although in finish market its impact is low as compare to the overall Nordic market. Whereas there is no significance of the finish market as compare to the high significance to the overall Nordic market. Similarly the second dividend policy measure dividend yield ratio also has a negative relation with the stock returns but its effect is minor in the Finish stock market with low significance. In the Nordic market it has a low impact with high significant level. In Danish stock market dividend payout ratio has a negative effect on the stock returns but the significant of the overall market is much higher as compare to the Danish market and these results are consistent with developed markets results (Baskin 1989). Dividend yield ratio has a positive impact on the stock returns and these findings are not consistent with earlier research in Pakistan i.e., Irfan and Nishat (2001) but consistent with M. S. Nazir and M.M. Nawaz and W. Anwar and F. Ahmad, (2010).

The results of the Norwegian market; while examining the dividend payout ratio shows the positive relation with the stock returns and their significance level is also very high. The overall Nordic stock market has the negative relation to the stock returns with the high level of significance. But the results of the dividend yield ratio have the negative relation in the Norwegian and Nordic with the high level of significance in the overall market. Dividend payout
ratio of the Swedish market shows the positive relationship with the stock return. Similarly dividend yield ratio also has the positive impact on the stock returns in the Swedish market with low level of significance and negative relation in the overall market with the high level of significance.

We suggest for future research to take more companies of countries to conduct the study and furthermore dividend yield and dividend payout can be examined in two separate models to avoid the multicollinearity problem if exist. We have used pooled least square regression due to cross sectional data and we refer to use fixed and random model by consider panel data to achieve more concrete results. At the end we can conclude that the dividend policy measures are the most readily available tools to assess any business for making investment decision. But other accounting variables also play vital role in determining the stock return and also have significant relationship with dividend yield and dividend payout. Dividend yield and payout have significant negative relationship with stock return in most of the stock markets which are consistent with the earlier research in developing and developed markets.
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