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Course Name. Master Thesis (MAN 599)
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#### Abstract

This study seeks to examine the determinants of dividends policy for forty listed companies of Sultanate of Oman (Muscat Security Market). The sample used in this paper is from 2001-2006. The analyses are performed using data derived from the financial statement which founded in the (share holder guide2006 and 2007 issued by Muscat Security Market (MSM)). In this research we have excluded all the regulated firms and take into consideration only cash dividends. Regression on panel data is used to estimate the regression equation.

Overall explanatory power is fair for a panel model with $R^{2}$ of $19.83 \%$. The result suggests a positive and insignificant relationship between leverage and payout ratio. Also size has again a positive but significant relationship with payout. The result shows positive relationship between profitability and payout ratio. In the other hand the results suggest also a negative and insignificant relationship between corporate tax and dividend payout ratio payout. market to book value of equity is founded also with negative coefficient and significant which means it has a negative with payout ratio. We found negative and significant relationship between tangibility and payout ratio.


## FOREWORD

This study seeks to examine the determinants of dividends policy for non regulated firms for forty listed companies of Sultanate of Oman (Muscat Security Market) using panel data regression.

I am greatly indebted to my thesis advisor Dr. Berna Serener for her constant help, guidance and the countless hours of attention she devoted throughout the course of this work. Her priceless suggestions made this work interesting and learning for me. I would like also to place on record my great appreciation to all Business administration faculty members and my colleagues who helped throughout my study.

I would like to thank all my instructors who taught me since the beginning of my master program, Dr. Turgut Tursoy, Dr. Okan Safakli, Dr. Fahiman Eminer, Dr. Figen Yasilada.

I would like to thank my advisor Dr. Nil Gunsel for instruction, guidance, and her full corporation.

Acknowledgment is due to Near East University for extending facilities and support to this research work.

My deep appreciation goes to Mr. Ali Mohammed Husain Ali Al-Zaabi a manager strategy and risk management at Oman Development Bank (ODB), who helped me in finding the necessary data to accomplish this research paper.

I wish to express my heartfelt gratitude to my family for their encouragement, constant prayers and continuing support. I owe a lot of thanks to my dear wife for her extra patience and motivation.
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ABBREVIATIONS<br>RO (Omani Rials)<br>CMA (Capital Market Authority)<br>GCC (GULF Council cooperation)<br>LOG of M. CAP (Log of market capitalization)<br>MSM (Muscat Security Market)<br>MTBV (Market to book value of equity)<br>ROA (Return on Assets)<br>ROE (Return of Equity)<br>SAOG (SOCIETE ANONYME OMANI GENERAL)<br>SIZE1 (LOG OF TOTAL ASSETS)<br>SIZE2 (LOG OF TOTAL SALES)

## CHAPTER ONE

## 1. INTRODUCTION:

### 1.1 Aim of the Study

This study seeks to examine the determinants of dividend policy for forty non regulated firms of listed companies in Muscat Security Market (MSM) for period 2001-2006 using panel data regression. The data which are used in this study are annual. In this study we test the affect six independent variables on PAYOUT (Y). Those variables include LEVERAGE, TAX, SIZE1, MTBV, TANGIBILITY, and PROFITABILITY. Where, PAYOUT $(Y)=$ Dividend per share $/$ Stock Price at end of the year, LEVERAGE $=$ Debt $/$ Total Assets, $T A X=T a x /$ Net profit, SIZE1 = Log of Total Assets, MARKET TO BOOK VALUE OF EQUITY (MTBV) = Market Capitalization / Net worth, TANG = Net Plant and Equipment / Total Assets, and PROF=EBIT / Total Assets.

### 1.2 Structure of the Study

This study consists of six chapters. The first chapter is an introduction which gives the general view of the study. Chapter two talks generally about Muscat Security Market, market dividend policy, and tax law in sultanate of Oman.

Chapter three explains the term of dividend policy, shows different types of cash dividends and its payment procedures, it shows also how some factors favor high dividends and some others favor low dividends, also is explains most of the dividends theories, and in the other hand it shows alternative to cash dividends.

Chapter four explains the literature review of dividends policy. This chapter shows the aim of each study, sample and period used in the research, the dependent and independent variables, methodology, and findings of each research.

Chapter five includes sample of the data used in the study, it also show the methodology of the research, in addition it covers also explanation for independent variables and its affect on dividend payout, and finally the results and the study limitations are shown at end of this chapter. The last chapter is chapter six which contains the conclusion of this research.

## CHAPTER TWO:

## 1. THE MARKET

### 2.1 Muscat Security Market (MSM)

The Muscat Securities Market (MSM) was set up in 1989 with the aim of attracting investment into the economy. It regulates the primary and secondary market of shares and bonds issued by joint stock companies SAOG registered in Oman. In 2006 the MSM performed well, bucking the regional trend of declining equity markets felt by other markets in the GCC (gulf council cooperation) regions. At the end of 2006, the market capitalization of the MSM was US $\$ 13$ billion. The total value of traded shares on the MSM increased by $8 \%$ during the course of the year. The largest increases were recorded in the industrial and banking sectors, which rose by $66 \%$ and $12 \%$ respectively. The MSM has also seen rising activity in the mutual fund industry, with a total of seven funds now in existence. Bonds were first issued in 2001, and the market has now grown to include ten government bonds and eight commercial bonds. Several factors have contributed to the positive performance of the market, including the strong performance of the economy as well as the rise in oil prices. The economy registered a real growth rate of $7.1 \%$, in comparison with the $6.7 \%$ growth recorded in 2005. In addition, the MSM along with the Capital Market Authority has successfully applied effective laws on disclosure and corporate governance and this has resulted in the growing confidence of investors in the market (www.gti.org/files/Middleeast2007.pdf, [08.08.2008]).

### 2.2 MSM-30 Stock Index

The principal stock index at the MSM is the MSM-30. The MSM-30 (also known as the Muscat Securities Market Index) wâs established in 1992. The composition of the index by sector is as follows: Banks \& Investment Sector: 10 companies Industry Sector: 10 companies, and Service \& Insurance Sector: 10 companies.

Muscat Security Market consist One Hundred and Twenty Six firms (126) which divided into three categories (www.msm.gov.om, [08.08.2008]).

Table 2.1 Muscat Security Market Firms Classification

| Banking and Investment (28) Firms. |
| :--- |
| Industrial (54) Firms |
| Services and Insurance (44) firms |

(The Royal Decree (80/98) dated November 9th 1998 which promulgated the new Capital Market Law provides for the establishment of two separate entities, an exchange, Muscat Securities Market (MSM) where all listed securities shall be traded and the Capital Market Authority (CMA) - the regulatory. The Exchange is a governmental entity, financially and administratively independent from the regulatory but subject to its supervision. Thus the securities industry in Oman was well established to enhance investors' confidence by developing and improving all the processes appertaining to the stock market (www.msm.gov.om, [08.08.2008]).

As a continuing process in the development of the securities market, the MSM has developed its regulations to provide information and financial data relating to the performance of the Market and all listed companies directly to investors through a highly advanced electronic trading system. This will not only ensure transparency of activities which is considered to be one of the main principles of a well organized market, but will support the market by encouraging investors to make the right investment decision at the right time.

The MSM has been established as a public organization with independent legal entity. It aims to encourage saving and improve investment awareness as well as protecting investors. The MSM targets to provide a better environment for investing funds in securities and to, consequently realize mutual benefit to national economy and investors. It also facilitates the trading of securities issued by joint stock companies as well as bonds issued by the government, commercial companies, investment fund's units and any other domestic or foreign securities agreed upon by the Market.

### 2.3 Tax Law in Sultanate of Oman

Sultanate of Oman is one of the countries with low tax bracket. The main reason behalf this is availability of oil. Thus, the main source of government income is from exporting oil.

Capital gains and dividends are not taxed in Oman. The country's main tax is corporate tax. Omani firms with more than $30 \%$ ownership are taxed on $12 \%$ on their income over Omani Rials RO. 30,000 . From RO. 0 to RO. 30,000 is exempt. Other businesses with over $70 \%$ foreign ownership and branches of foreign companies are taxed on $5 \%-30 \%$. There is no firm listed in Muscat Security Market over 70\% owned by foreigners (om.mofcom.gov.cn/table/sdsf.pdf, [13.08.2008]).

### 2.4 Market Dividend Policy

Most of the profitable firms in Oman distribute $100 \%$ of their profits as dividends. This led Capital Market Authority (CMA) to issue circular no. (12/2003) arguing that firms have to retain some of the earnings for "rainy days". This circular says: Trading of the share of your company on the securities market is influenced by the adequacy and quality of the information disclosed to investors as well as the expectations of market participants on the future performance of the company based on the available information. One of the most significant factors that affect the movement of shares in the market is the cash dividend policy of the listed company and the future attitude of the management. In many cases it is difficult for the market participants to predict the dividends unless the company has a clear-cut policy. Hence many market participants see that its imperative for companies to have clear policy of dividend and disclosure, therefore investors may be able to predict the potential position of the company and infer the intentions of the company's management whether or not to expand their activities.

Many take the view that dividend payments at high level without retaining part of the earnings for the "rainy day" or for expansion is unsafe and unsustainable. Trading based solely upon cash returns risks the creation, ultimately, of market stagnation and tends to lead to the occasional spectacular corporate crash when an unexpected crisis occurs and the company has not maintained reserves sufficient to deal with the situation.

At best, paying out all of the earned profit means that the company will not grow and will ultimately be outstripped by companies who save and grow. At worst, a fundamentally strong company can be weakened or even destroyed by the failure to retain earnings (www.cma.gov.eg [12.08.2008]).

Cash dividend practices differ from one jurisdiction to another, studies has shown that the majority of Omani public joint stock companies currently operate with a dividend cover of $100 \%$ of its available profits assigned to dividends. In comparison with many other jurisdictions where a common dividend covers may be in the range of $60 \%-80 \%$ of profits being made available for dividends.

Corporate directors in such jurisdictions are aware of the possible long-term consequences to themselves in respect to personal liability in regard of the long-term growth of the company through the reinvestment of retained profits to achieve the objectives of the company.

The Capital Market Authority would like to bring to the kind attention of the managements of public joint stock companies that this policy is not an end in itself but a means to protect the interests of the shareholders of the company. Therefore, CMA would like to recommend not to depend on the operational results alone, but to strike a balance between the demand and expectations of investors for immediate and high returns and the long-term growth of the company through the reinvestment of the retained profits. The boards shall also take into account the prevailing laws and sub-laws and the contracts with bondholders and creditors and other aspects that the board deems necessary on the declaration of dividends.

We are aware of the pressures and expectations of investors that the boards are facing. . CMA is keen to create large entities, which are able to boost the Omani economy and are able to compete, especially after Oman joined the World Trade Organization. We are all required to set out a clear cut dividend policy with a view to the long term expansion of the company by striking the right mix to meet both good housekeeping practice (retention of some earnings appropriate to the economic conditions and the understandable desire of shareholders for immediate returns. CMA calls upon public joint stock companies to adopt prudent policies in cash dividends and to disclose the same in the annual report of the board of directors attached to the financial statements.

## CHAPTER THREE

## 3. DIVIDEND POLICY

A dividend is usually a percentage of net profit paid to the stockholder. Sometimes the firms pay dividends from source other than accumulated retained earnings; the term distribution is used rather than dividends. Generally, we refer to a distribution from earnings as dividends and distribution from capital as liquidating dividends.

### 3.1 Cash Dividends

Dividends come in several different forms. The most common type of dividend is a cash dividend. The first type of cash dividend is regular cash dividends in which the firms pay cash to its owners in the normal course of business. Some times firms pays its stockholders extra dividends rather than regular dividends payment. There is no specific time interval for paying extra dividends it may and may not be repeated in the future. The third type of cash dividends is special dividends which can be defined from its name "special" which indicate that it truly unusual or one-time event. And finally, the forth type is liquidating dividend which usually means some or all of the business has sold off (liquidated). All cash dividend reduce corporate cash and retained earnings and increase external financing if need, except liquidating dividend which may reduce paid-in capital (Ross and others, 1998, 573).

### 3.2 Dividends Payment Procedures

Dividends are usually set by the board of directors and paid to stock holder a few weeks later. Generally there are specific procedures followed by the publically traded firms in paying dividends. Starting from Dividend declaration date, the date on which the board of directors declares the amount of dividend that will be paid.

The next date of note is the ex-dividend date, at which time investors have to have bought the stock in order to receive the dividend. Since the dividend is not received by investors buying stock after the ex-dividend date, the stock price will generally fall on that day to reflect that loss. After few days time the firms close the stock transfer book and record all the shareholders names and this date is called date of record.

These shareholders will receive the dividends. There should be generally no price effect on this date. The final step involves mailing out the dividend checks on the dividend payment date. In most cases, the payment date is two to three weeks after the holder-of-record date. While stockholders may view this as an important day, there should be no price impact on this day either.

Figure 3.1: The dividends payment schedule


### 3.3 Does Dividend Policy Matter?

Indeed all the investor evaluates the firm stock price before purchasing its shares. The value of the stock is equal to present value of all future payments (dividends payment plus expected capital gain). There is a very important question arise, does dividend policy affect stock price? Based on intuition, we could quickly conclude that dividend policy is important.

However, we might be surprised to know that dividend question has been a controversial issue. Fisher Black, some 32 years ago, called it the "dividend puzzle". In his words, why do corporations pay dividends? Why do investors pay attention to dividends? Perhaps the answers to these questions are obvious. Perhaps dividends represent the return to the investor who put his money at risk in the corporation. Perhaps corporations pay dividends to reward existing shareholders and to encourage others to buy new issues of common stock at high prices. Perhaps investors pay attention to dividends because only through dividends or the prospect of dividends do they receive a return on their investment or the chance to sell their shares at a higher price in the future. Or perhaps the answers are not so obvious.

Perhaps a corporation that pays no dividends is demonstrating confidence that it has attractive investment opportunities that might be missed if it paid dividends. If it makes these investments, it may increase the value of the shares by more than the amount of the lost dividends. If that happens, its shareholders may be doubly better off.

They end up with capital appreciation greater than the dividends they missed out on, and they find they are taxed at lower effective rates on capital appreciation than on dividends. In fact, I claim that the answers to these questions are not obvious at all. The harder we look at the dividend picture, the more it seems like a puzzle, with pieces that just don't fit together (Fischer black, 1976, 5).

### 3.4 Factors Favoring Low Dividends Payout

There are several factors which might lead all the investors to prefer low dividends. Those factors are introduced below.

### 3.4.1 Tax

The tax laws in US are complex and severely affect the dividend policy. The effective tax rate for individual shareholders is higher for dividend income than capital gain. Also the tax on capital gain is deferred until stock is sold. But this is not the case in Sultanate of Oman because of absence of individual taxes.

The second aspect of capital gain taxation makes the effective tax rate much lower because the present value of the tax is less. The firms which adopt low dividend payout policy reinvest the money instead of paying dividend. This reinvestment increases the value of the firm and of the equity. Ceteris paribus, the net effect is that the expected capital gains portion of the return will be higher in the future. So, the fact that capital gains are taxed favorably may lead us to prefer this approach (Ross and others, 1998, 578).

### 3.4.2 Expected return, Dividends, and Personal Taxes

If we assume that dividends are taxed as ordinary income, capital gains are not taxed at all, and all investors are in $25 \%$ tax bracket. We consider stock for firms X and Y . Suppose the stock price for firm X is $\$ 100$ and next year's price is expected to be $\$ 120$.

With no dividends the return for the firm X will be $20 / 100=20 \%$. And firm Y expected to pay $\$ 20$ dividend next year, and ex-dividend price will then be $\$ 100$.

The after tax dividend is $\$ 20 *(1-0.25)=\$ 15$ and the present value for after tax amount at $20 \%$ required rate of return is $\$ 115 / 1.2=\$ 95.83$. Thus, the market price for the stock Y must be $\$ 95.83$. It is obvious that the firm Y is worth less than stock X because of its dividend policy.

If we consider pretax return for stock $Y$, it is equal to $25.2 \%$ ( $\$ 120-95.83$ )/ 95.83. Thus, we can conclude the firm $Y$ has a higher cost of equity ( $25.2 \%$ versus $20 \%$ ) because its dividend policy. Shareholders demand the higher return as compensation for the extra tax liability (Ross and others, 1998, 578).

### 3.4.3 Flotation costs

In real life we know the issuing of new stock can be very expensive. Some firms in order to pay dividends to its stockholders they issue new stock and this increase cost of capital. Thus, if we take floatation cost in our consideration we can find that the value of the stock decreases if we sell new stock (Ross and others, 1998, 578).

### 3.4.4 Dividend Restrictions

Some corporation may face restriction on its ability to pay dividends. For example, a common feature of a bond indenture is a covenant prohibiting dividend payments above some level. Also, some corporations may be prohibited by the state law from paying dividends if the dividend amount exceeds the firms retained earnings (Ross and others, 1998, 578).

### 3.5 Factors Favoring High Dividends Payout

In contrast, in this section we will consider some reasons which lead the firms to pay higher dividends. In a classic textbook, Graham, and others have argued that firms should generally have high dividend payouts because:

### 3.5.1 Discount Value

The discounted value of neầ dividends is higher than the present worth of distant dividends (Ross and others, 1998, 581).

### 3.5.2 Larger Dividends Higher the Price

Graham, and others (1962) between two companies with the same general earning power and same general position in an industry, the one paying the larger dividend will almost always sell at a higher price (Ross and others, 1998, 581).

There are two additional factors favoring a high dividend payout by the proponents of this view.

### 3.5.3 Desire For Current Income

In the real world many individuals desire current income. The classic example is the group of retired people and others living on a fix income, the proverbial widows and orphans. It is argued that this group of people willing to pay a premium to get a higher dividend yield.

The individual who prefer current high cash flow can easily sell off his shares which are with low current cash flows, and similarly those who hold high dividend share and prefer low dividend can reinvest the dividends. In the real world selling and buying securities is not so easy, the investor have to consider the brokerage fee and other transaction cost. These direct cash expense could be avoided by an investment in high dividend securities. In addition, the expenditure of the stockholder sometimes own time in selling securities and the natural fear of consuming out of principal might further lead many investors to buy high dividend securities.

Even so, to put this argument in perspective, it should be remembered that financial intermediaries such as mutual funds can (and do) perform these repackaging transactions for individuals at very low cost (Ross and others, 1998, 581).

### 3.5.4 Uncertainty Resolution

Gordon (1962) has argued that a high-dividend policy also benefits stockholders because it resolves uncertainty.

According to Gordon, investors price a security by forecasting and discounting future dividends. Gordon then argues that forecasts of dividends to be received in the distant future have greater uncertainty than do forecasts for near term dividends.

Gordon's argument is essentially a bird in hand story. A \$1 dividend in a shareholders' pocket is somehow worth more than that samê $\$ 1$ in a bank account held by the corporation (Ross and others, 1998, 581).

### 3.5.5 Tax And Legal Benefits from High Dividends

In the previous section we mentioned that dividends are taxed unfavorably for individual investors.

This fact is a powerful argument for a low payout. However, there are a number of other investors who do not receive unfavorable tax treatment from holding high dividend yield, rather than low dividend yield securities.

A significant tax break on dividends occurs when a corporation owns stock in another corporation. A corporate stockholder receiving either common or preferred dividends is granted a $70 \%$ (or more) dividend exclusion. Since the $70 \%$ percent exclusion does not apply to capital gains, this group is taxed unfavorably on capital gain. As results of the dividend exclusion, high dividend, low capital gains stocks may be more appropriate for corporations to hold.

This tax advantage of dividends also leads some corporations to hold high yielding stocks instead of long term bonds because there is no similar tax exclusion of interest payment to corporate bondholders.

We have already discussed the tax advantages and disadvantage. Of course, this discussion is irrelevant to those with zero tax brackets. This group includes some of the largest investors in the economy, such as pension funds, endowment funds, and trust funds.

There are some legal reasons encourage large institutions to invest in firms who pays high dividends. First, institutions such as pension funds and trust funds are often set up to manage money for the benefit of others. The mangers of such institution have a fiduciary responsibility to invest the money prudently. It has been considered imprudent in courts of law to buy stock in companies with no established dividends record. Second, Institution such as university endowment funds and trust funds are frequently prohibited from spending any of the principles. Therefore, such institutions might prefer to hold high dividends yield stock so they have some ability to spend (Ross and others, 1998, 581).

### 3.6 Dividend Policy Theories

For an optimal dividend policy to exist there must be benefits from paying dividends as well as cost due to their payment such floatation cost etc. There are several theories that identify benefits as well as cost.

### 3.6.1 Signaling Theory or Information Content

Signaling theory or information content is a theory which explains how the information affects the stock prices. The announcement of that a firm has decide to increase its dividends per share may imply as a good signal for the investors because increasing the dividends may imply that the firm is expecting higher profit and therefore larger cash flow to pay the shareholders (Weston and others, 1996, 648).

From the real world, In November 1990, Occidental petroleum cut its dividend from $\$ 2$ to $\$ 1$ per share. In response, the firm stock price went from about $\$ 32$ to $\$ 17$.

Generally, the investors who prefer high dividends rather than capital gain argue that the larger the dividends increase lead to increase in the stock price.

Miller, and Modigliani argued differently. To conclude our discussion of dividends policy under uncertainty, we might take note briefly of a common confusion about the meaning of the irrelevance proposition occasioned by the fact that in the real world a change in the dividend rate is often followed by a change in the market price (sometimes spectacularly so). Such a phenomenon would not be incompatible with irrelevance to the extent that it was merely a reflection of what might be called "informational content" of dividends, an attribute of particular dividend payment hitherto excluded by assumption from the discussion and proofs. That is, where a firm has adopted a policy of dividend stabilization with along established and generally appreciated "target payout ratio" investors are likely to (and have good reason to) interpret a change in the dividend rate as a change in management's views of future profit prospects for the firm. The dividend change, in other words, provides the occasion for the price change though not it cause, the price still being solely a reflection of future earnings and growth opportunities. In any particular instânce, of course, the investors might well be mistaken in placing this interpretation on the dividend change, sine the management might really only be changing its payout target or possibly even attempting to "manipulate" the price (Miller and Modigliani, 1961, 411-433).

But this would involve no particular conflict with the irrelevance proposition, unless, of course, the price changes in such case were not reversed when the unfolding of events had made clear the true nature of the situation.

Thus, Miller, and Modigliani claimed that investor's reaction to changes in dividend payment do not show that investors prefer dividends to retained earning; rather, the stock price change simply indicate that important information is contained in dividend announcements. In effect, dividend announcements provide investors with information previously known only to management. This theory is referred to as the information content or signaling hypothesis.

Some would claim that management frequently has inside information about the firm that it cannot make available to investors. This difference accessibility to the information between management and investors, called information asymmetry.

### 3.6.2 Agency Cost

Agency cost occurs from the conflict between the personal interest of managers and the goal of shareholders wealth maximization, especially in large firms in which mangers and owners have different incentive. That is the managers will not work for the owners unless it is in their best interest to do so.

In reality, conflicts may still exist, and the stock price of a company owned by investors who are separate from management may be less than the stock value of a closely held firm. The potential difference in price is the cost of the conflict to the owner, which has come to be called agency cost.

Jensen and Meckling, define an agency relationship as a contract under which one or more persons (the principal(s)) engage another person (the agent) to perform some service on their behalf which involves delegating some decision making authority to the agent (Jensen, Meckling, 1976, 305).

### 3.6.3 Pecking Order Theory

The theory of firm's capital structure and financing decisions. The pecking order theory was first proposed by Donaldson (1961) as a theory to explain the observed financial behavior of forms. A modified version of the pecking order theory was proposed by Myers and Majluf (1984). It states that companies prioritize their sources of financing (from internal financing to equity) according to the law of least effort, or of least resistance, preferring to raise equity as a financing means "of last resort". Hence, internal funds are used first, and when that is depleted, debt is issued, and when it is not sensible to issue any more debt, equity is issued (Jensen and others, 1992, 250 ).

This theory maintains that businesses adhere to a hierarchy of financing sources and prefer internal financing when available, and debt is preferred over equity if external financing is required.

We could ask why firms prefer to finance its needs internally when available, than by debt, and finally by issuing equity. The answer simply is because of cost. We know that floatation cost is associated with the issuing of equity is much more costly than issuing bonds (debt).

This means very simply that new equity capital raised through the sale of common stock will be more expensive than capital rose through the retention of earnings. Jensen, Solberg, Zorn (1992) suggests that firms set dividend level that permit manager to finance expected investments internally.

If dividend policy corresponds to managerial projections of future investment opportunities, firms can maintain stable dividends and obtain needed equity financing internally.

### 3.7 An Alternative to Cash Dividends (Stock Repurchase)

Stock repurchase is another method used to pay out a firm's earnings to its owners, which provide more preferable tax treatment than dividends.

Assume XYZ, Inc has an excess cash of $\$ 300,000$, other assets for $\$ 700,000$, net income for the current year $\$ 49,000,100,000$ total outstanding shares. So, the balance sheet for the company will be as follow.

Table 3.1: Stock Repurchase Example

| Market Value Balance Sheet (before paying out excess cash) |  |  |  |
| :--- | :--- | :--- | :--- |
|  | Assets | Liabilities and Owners Equity |  |
| Excess Cash | $\$ 300,000$ | Debt | $\$$ |
| Other Assets | $\underline{\$ 700,000}$ | Equity | $\$ 1,000,000$ |
| Total Assets | $\underline{\mathbf{\$ 1 , 0 0 0 , 0 0 0}}$ | Total Liabilities \& O.E. $\underline{\mathbf{\$ 1 , 0 0 0 , 0 0 0}}$ |  |

The total market value of the equity for the above firm is $\$ 1$ million, so the stock sells for $\$ 10$ per share. Earning per share (EPS) are $\$ 49,000 / 100,000=\$ 0.49$ and the price earning ratio $(\mathrm{PE})$ is $\$ 10 / 0.49=20.4$.

The first option, If the firm pays cash dividends $\$ 300,000 / 100,000=\$ 3$ per share extra cash dividend. Alternatively, if the firm is thinking of using the excess cash to repurchase $\$$ $300,000 / 10=30,000$ shares of stock.

Let see what if the firm pay $\$ 300,000$ as cash dividends. The new balance sheet will be as follows:

Table 3.2: Stock Repurchase Example

| Market Value Balance Sheet (before paying out excess cash) |  |  |  |
| :--- | :---: | :--- | :--- |
| Assets |  | Liabilities and Owners Equity |  |
| Excess Cash | $\$$ | Debt | $\$ 0$ |
| Other Assets | $\underline{\$ 700,000}$ | Equity | $\underline{\$ 700,000}$ |
| Total Assets | $\underline{\mathbf{7 7 0 0}, \mathbf{0 0 0}}$ | Total Liabilities \& O.E. | $\underline{\mathbf{\$ 7 0 0 , 0 0 0}}$ |

If the cash is paid out as a dividend, there are still 100,000 shares outstanding, so each is worth $\$ 7$. Thus, the price per share falls from $\$ 10$ to $\$ 7$. Consider a stockholder who owns 100 shares. At $\$ 10$ per share before the dividend, the total value is $\$ 1000$.

If the firm pays $\$ 3$ as dividends to the stockholders, those 100 shares worth $\$ 700$ plus $\$ 300$ for a total of value of $\$ 1000$. Thus, we can conclude that that the dividend does not affect stockholders wealth if there is no imperfection.

Also, because total earnings and the number of shares outstanding haven't changed, EPS is still $49 \%$. The price earnings ratio, however, fall to $\$ 7 / 0.49=14.3$. Why we are looking at accounting earnings and PE ratios will be apparent in just a moment. The second option if the firm repurchases shares with the excess cash, there will be just 70,000 shares outstanding. Clearly we can see that the balance sheet remain without any changes.

Table 3.3: Stock Repurchase Example

| Market Value Balance Sheet (before paying out excess cash) |  |  |  |
| :--- | :---: | :--- | :--- |
|  | Assets | Liabilities and Owners Equity |  |
| Excess Cash | $\$$ | 0 | Debt |
| Other Assets | $\underline{\$ 700,000}$ | Equity | $\$$ |
| Total Assets | $\underline{\mathbf{\$ 7 0 0 , 0 0 0}}$ | Total Liabilities \& O.E | $\underline{\$ 700,000}$ |

The company is worth $\$ 700,000$ again, so each remaining share is worth $\$ 700,000 / 70,000=\$ 10$. Our stockholder with 100 shares is obviously unaffected. Also in this case, EPS goes up because total earning remain the same while the number of share goes down. The new EPS is $\$ 49,000 / 70,000=0.7$., just it was following the dividend.

This example illustrates two points, first the cash dividend and a share repurchase are essentially the same thing when there are no imperfections. Second point, when there are no taxes or other imperfection the dividend policy is irrelevant.

### 3.8 Stock Dividend and Stock Split

Stock dividend is a third type of dividend, but it is not true dividend because it is not paid in cash. When any firm pay stock dividends to its shareholder it effect the number of shares outstanding, the share price decrease, and the percentage of ownership remain unchanged. In the other hand a stock split is essentially the same thing a stock dividend, except that a split is expressed as a ratio instead a percentage. When a split is declared, each share is split up to create additional shares. For example, in a three for one stock split, each old share is split into three new shares (Ross and others, 1998, 593).

## CHAPTER FOUR

## 4. LITERATURE REVIEW

### 4.1 Literature Review

Rozeff (1982) presents a straightforward model of the determination of the optimal dividend payout and empirical test using a multiple regression equation to explain the cross sectional variation in dividend payout ratio.

In the other hand Lioyd, and other, (1985) replicate and expand the work of Rozeff, which model the dividend decision using agency costs as an important determinant of payout ratios. More specifically, the expansion of Rozeff's model directly addresses the question of whether agency cost variables serve as proxies for size.

Rozeff (1982) used the sample of stocks which is drawn from editions 1-13 of the Value Lines Investment Survey of June 5, 1981. Data are for all firms except for the intentional omission of the following industries: regulated (gas, telephone and electrical utilities, air transport, railroad, bank, insurance, savings and loan, investment companies), foreign and petroleum exploration. Regulated firms are not selected because their financing policies may be significantly affected by their regulatory status. A small number of new firms which Value Line has not yet classified as to industry are also omitted. After these size is 1000 and spans 64 different industries.

The basic elements of his payout model presented are cost-minimization diagrams of the type used in agency cost theory to explain optimal debt/equity ratio. The cost minimization model tests if dividend payout ratios are systematically related in the predicted direction to variables which surrogate for agency costs and transaction costs of external financing.

The firms fund requirement for investment purpose is one of the factors influencing the (target dividend payout) ratio which used as dependent variable which measured as the arithmetic average of each of a firm's seven dividend payout ratios. When the firm experiencing or anticipating higher growth in their revenue that mean they also need extra fund to finance this growth.

Thus it will affect on the dividend payment ratio negatively because if the firm pay higher dividend they will need for external fund either by issuing bonds or stocks so, to reduce the floatation cost the company will reduce dividend payment. For this reason the author use average growth rate of revenue (GROW1) and Value Line's forecast of average growth rate of revenue as independent variables in this paper.

Third independent variable used in this paper is beta coefficient (BETA). The firm establish lower dividend payout ratio when they possess higher beta coefficient, presumably because higher betas are a reflection of the presence of higher operating and financial leverage. This is because firms with higher fixed charges pay lower dividends in order to avoid the costs of external finance.

Two more variables are used in this research paper which used to measure the agency cost decrease associated with increasing the dividend payout ratio which are: Percentage of common stock held by insiders (INS), and natural logarithm of number of common stockholders (STOCK).

It is expected to find positive relationship between dividend payout ratio and the percentage of common stock held by insiders because of the conflict between the managers and the stockholders of the company. The hypothesis is that as outside equity holders own larger shares of equity, they will demand a higher dividend as part of the optimum monitoring package. Therefore the author will test this hypothesis in this paper and prove or reject this hypothesis later in the paper. Finally, the author used the natural $\log$ of the number of shareholders as an independent variable. Some of outsider stockholder may carry different attitude by their less demand for dividends. If there is few shareholders who demand less dividend, their ownership will be more concentrated and my easily influence insider behavior, thereby reducing agency cost and leading to a lower optimal dividends payout.

Hence, dispersion of ownership among outside stockholders may influence the dividend decision, with more dispersion leading to higher dividends. To measure ownership dispersion, the $\log$ of number of common stockholders used to correct scale effects.

While Lioyd, and other, (1985) used data from July to September 1984 edition of Value Line. Regulated industries, such as gas, telephone, air transport, railroad, banks S\&L, insurance investment companies, petroleum exploration, and foreign firms are excluded. The final data set includes 957 firms for which complete data are available.

The forecasted and the historic five year (growth) rates in sales are expected to measure the effect of the need for investment funds, with an inverse relationship hypothesized for both variables with payout. The firm's (beta) is included to account for operating and financial leverage effects. Rozeff's two agency cost variable are the (percent of stock held by insider) and the (natural logarithm of the number of shareholders).

The (size) variable is defined in term of sales revenue. This variable is included to assess the true impact of the agency variables. An alternative variable, the number of shareholders, is tested to eliminate also any size contamination of the (number of shareholders) which is used as a proxy for ownership dispersion. In a further attempt to isolate size and agency influences, the percent of stock held by insiders is regressed on sales; the residual is then used in the analysis. Likewise, the (log of the number of shareholders) is regressed on sales and the residuals introduced into analysis. The residual approach eliminates (size) effects from the agency variable.

Rozeff (1982) according to the regression test found the regression is highly significant and explains $48 \%$ of the cross-section variation in dividend payout ratios. All the independent (variables) have t -statistics well above 2.0 and enter the regression with the hypothesized sign. The analysis in this paper supports that higher (growth) rates in the past and forecasts for the future are associated with lower dividend payouts which mean that dividend payout is a significantly negative function of the firm's past and expected future growth rate of sales, higher (beta) coefficients are associated with lower dividend payouts (dividend payout is a significant negative function of its beta coefficient).

Also higher (inside ownership) is associated with a reduced dividend payout ratio (dividend payout is a significant negative function of percentage of stock held by insiders), and a greater (number of shareholders) is associated with a larger dividend payout (dividend payout is significant positive function of the firm's number of common stockholders. There is another interpretation which relies on tax effects.

Suppose taxes on dividends matter. If a director holds only 100 shares of stock and this represents a small fraction of his wealth, his decision on the dividend is far less likely to be influenced by consideration of the personal income tax than a director who has much of his wealth in shares of the firm. The variable (percentage of stock held by insiders) is a proxy for the variable percentage of insider wealth in the form of common equity. Hence if tax-avoidance on dividends is less than complete, the higher the (percentage of stock held by insiders), the lower the dividend payout ratio.

Finally Lioyd, and other, (1985) found that the appearance of (SIZE) results in some reduction of the significance of (STOCK), but does not destroy its explanatory power. There is no reduction of significance in (INS). When (STOCK), and (INS) are deleted; (SIZE) is positive and high significant. A conclusion is that larger firms have higher payout ratios. When the authors omit (GROW1), and (GROW2) without deleting (STOCK), and (SIZE), finds significance for both, however, but a negative sign on (SIZE). The number of shares per shareholder (STKSHR) utilized as a measure of ownership dispersion. Substituting this for (STOCK), the re-estimation of Rozeff's original model with the new variable reveals significance in only two cases. These results indicate that the effect of ownership dispersion is reduced. Maintaining (STKSHR) and"adding (SIZE) to the models, the results founded (SIZE) is significant and positive in all equations, while (STKSHR) is significant in only two of the five. Thus, these results would suggest that larger firms have higher payout ratio with dispersion model adding little to the model.

The correlation between (RSINS) residual of insiders on size and (SIZE) is -.000. Likewise, the correlation between (RSTOCK) and (SIZE) is -.000 . Thus, any multicollinearity effects have bean greatly reduced. The results indicate that all variables, including (SIZE), are important explanatory variables. Using the agency variable residuals eliminates any size effect contamination in those variables.

Thus, Rozeff's model advocating an agency explanation of dividend payout ratio is supported. Finally, they conclude that the dividends payout is affected by both agency cost and (SIZE).

Jensen, and others (1992) have a research that examines the determinate of crosssectional differences in insider ownership, debt, and dividend policies. These policies are related not only directly, but also indirectly, through their relationship with operating characteristics of firms.

In this research paper the authors used the data at two points in time 1982 and 1987. Each firm included in the analysis had the requisite financial data on the Compustat date file, and its level of insider ownership listed in the Value Line Investment Survey. The number of divisions for each firm was taken from the Value Line data base. The sample used 565 firms and 632 firms for 1982 and 1987 respectively.

In this research paper writers examine three different policies and distinguish their effects.

## 1. Insider ownership

The authors in this research considers four real determinants of insider ownership: (business risk), firm (size), the (number of operating divisions of the firm), and (research and development expenditures). High firm-specific (risk) increases the value of (insider ownership) because the contribution of managers to firm performance is difficult to measure due to the noise created by external factors.

Firms with high (research expenditures) or a (large number of divisions) will also be more costly for external investors to monitor. Limits on managerial wealth make it more costly for managers to take controlling interests in large firms.

## 2. Debt Policy

The authors used (business risk), (profitability), (research and development expenditures), and (fixed asset levels) to characterize the likelihood of a firm employing debt.

Market imperfections have motivated tests of the effects of (fixed asset) ratios, (profitability), (risk), and (research and development expenditures) on debt policy. (High business risk) or (research and development expenditures) should reduce the quantity of debt supplied to the firm at any given interest rate.

Conversely, a firm's (level of fixed assets) should be related positively to debt level. Myerss and Majluf (1984) relate (profitability) to debt policy through a modified pecking order hypothesis, which suggests that more profitable firms will decrease their demand for debt, since more internal funds will be available to finance investment.
(Research and development) proxies for the level of agency costs if external stakeholders bear greater monitoring cost when a significant amount of investment is allocated to intangibles. (Research and development) expenses also have been used as proxy for future growth opportunities and implicit claims of the firm's stakeholders. In this sense (Research and development expenditures) reflects the level of potential indirect bankruptcy cost, which suggest a negative relationship with debt.

## 3. Dividend Policy

The financial literature has related dividends to the firm's future (profitability). (Current profitability), (investment), (growth), and (business risk) are used as indicators of future (profitability). Rozeff (1982) argues that higher dividend payments reduce agency conflicts between mangers and shareholders and finds evidence of relationship among (growth), (profitability), and dividends.

Greater (business risk) makes the expected direct relationship between current and expected future (profitability) less certain. Therefore, we hypothesize that greater (business risk) will be associated with lower dividend payments. Jensen, and others, (1992) found the following results.

## 1. Debt Equation.

The results indicate that insider ownership leads to less debt. The negative coefficient on (insider ownership) is consistent with two complementary explanations. The results suggest that insiders with a major stake are less diversified, and have more incentive to reduce financial risk.

A second argument is that firms with higher (insider ownership) should have lower agency cost of equity and higher agency costs of debt because the incentives of managers would be more closely aligned with owners than with creditors.

The negative sign on the dividend ratio ( $\mathrm{t}=-6.22$ and $\mathrm{t}=-5.33$ ) suggests that firms with high dividend payout find debt financing less attractive than equity financing. This is consistent with the explanation that firms with high fixed financial costs are unwilling to commit simultaneously to higher dividend payout.

The negative coefficients on the (Research and development) variable and the (Profitability) variable are consistent with previous findings, as are the observed positive coefficients on the (Fixed assets) variable. The (Business risk) variable has negative coefficient which consistent with the hypothesis that firms substitute financial and business risk to keep total risk at a manageable level. The observed negative relationship between (debt) and (business risk) is also consistent with the static tradeoff theory which suggests that firms select an optimal capital structure by adding debt until expected bankruptcy cost equal the tax advantage.

## 2. Dividend Equation.

The negative sign and statistical significance of the coefficient on insider ownership in the dividend equation indicate that (insider ownership) is an important determinant of a firm dividend policy.

This observation support Rozeff's proposition that the benefits of dividends in reducing agency costs are smaller for firms with higher insider ownership. Investment and (growth) are related negatively to dividends, while profitability is related positively to dividends.

Significant negative coefficients on (growth) and (investment) indicate that greater gFK $^{2}$ investment and growth opportunities reduce dividends. In the other hand (profitability) is significantly positive suggesting that firms generating more earning pay higher dividends. The coefficient on the (business risk) variable is negative in both periods, but is significant only in 1987. The negative coefficient on the business risk variable supports the view that firms avoid the commitment to higher dividends when uncertainty about earning is high.

## 3. Insider Ownership Equation.

Both debt and dividend payout are insignificant in the insider ownership equation. Thus, there is no evidence that financial policy is an important determinant of the stake insiders will have in a firm.

More specifically, after controlling for real firm-specific attributes affecting (insider ownership), neither dividend policy nor debt policy provides any information about the level of insider ownership a firm will take.

Only (size) has a consistently significant effect on the level of insider ownership. Research and development and (business risk) are insignificant in both periods, while the (number of divisions) is negative in both periods, but significant only in the latter. The negative coefficient on (size) and (number of divisions) is consistent with the hypothesis that insiders take larger positions in firms where they can exercise the most control.

While Alli, and others, (1993) have a factorial analysis research. The purpose of their paper is to re-examines the dividend policy issue by conducting a simultaneous test of the alternative explanations of corporate payout policy using two step procedures that involves factor analysis and multiple regression.

Values for (HOLDING) number of shareholder to total outstanding shares, (INSIDER) Insider holdings as percentage of total shares outstanding, and (INSTHOL) Institutional holdings were obtained from S \& P stock reports, Value Line and COMPUSTAT as of December 1985. All remaining data were obtained from the COMPUSTAT tape.

The final sample of 105 firms came from 34 industries with the largest share from the chemical and allied products industry ( 13.9 percent). The representation of 13 industries was less than 1 percent in the final sample. Regulated utilities and bank were not included.

In this paper, the clientele effect is tested by incorporating the tax status of the firm's major stockholders. Institutional investors are either tax-exempt, can defer taxes on dividends received, or pay taxes on only 15 percent (in 1985) of the dividends received from another corporation. Consequently, if the tax clientele argument is valid, a positive relationship is expected between institutional holdings, (INSTHOL), and dividend payout ratio.

If issuing costs are significant, then firms are likely to finance investments though retention of earnings rather than from external sources. To the extent that dividends compete with investments for internally generated funds, such costs are likely to affect dividend policy.

A negative relationship is expected between divided payout and external financing cost. Firm size (LNTA) as measured by the natural log of total assets is used as proxy for the cost of external debt financing.

Firms experiencing high growth rates generally have large investment requirements thus, it should be characterized by low payout ratio. (EXCAP) the average realized capital expenditures and (GROWTH) the annual average growth rate in operating income are two long term variables used to examine this relationship.

Another variable used to measure the firm's access to the capital market is (STDCDE), measured as the variability in the capital structure. This variability is measured as the standard deviation around the mean of annual capital structure changes. It is argued that firms that have greater access to capital markets are easily able to switch between debt and equity and take advantage of lower transaction cost.

This paper tests the relationship of dividends with the stability of cash flows. Cash flow variability (CFV) is measured as the OLS estimate of the coefficient of variation of cash flows.

The payment of dividends reduces the discretionary funds available to managers for perquisite consumption and helps address the manager stockholder conflict. Two variables are used to measure the problem between shareholders and managers.

The variable (HOLDING), defined as the ratio of the ratio of the number of shareholders to total outstanding shares. As the number of shareholders increases, the need for monitoring managerial action also increases. The variable (INSIDER), defined as the ratio of shares held by insiders to total shares outstanding.

In addition to the conflict between stockholders and managers, a similar conflict also exists between stockholders and bondholders. Stockholders may expropriate wealth from bondholders by paying themselves dividends. Bondholders try to contain this problem through restrictions on dividend payments in the bond indenture. The variable (INTANG), measured as the ratio of net plant to total assets, is a proxy for collateralizable assets and is used to capture this problem.

This paper examines the relationship between financial slack and dividend payout. In order to retain their ability to undertake profitable investments, firms may prefer to increase their financial slack rater than pay higher dividends. In this study financial slack (SLACK) is measured as the sum of cash balances and marketable securities (scaled by the market value of equity) and unused debt capacity.

Finally, the role of dividend stability in corporate payout policies in examined. To capture stability of past dividends, a $0-1$ dummy coded variable (STAB) is used. STAB is equal to 1 if dividends for the past five years have been consistently higher than 90 percent of the previous year.

The author summarized the results as follows. The significant negative coefficients on issuance cost and pecking order indicate that firms experiencing high issuing costs, high growth (and risk), and expecting a high level of capital expenditures pay low dividends. The insignificant coefficient on Factor 3 (Ownership dispersion) indicates that ownership dispersion does not affect dividends. The significant positive coefficient of Factor 4 (Dividends stability) provides support for the dividend stability argument and is consistent with findings of Lintner. Lintner model stating that dividend policy has two parameters: (1) the target payout ratio and (2) the speed at which current dividends adjust to the target.

Lintner developed this theory based on two important things that he observed about dividend policy: 1) Companies tend to set long-run target dividends-to-earnings ratios according to the amount of positive net-present-value (NPV) projects they have available. 2) Earnings increases are not always sustainable. As a result, dividend policy is not changed until managers can see that new earnings levels are sustainable.

The significant positive coefficient of Factor 5 (Tax and agency cost effects) indicates that dividends are used to mitigate agency problems and it also supports the tax clientele arguments. The financial slack argument is also supported by the significant negative coefficient of Factor 6 (financial slack). The results do not support the role of dividends in signaling cash flow quality, as shown by the insignificant coefficient of Factor 7 (cash flow quality).

The insignificant coefficient for Factor 8(capital structure flexibility) indicates tat firms with greater capital structure flexibility (easier access to capital markets) are able to pay higher dividends which consistent with the transaction cost / residual dividends theory.

Finally, the results from the two-step procedure were compared to the results of the ordinary least square regression analysis. The OLS regression equation was estimated using the 12 independent variables.

The comparison indicates that five out of the seven variables with significant coefficients in the OLS equation have the highest loading on five of six significant factors: (GROWTH) factor 1 (issuance cost), (EXCAP) factor 2 (pecking order), (STAB) factor 4 (dividend stability), (INTANG) factor 6 (financial slack), and (STDCDE) factor 8 (capital structure flexibility). This indicates that the results of the two-step procedure are fairly robust. However, the variables (HOLDING) has inverse relationship with (DPR)dividends payout ratio, In contrast, (SLACK) and (CFV) have positive relationship with (DPR) dividends payout ratio.

While D'Souza, and others (1999) examines the effect of agency cost, market risk, and investment opportunities on an international firm's dividend policy. They used (institutional holdings), (beta), and past (growth) and (market-to-book value) of stock, or its investment opportunity set, as proxies for agency cost, market risk, and investment opportunities, respectively. The variables definition will be explained further.

The authors used a sample of 349 firms worldwide to determine the relationship between dividend payout, agency cost, market risk, and investment opportunity. The dividend payout variable used in the study is a three year average for the period 1995-1997, while the institutional holdings, beta value, growth, and market-and book-values all pertain to the year 1997. We obtain (dividend payout), (beta) and (growth) data from DataStream, while institutional ownership is obtained fro WorldScope disclosure.

The writers analyzes three regression equations; first with (dividend payout) as the dependent variable, and (beta), (percentage of institutional holding), three years sales (growth), and (market-to-book value) as explanatory variable. Second, with (dividend payout) as dependent variable and (beta) and (percentage of institutional holdings) as explanatory variable.

Finally, (dividend payout) as the dependent variable and past (growth) and (market-tobook value) as explanatory variables.

The authors defined dividend policy of a firm by its (dividend payout ratio). The percentage of (institutional holdings) of a firm's common stock is used as a proxy for controlling agency costs while its (beta) value is used to reflect its market risk. The past three year's sales (growth) and market-to-book value of common stock are used as proxies for the firm's investment opportunities in the near future. Jensen and Meckling (1976) argue that external monitory activity is an important controlling element when agency conflicts exist. One group of external monitors includes security analyst employed by investment bankers, brokerage firm, and large institutional investors. If large institutional investors act as monitoring agents, and if dividends are paid to reduce agency cost, then according to this theory, the results should show a negative relationship between the (percentage of shares held by institutions) and the (dividend payout).

Second, (beta) is used as proxy for firm-specific market risk, and if a bigger (beta) value reflects a higher level of market risk, then one should observe a negative relationship (beta) and (dividend payout ratio). Third, an increase in historical sales (growth) is good indication for things to come in the future investment opportunities. Holding everything else constant, this implies lower (dividend payout).

Finally, they used (market-to-book) value as proxy for investment opportunities. Hence, applying the same argument, we should observe an inverse relationship between (dividend payout) and (market-to-book) value of a firm common stock.

In the model dividend payout ratio is regressed against four explanatory variables. The results show a significantly negative relationship for explanatory variables INSH and BETA, and insignificant relationship for explanatory variables (GROWTH) and (MTBV). These results confirm the finding of prior studies on dividend policy and agency cost and market risk using US firms data. In the model dividend payout ratio is regressed against two explanatory variables. These variables are institutional holdings (INSH) and beta value (BETA).

This regression confirms the statistically significant and negative relationship of dividend payout with the explanatory variables (INSH) and (BETA), with (INSH) showing significance at the five percent level and (BETA) showing significance at ten percent level.

In the second model, dividend payout ratio is regressed against the historical sales growth rate (GROWTH) and the market-to-book value (MTBV) of the firms common stock. These variables serve as proxies for a firm's future growth prospects, or its investment opportunities. The results show statistically insignificant relationship for both the proxies of investment opportunities, Growth and (MTBV). In other words, if a firm has grown at a fast rate in the past, chance is that it will have lower dividend payout rate. A fast growing firm needs more funds to grow; hence it would like to retain most of its earnings instead of paying higher dividends. Similarly, a firm with a high market-to-book value will have a bigger investment opportunity set. Hence, it will have a lower payout ratio.

Aivazian, Booth (2003) in their study compare between the dividend policy between the emerging market firms and U.S firms. They examine a sample of firms from eight emerging markets (South Korea, Malaysia, Thailand, Pakistan, India, Zimbabwe, Jordan, and Turkey), where financial system are significantly different from those in the united states, and compare them with a sample of ninety-nine firms from the United States.

The World Bank (International Finance Corporation, or IFC) database is described in Glen et al. (1994) and Booth et al. (2001). The firms in the database are the largest firms listed on the local stock exchange.

The data set consists largely of abbreviated balance sheet and income statement, with limited cash-flow and market data, and it has the largest available coverage of companies for these countries. For comparison purpose, the authors include a sample of ninety-nine of the largest U.S companies contained in the research Insight (Compustat) database. In this paper aggregate corporate financial data provided, along with some broad macroeconomic data, to assess the importance of the relation between financing and growth rates. The reason aggregate growth rates are important is that economic growth, from the gross national product identity, drives aggregate expenditure. Assuming the sample firms are representative of economic activity in each country, companies in high-growth economies are faced with high sales growth rates.

In this paper the authors provide summary measures of dividend policy as well as basic data to assess the financial health of these firms. It include three operating measures is the tangibility of the firm's assets (Tangibility), defined as total assets minus current assets divided by total assets. This ratio is designed to measure the proportion of long-term (hard) assets in the firm asset structure.

The other two operating measures are firm's business risk (Busrisk), measured by the standard deviation of its return on investment, and the scale of the firm's operations (Size), measured by the natural logarithm of sales. The three debt measures are debt ratio (Debt), defined as total liabilities divided by total assets; the time interest earned ratio (Coverage); and the current ratio (Current). The two summary measures are the firm's (ROE) and the firm's market-to-book ratio (M/B), defined as the average common stock price divided by book value per share. They focus on the dividend-to-total-assets measure, which referred to (dividend policy). The authors examine the influence of several firm-level characteristics hypothesized to affect the dividend decision and analyze these characteristics in a cross-sectional setting, which allows us to monitor for the influence of country factors.

Summery statistics report suggests that U.S sample consists of high-quality, profitable firms. They also indicate that the financial health of the emerging market firms is poorer than that of the U.S firms. In particular, except for firms from Zimbabwe and Jordan, emerging market firms are more highly indebted than U.S firms, and judging from the current ratio statistics, much of this debt is short term. In the cross country comparisons of dividend measures table the differences appear significant.

The U.S column indicates that these measures of dividend policy are significantly different from those in the United States for every country except India. This suggests that U.S firms are different from emerging market firms. However, a similar message emerges when comparing each country in turn with the overall sample, both with and without the United States. The results suggest that the dividend policies of firms in emerging markets react to variables similar to those in the United States. The empirical results reveal that for both U.S firms and emerging market firms, (profitability) affects dividend payment; high (ROE) tend to mean high dividend payments.

Similarly, higher (debt ratio) corresponds to lower dividend payment, suggesting that financial constraints affect dividend policy. Which mean that the result suggests that dividends are inversely related to (debt) and positively related to both (ROE) and (market-to-book) ratio.

In addition, the (market-to-book) ratio has a positive effect on dividend payment. There is little evidence that (business risk) or (size) affects dividend policy in a significant or consistent way. Finally, for emerging market firms, the author find that dividends are negatively related to the (tangibility) of firm assets.

In this research paper they conduct a pooled cross-country analysis including country (dummy) variables to examine the differences that do exist. Overall, the simple country dummies have as much explanatory power as the six independent financial variables, which demonstrate the importance of these factors. In fully expanded version of our model, country dummies are significant even after adjusting for differences in firm-level characteristics such as (profitability) and (debt). This suggests that firms in these emerging markets pay out more in dividends than do similar firms in the United States.

Amidu, Abor (2006) examined the determinants of dividend payout ratios of listed companies in Ghana. While Belanes, and others (2006) test whether or not mangers of Tunisian listed firms smooth their dividends. These researches are done on developing countries.

Amidu and Abor (2006) used a sample of firms that have been listed on the Ghana Stock Exchange (GSE) for the recent six years period (1998-2003). Only 22 firms qualified for this study. This number represents $76 \%$ of listed firms in Ghana. The data was derived from the annual reports of the selected listed firms and the GSE fact books during the six year period.

This study examines the relationship between determinants of dividend payout ratios from the context of a developing country. The study looks at the issue from a developing country perspective by focusing specifically on firms listed on the Ghana stock exchange (GSE). This study defines the (dividend payout ratio) as the percentage of profits paid as dividend. It uses the percentage of (institutional holdings) of a firm's common stock as a proxy for agency cost.
(Growth) in sales and market-to-book-value are also used as proxies for future prospects and investment opportunities other variables include (profitability), (risk), (cash flow), and (corporate tax).

The panel character of the data allows for the use of panel data methodology. Panel data involves the pooling of observations on a cross-section of units over several time periods and provides results that are simply not detectable in pure cross-section or pure time-series studies.

With free cash flow hypothesis, Jensen (1986) asserts that funds remaining after financing all positive net present value projects cause conflicts of interest between mangers and shareholders. Dividend and debt interest payment decrease the free cash flow available to manager to invest in marginal net present value projects and manger perquisite consumption. The dividend payout ratio is regressed against seven explanatory variables. These includes (Profitability), (Risk), (Cash flow), (Tax), (Institutional ownership), (Growth), and (Market-tobook value).

In the other hand the data used in Belanes, and others (2006) are provided by the Tunisian Stock Exchange (TSE) and the Council of capital Market through, respectively, their official bulletins and their annuals reports covering the period 1996-2002. The sample is made up of 48 firms of which 29 belong to regulated industries (financial institutions, transport and telecommunication firms). The period of study covers seven years, from 1996 to 2002.

The hypothesis that dividend policy serves as a signaling mechanism and also serves to control managerial opportunism is usually supported by empirical studies showing that firms in developed countries smooth their dividends as noted by Lintner (1956).

In this research paper the authors test whether firms in Tunisia have less predictable dividend payments than firms in developed countries and whether dividend payment for firms in Tunisia are less sensitive to past dividends and more sensitive to current earning than for firms in industrialized countries. In contrast to the substitute hypothesis, one could argue that dividends reinforce rather than substitute for other mechanisms in controlling agency and information problems. Following Aivazian et al. (2003), we term this the complement hypothesis.

In fact agency costs theory is not only is a conflict of interest between outside shareholders and inside mangers but also between the shareholders themselves. The percentage of the stock held by majority shareholders is used as a proxy (majority shareholders) are those who hold more than $5 \%$ of capital according to the definition of the Council of Capital Market. In developed countries, it is expected that the higher the percentage of stock held by outsiders, i.e. shareholders, the more they can influence management behavior and the lower the paid dividend.

On the other hand, some conflicts of interest also exist between shareholders themselves. Some of them can get preferential treatment through assets sales, excessive salaries, and outright theft. The number of majority shareholders (MSH) is used as a proxy.

The Tunisian Stock Exchange authority introduced an electronic system in 1997 in order to simplify the transaction process, and to improve the liquidity of firms listed in the TSE. The author measures the liquidity of a stock market by the annual value of stock traded over its market capitalization (TURN). Gonzales (2003) suggests in a theoretical model that mangers acting in favor of shareholders will increase the level of payment of dividends in situation of liquidity shocks, as the discount cost become high. They test whether the relation between the company's payment of dividends and the liquidity of the market is negative in Tunisia.

The basic idea has it roots in Miller and Modigliani's (1961) argument which holds that the value of the firm is determined solely by the earnings power of its assets and it investment policy. The total size of the pies is what is important and it is unchanged in the slicing. Therefore, a firm should endeavor toward having an optimal investment policy. It is unable to create value simply by altering the mix of dividends and retained earnings.

Thus, firms with high profitability can afford larger free cash flows and hence new investment opportunities. Therefore, paying higher dividends does not disturb them. As proxy, we measure the profitability by the return on assets (ROA) and it is hypothesized to be positively correlated with dividend policy.

Asymmetric information also provides new evidence on dividend policy. Assuming the divergence of interest between insiders and outsiders, the former often process and trade on information about firms' shares value whereas investors do not because of lack of pertinent information. Dividend may then act as a signaling mechanism. It is hypothesized that firms with large investment opportunities and hence with strong financing needs would rather retain than distribute their earning. A common proxy for investment opportunities is market-to-book value (MBV).

Two arguments support this suggestion. First, in an agency theory framework, debt can play a disciplinary role by increasing the debt level, the free cash flow will decrease. Therefore, we used leverage ratio (LEV) as independent variable.

The larger firms should have easier access to external capital market and can borrow on better terms. Even the conflicts between creditors and shareholders are more severe for smaller firms than larger ones. Moreover, larger firms tend to e more diversified and their cash flows are more regular and less volatile. Thus, larger firms should be more willing to pay out higher dividend. As surrogate to size, we use the firm's total market value (LNSIZE).

Amidu and Abor (2006) results indicate a statistically significant and positive relationship between (profitability) and the dividend payout ratio. This is explained by the fact that, highly profitable firms tend to declare and pay high dividend.

The results of their study also show a negative but insignificant association between (risk) and dividend payout ratios, suggesting that, high-risk firms pay lower dividends to their shareholders. As expected, the results indicate a significantly positive relationship between (cash flow) and dividend payout ratio. And contrary to the writer hypothesis, the results of this study surprisingly show a positive relationship between (corporate tax) and dividend policy, indicating that, increasing tax is associated with increase in dividend payout. The results also reveal a negative but insignificant association between (institutional holding) and dividend payout ratios.

This means the higher the percentage of (institutional holding) the lower the dividend payout ratio. A possible explanation is that firms pay dividend in order to avoid the cost associated with agency relationship.
(Growth) in sales and (market-to-book) values are used as proxies for the firm's future prospects and investment opportunities. Both variables were found to have statistically significant and negative associations with dividend payout ratios. This is inactive of the fact that, growing firms require more funds in order to finance their growth and therefore would typically retain greater proportion of their earnings by paying less dividends. Also, firms with higher (market-to-book) value tend to have good investment opportunities and thus would retain more funds and record lower dividend payout ratios.

Belanes, and others (2006) results indicate cow test is significant and confirms the presence of firm-specific effects. The Hausman's test indicates that the fixed effect model is more appropriate than the REM (random effect model). The estimation of the Lintner model tested on Tunisian listed firms reject Lintner's hypothesis since dividend decisions are not based on long-term target payout. There is no indication that firms in the Tunisia Stock market place a higher importance on stable dividends payout to signal their future profitability or to minimize agency costs.

The authors take this as support for the substitute hypothesis. Low payout ratio and high adjustment factors indicate that the TSE listed firms frequently change their dividends payment, while changes in earnings and dividends smoothing is of low order.

The results indicates that the only coefficient associated with the lagged (dividend yield), (profitability), (leverage), and (size) are significant. However when dynamic panel data are considered, those associated with (profitability), (size), (growth), and stock market (liquidity) have a significant impact on the dividend policy in Tunisian firms.

The results reveal that (profitability) affects dividend payments. This provides strong support for the residual cash flow theory of dividends that firms with high cash flow pay high dividends and vice versa. Moreover, the absence of relationship between dividend policy and (MBV) clearly support the argument that the expectation of future (growth) opportunities is not relevant in dividend policy for Tunisian firms.

However, dividend policy in our sample is positively affected by past growth, which means that Tunisian firms pay more attention to past growth than future growth to devise their dividend policy.

The findings of this research paper show that the coefficient on ownership concentration is not significant which support the hypothesis that dividend payment is not used as a device to reduce agency costs in the TSE. Also, the findings show that financial leverage has no impact on the dividend policy. This result does not confirm the common view that a risky firm pays out lower dividends in order to decrease its dependence on external financing.

The results show that (size) has a negative effect on dividend yield. This evidence suggests that larger companies, despite having the opportunity to tap easily the financial markets by issuing stock or bonds, prefer to retain dividends so as to avoid the costly external financing.

Finally, the results indicate that stock market (liquidity) is negatively correlated with dividend payment. The introduction of an electronic quotation system in the TSE improved (liquidity) and thus facilitated capital gains that replaced somewhat dividend payments.

See appendix 4 for the summery of the literature review.

## CHAPTER FIVE:

## 5. DATA ANALYSIS AND RESULTS

### 5.1 The Data

This study examines the determinants of dividend payout ratios of listed firms in Muscat Security Market (MSM). A sample of firms that have been listed on the MSM during six years period 2001-2006 was considered. In all 40 firms was qualified for this study. This number represents approximately $32.5 \%$ of listed firms in MSM. In this study we exclude all regulated firms and consider only cash dividends. Also we forced to exclude some of the firms due lack of data. The data was derived from the annual reports of the selected listed firms that founded in the (shareholders guide for the years 2006, and 2007).

The data for the year 2001 was taken from the (shareholders guide 2006 issued by Muscat Security Market) and the rest of the years from the (shareholders guide 2007 issued also by Muscat Security Market). Annual data are used in this research. The name of the firms shown in appendix 1, and all the data are shown in the appendix 2.

The following table will show the dependent and independent variables which used in this research table.

Table 5.1: Dependent and Independent Variables

| Dependent Variable | Independent Variables |
| :---: | :--- |
| $\bullet$ PAYOUT (Y). | $\bullet$ ROA. |
|  | $\bullet$ LEVERAGE. |
|  | $\bullet$ LOG OF MARKET CAPITALIZATION. |
|  | $\bullet$ TAX. |
|  | $\bullet$ SIZE1. |
|  | $\bullet$ SIZE2. |
|  | • MARKET TO BOOK VALUE OF EQUITY |
|  | (MTBV). |
|  | • TANG. |
|  | $\bullet$ PROF. |
|  | $\bullet$ ROE. |

Where, PAYOUT $(\mathrm{Y})=$ Dividend per share $/$ Stock Price at end of the year, $\mathrm{ROA}=$ Net profit / Total Assets. LEVERAGE = Debt / Total Assets, LOG OF MARKET CAPITALIZATION $=$ Year closing price Times number of shares outstanding, $\mathrm{TAX}=\mathrm{Tax} /$ Net profit, SIZE1 $=$ Log of Total Assets, SIZE2 $=$ Log of total sales, MARKET TO BOOK VALUE OF EQUITY $(M T B V)=$ Market Capitalization / Net worth, TANG $=$ Net Plant and Equipment / Total Assets, PROF = EBIT / Total Assets, and ROE = Net profit / Net Worth.

In this study we couldn't take payout as dividend per share divided earning per share because we have negative earning for some firms in several years.

### 5.2 Methodology

The panel character of the data allows for the use of panels data methodology. Panel data involves the pooling of observations on a cross-section of units over several time periods and provides results that are simply not detectable in pure cross-sections or pure time-series studies. The panel regression equation differs from a regular time-series or cross section regression by the double subscript attached to each variable. The general form of panel data model can be specified more compactly as:

$$
\mathbf{Y}_{\mathrm{i}, \mathrm{t}}=\boldsymbol{\alpha}_{\mathbf{i}}+\mathbf{X}_{\mathrm{i}, \mathbf{1} \boldsymbol{\beta}}+\boldsymbol{\mu}_{\mathrm{it}} \quad \mathbf{I}=\mathbf{1}, \ldots, \mathbf{N} ; \mathbf{t}=\mathbf{1}, \ldots \mathbf{T} \text { (Baltagi, 2005, 11) }
$$

With the subscript $i$ denoting the cross-sectional dimension and $t$ representing the time-series dimension. In this equation, $\mathrm{Y}_{\mathrm{i}, 1}$ represents the dependent variable in the model, which is the firm's dividend payout ratio; $\mathrm{X}_{\mathrm{i}, \mathrm{t}}$ contains the set of explanatory variables in the estimation model; and $\alpha_{i}$ is taken to be constant over time $t$ and specific to the individual cross-sectional unit $i$. If $\alpha_{\mathrm{i}}$ is taken to be to be the same across units, then Ordinary Least Square (OLS) provides a consistent and efficient estimate of $\alpha$ and $\beta$.

$$
\begin{aligned}
& \text { PAYOUT }_{i, t}=\beta_{0}+\beta_{1} \text { LEVERAGE }_{i, t}+\beta_{2} \text { TAX }{ }_{i, t+} \beta_{3} \text { SIZE1 }_{i, t+} \beta_{4} \text { MTBV }_{i, t}+\beta_{5} \\
& \text { TANGIBILITY }_{i, t+} \beta_{6} \text { PROFITABILITY }_{i, t+} \mu \text {. }
\end{aligned}
$$

We can see the difference between the model above and our variables mentioned above we can see there are some variables are omitted from the above equation which, is due to multicollinearity problem which will be discussed later in results part.

### 5.3 Conceptual Framework for Independent Variables

In this section we are going to introduce the factors used in our model.

### 5.3.1 Leverage

It is obvious, by increasing the debt level; the free cash flow will decrease. Jensen and Meckling (1976) Indeed, shareholders may expropriate wealth from bondholders by paying themselves dividends at the expense of bondholders who try to tackle this problem through indentures restrictions. The firm with high level of debt ought to pay out lower dividends as they have already pre-committed their cash flows to make debt payment and to avoid borrowing more capital. In this research paper we have used debt ratio (LEVERAGE) to evaluate the debt level and we expect a negative relationship with dividend payout.

### 5.3.2 Tangibility

We use firm TANG as a proxy for financial market access where TANG is measured as fixed assets divided by total assets. We hypothesize that high level of fixed assets gives the firm better access to the market and allow the firm to borrow funds easily because they can provide their fixed assets as collateral.

Also firms with high level of tangible assets should subject to less agency problem between shareholders and bondholders. Because high level of tangible assets will be as collateral for bondholder in case of bankruptcy and therefore they will not be impose severe restrictions on the firm dividends policy. Thus the firm will be less depending on internal financing and can pay high dividends from its profit. Therefore we expect a positive relation between TANG and dividend payout.

### 5.3.3 Size

We use firm size as a proxy for financial market access where size is measured as the natural logarithm of the firm's total assets level. The firms with high level of assets always don't face problem of income uncertainty. Certainty in income level gives the firm the ability to pay maintain its dividend level. We hypothesize that high level of total assets allows the firm to maintain its dividends level as thus we expect positive relationship between dividends payout and Size.

### 5.3.4 Tax

Tax-adjusted model assumes that investors require and secure higher expected returns on shares of dividend paying stocks. The consequence of tax-adjusted theory is the division of investors into dividend tax clientele. Masulis and Trueman (1988) model predict that investors with differing tax liabilities will not be uniform in their ideal firm dividend policy. They conclude that as tax liability increase, the dividend payment decrease and vice versa. Thus negative relationship expected between tax and dividends payout.

### 5.3.5 Market to Book Value of Equity (MTBV)

In some cases high investment opportunities force the firm to increase cash flow by selling stocks or bonds which is cheapest. Usually firms with large investment opportunities needs strong financing and would rather retain earnings than distribute their earnings.

Because financing internally is much cheaper than issuing stocks and bonds. Therefore, the firms which have investment opportunities try finance its need internally by retain its earnings.

A common proxy for investment opportunities is the market to book ratio (MTBV). Thus, we would expect a negative relationship between market to book value of equity (MTBV) and dividend payout.

### 5.3.6 Profitability

Mayers and Majluf (1984) relate profitability to debt policy through a modified "Pecking order hypothesis", which suggests that more profitable firms will decrease their demand for debt, since more internal funds will be available to finance investment. Profitable firms have more earnings available for retention or investment and, therefore, paying dividends does not disturb them. In the same vein and according to the pecking order theory, firms prefer using internal sources of financing first, then debt and finally external equity obtained by stock issue. The more profitable the firms are the more internal financing they will have and thus are able to afford larger dividends. In this research we have used earning before interest and tax dividend by total assets as a proxy for profitability and we expect it to be positively correlated with dividends payout.

Table 5.2: Expected Results Summery Table

| Variable | Hypothesized Sign |
| :--- | :--- |
| LEVERAGE | Negative |
| TAX | Negative |
| SIZE1 | Positive |
| MTBV | Negative |
| TANG | Positive |
| PROF | Positive |

### 5.4 Empirical Results

Three tables are given with the results. The first table represents the descriptive analysis for all the variables. The second table show correlation matrix. Finally, the third, table shows the regression results of three different models. It shows the regression results of the three different equations after omitting the correlated variables. Appendix 3 represents regression result for all the variables before omitting variables.

### 5.4.1 Descriptive Statistics

Table 5.3: Descriptive Statistics

|  | PAYOUT | LEVERAGE | TAX | SIZE1 | MTBV | TANG | PROF |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Mean | 0.067283 | 0.422658 | 0.093917 | 7.001533 | 1.485975 | 0.440029 | 0.079529 |
| Median | 0.048000 | 0.428500 | 0.106500 | 7.021500 | 1.314500 | 0.406000 | 0.070500 |
| Maximum | 0.787000 | 1.100000 | 8.065000 | 8.346000 | 17.89400 | 0.921000 | 0.292000 |
| Minimum | 0.000000 | 0.040000 | -2.500000 | 4.523000 | -6.606000 | 0.003000 | -0.133000 |
| Std. Dev. | 0.113989 | 0.215749 | 0.572503 | 0.564950 | 1.484732 | 0.258431 | 0.068848 |
| observations | 240 | 240 | 240 | 240 | 240 | 240 | 240 |

Table 5.3 presents the descriptive statistics for all the regression variables. The average (median) PAYOUT for all the sample of 40 firms is $6.7 \%$ ( $4.8 \%$ ), we can say also all the firms pay dividend between $0-78.7 \%$ of the firms stock price at end of the year.

The average (median) LEVERAGE is approximately $42.26 \%$ (42.85\%). The LEVERAGE of the all firms is between $4 \%-110 \%$ as percentage of total assets. Corporate tax rate average (median) is $9.3 \%$ ( $10.65 \%$ ), in additional firms pay tax between $-250 \%$ and $806 \%$. The average (median) SIZE1 is 7.001 (7.0215) and the logarithm of total assets for all the firms laying between 4.523 and 8.346. The average (median) MTBV is 1.486 (1.3145), and the MTBV is lying between -6.6 and 17.894 . The average (median) TANG for all the sample is $44 \%(40.6 \%)$. The percentage of fixed assets to total assets for the full sample is between $0.3 \%$ and $92.1 \%$. The average (median) PROF for all the firms used in this research is $7.95 \%(7.05 \%)$. The PROF is laying between $-13.3 \%$ and $29.2 \%$.

### 54.2 Correlation Matrix Analysis

Table 5.4: Correlation Matrix

|  | Payout | ROA | Leverage | Log M. CAP | Tax | SIZE1 | SIZE2 | MTBV |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Payout | 1.000 |  |  |  |  |  |  |  |
| ROA | 0.2589 | 1.000 |  |  |  |  |  |  |
| Leverage | -0.0304 | -0.2310 | 1.0000 |  |  |  |  |  |
| Log M. CAP | -0.0434 | 0.2506 | -0.1971 | 1.0000 |  |  |  |  |
| Tax | 0.0065 | 0.0141 | -0.0211 | 0.0461 | 1.0000 |  |  |  |
| SIZE1 | 0.2072 | -0.0261 | 0.0623 | 0.7963 | 0.0461 | 1.0000 |  |  |
| SIZE 2 | 0.2123 | 0.1434 | 0.1345 | 0.6665 | 0.0443 | 0.7494 | 1.0000 |  |
| MTBV | -0.1702 | 0.2424 | -0.0545 | 0.3159 | -0.0054 | -0.0504 | 0.0912 | 1.0000 |
| TANG | -0.1784 | -0.1959 | 0.2373 | 0.0560 | -0.0676 | 0.1468 | -0.0316 | -0.0898 |
| PROF | 0.2591 | 0.9930 | -0.2341 | 0.2710 | 0.0599 | -0.0060 | 0.1678 | 0.2483 |
| ROE | 0.1386 | 0.5923 | 0.0530 | 0.0968 | 0.0085 | -0.0064 | 0.1120 | 0.4046 |


|  | TANG | PROF | ROE |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| TANG | 1.0000 |  |  |  |  |  |  |  |
| PROF | -0.1915 | 1.0000 |  |  |  |  |  |  |
| ROE | -0.0974 | 0.5788 | 1.0000 |  |  |  |  |  |

Correlation is common measuring instrument to measure the relationship between two variables. The correlation is always lies between ( 1 and -1 ). Positive value indicates a positive relationship between variables and negative values indicate inverse relationship between variables. Large positive values of correlation indicate stronger relationship and large negative values indicate strong negative relationship. The correlation of 1 indicates perfect positive relationship and -1 indicates perfect negative relationship between variables.

If the correlation between two variables founded zero this means the data uncorrelated (there is no relationship between those variables).

Multicollinearity is a problem that arises if some or all of the explanatory variables are highly correlated with on another. If it is present, the regression model has difficulty telling which explanatory variable is influencing the dependent variables. A multicollinearity problem reveals itself through low $t$-statistics and therefore high P-values. In these cases, you may conclude that coefficients are insignificant and hence should be dropped from the regression. In an extreme case, it is possible for you to find all the coefficients are insignificant using $t$-statistics, which the $R^{2}$ is quite large and significant.

Intuitively, this means that the explanatory variables together provide a great deal of explanatory power, but that multicollinearity makes it impossible for the regression to decide which particular explanatory variable is providing the explanation.

There is not too much that can be done to correct this problem other than to drop out some of the highly correlated variables from the regression.

As mentioned above we have observed that we have omitted some variables. Going back to the table 1 which represents the correlation matrix obviously we can say there is high correlation between ROA and PROF which is equal to $99.3 \%$. There are high correlations that we can find in above matrix which is between LOG OF M. CAP and SIZE1, LOG OF M. CAP and SIZE2, SIZE1 and SIZE2, and PROF and ROE $79.63 \%, 66.65 \%, 74.94 \%$, and $57.88 \%$ respectively.

Therefore, comparing the $R^{2}$ in both regression estimation table's number 4.5, and appendix 3 , we can conclude that due to maulticollinearity problem we found high $R^{2}$ while putting all the variables in regression equation. Therefore we eliminate highly correlated and insignificant variables.

### 5.4.3 Panel Data Regression Models Results.

Table 5.5: Regression Results

| Variable | Model 1 | Model 2 | Model 3 |
| :--- | :---: | :---: | :---: |
|  | Coefficient | Coefficient | Coefficient |
| ROA |  | -0.001600 | -0.000939 |
| LEVERAGE | 0.032158 | -0.027315 | 0.032405 |
| LOG of M. Cap |  |  | -0.005017 |
| TAX | -0.006784 | -0.003835 | -0.004279 |
| SIZE1 | $0.044941^{* *}$ |  |  |
| SIZE2 |  | $0.037140^{* *}$ |  |
| MTBV | $-0.018991^{* *}$ | $-0.022915^{* *}$ | $-0.019204^{* *}$ |
| TANG | $0.494085^{* *}$ | -0.074680 | $-0.068219^{* *}$ |
| PROF |  |  |  |
| ROE | 0.198305 | $0.124690^{* *}$ | $0.520060^{* *}$ |
| R-squared | 0.103369 | 0.160454 | 0.151290 |
| S.E. of Regression | 9.605674 | 6.334255 | 0.106585 |
| F-statistic | 0.000000 | 0.000001 | 0.908014 |
| Prob. (F-statistic) |  |  | 0.000002 |

- All figures with ${ }^{* *}$ means that the variable is significant at $95 \%$ confidence level.

The regression is run in a panel manner. Various options of panel data regression were run, fixed effects, random effects and OLS panel. The most robust of all was the OLS panel, thus we report results of the OLS panel regression. Comparing the three models we can conclude model one is the best results founded.

The dividend payout ratio PAYOUT (Y) is regressed against the six explanatory variables as mentioned above. These variables include LEVERAGE, TAX, SIZE1, MTBV, TANG, and PROF.

Overall explanatory power is fair for a panel model with $R^{2}$ of $19.83 \% . R^{2}$ measure the explanatory power of all independent variables on dependent variable. The explanatory variables in the regression, taken together, help explain the dependent variable, whereas if we find $R^{2}=0$, we can say that the explanatory variables are not significant and do not provide any explanatory power for the dependent variable. In our case we found $\mathrm{R}^{2}=19.83 \%$ which means the explanatory variables has fair explanatory power on the dependent variable.

The regression model suggests a positive and insignificant relationship between LEVERAGE and PAYOUT but it suggests a positive and significant relationship between SIZE1 and PAYOUT, and PROF and PAYOUT. Also it suggests a negative and insignificant relationship between TAX and PAYOUT but a negative and significant between MTBV and PAYOUT, and TANG and PAYOUT.

The positive coefficient of LEVERAGE indicates a positive relationship between LEVERAGE and PAYOUT which is contrary to our hypothesis. As we can see LEVERAGE is insignificant because its P-Value exceeds $5 \%$ at $95 \%$ confidence level and $t$-statistics less than 1.96. This means the capital structure of the firms in Sultanate of Oman does not affect dividends policy.

This suggests that firms in Sultanate of Oman with high leverage tend to pay higher dividends. But since we found a positive and insignificant relationship between LEVERAGE and PAYOUT, this means that leverage has no impact on the dividends policy and capital structure of the firms. This is also consistent with results of the research done on Tunisian firms of Belanes and other (2006). The possible explanation is that firms reduce the agency problem between managers and shareholders by reducing the free cash flow by paying high dividends.

As expected this study results indicate a negative but insignificant relationship between corporate tax (TAX) and dividend payout ratio (PAYOUT), indicating that increasing tax associated with decreasing dividend payout. This is consistent with residual dividend theory which says that dividends would be paid only if profits are not completely used for investment purpose. Thus taxes hurt the dividend payment of firms listed in Muscat Security Market because it reduces the cash flow. Comparing the results founded with the research done on Ghana Stock Exchange by Amidu and Abor (2006) we can observe a contrary to our findings a positive relationship between dividend payout ratio and tax.

As hypothesized there is significant and positive relationship between SIZE and PAYOUT. The positive coefficient on (SIZE1) proves the firms with higher level of assets are mostly have certainty in their income level and therefore can maintain their dividend level. Thus we conclude the firms with higher level of assets considered larger firm and can pay higher dividends is the case with the firms listed in Muscat Security Market.

Market to book value of equity is used as a proxy for the firm's future prospects and investment opportunities. Our results indicate a negative and significant relationship between MTBV and PAYOUT as expected. This is refer us to a fact that, growing firm's or investment opportunity require more funds in order to finance the growth and therefore retain required proportion of earning which affect negatively on dividends payment. This consistent with pecking order theory. This theory maintains that businesses adhere to a hierarchy of financing sources and prefer internal financing when available, and debt is preferred over equity if external financing is need because of cost of capital. Thus, the firms with investment opportunity retain their earnings rather than financing externally and this effect negatively on dividends payment. This result consistent with Amiduand and Abor (2006). This means firm with investment opportunity tend to pay less dividends in both Sultanate of Oman and Ghana.

We expect to find a positive relationship between TANG and PAYOUT. But surprisingly we found a significant negative relationship between TANG and PAYOUT ratio. This means the firms with higher tangible assets tend to pay lower dividends. This result consistent with results found by Aivazjan, and Booth (2003) in our literature review for the emerging market firms. A possible explanation for this is that when assets are more tangible, fewer short-term assets are available for banks to lend against. This impose financial constraints on firms operating in more primitive financial systems, where source of debt is short term bank financing.

The result shows a statistically significant and positive relationship between PROFITABILITY and payout ratio. This is explained by the fact that, highly profitable firms tend to declare and pay high dividend. Thus, they would have exhibited high payout. These results clearly supports hypothesize of a positive relationship between PROF and PAYOUT. Also it support he findings of Jensen and others (1992).

The most important factors which affect dividends are MTBV and PROF. Both factors have a significant $t$-statistics and $P$-values. High profitable firms allow the firm to pay dividends and return their earnings to finance their needs. In contrast MTVB considered one of the factors which explain investment opportunity. So the firms with high financial need tend to pay less dividends.

### 5.5 Research Limitations

Due to lack of data we have unfortunately ignore some important factors that affect on dividends policy. The first factor is percentage of shares hold by insider as proxy for agency cost which is used by Rozeff (1982), and Lioyd, and others (1985). Also due to the same reason we couldn't use revenue growth which is used by the same author's researches. Growth in sales is one of important factors which affect the dividend policy which used by D'Souza (1999) is not used in this research as independent variable again because data limitation. Most of the researches in the literature review are using the firm BETA as a proxy of risk such as Rozeff (1982), and D'Souza, (1999). BETA is not calculated in the Muscat Security Market because it is not well developed market and in this research we have tried to calculate it but again due to data limitation it was impossible. In addition we taken PAYOUT as dependent variable which is defined by dividend per share divided stock price at end of the year While Rozeff (1982) taken arithmetic average of firms for seven years. Taking average PAYOUT is impossible due to lack of data. We can conclude that due to data limitation some of important explanatory variables not used in this research and since those data have a significant impact on dividend payout which is obvious from the literature review this cause to reduce our $R^{2}$. $R^{2}$ is used to test the explanatory power of the independent variables on dependent variables. Therefore ignoring such important variables off course will reduce the explanatory power of independent variable on PAYOUT. This is the only explanation which can explains our low $\mathrm{R}^{2}$ founded in the regression results.

## CHAPTER SIX

## 6. CONCLUSION

### 6.1 Conclusion

In this study we tried to determine the dividend policy for Sultanate of Oman market (Muscat Security Market). The sample used in this study for period of six financial years. All the data obtained from the shareholders guide 2006 and 2007 issued by Muscat Security Market. In this research paper all the regulated firms are excluded only the non regulated firms are taken in consideration.

Some of the variables excluded from the final regression model because of Multicollinearity problem which includes ROA, LOG of Market Capitalization, SIZE2, and ROE.

The regression is run in a panel manner. Various options of panel data regression were run, fixed effects, random effects and OLS panel. The most robust of all was the OLS panel, thus we report results of the OLS panel regression.

The dividend payout ratio PAYOUT (Y) is regressed against the six explanatory variables as mentioned above. These variables include LEVERAGE, TAX, SIZE1, MTBV, TANG, and PROF. Overall explanatory power is fair for a panel model with $\mathrm{R}^{2}$ of $19.83 \%$.

Since we found a positive and insignificant relationship between LEVERAGE and PAYOUT, this means that leverage has no impact on the dividends policy and capital structure of the firms. The possible explanation is that firms reduce the agency problem between managers and shareholders by reducing the free cash flow by paying high dividends.

This study results indicate a negative but insignificant relationship between corporate tax (TAX) and dividend payout ratio (PAYOUT), indicating that increasing tax associated with decreasing dividend payout. Thus taxes hurt the dividend payment of firms listed in Muscat Security Market because it reduces the cash flow. Our results indicate a negative and significant relationship between MTBV and PAYOUT. This is refer us to a fact that, growing firm's or investment opportunity require more funds in order to finance the growth and therefore retain required proportion of earning which affect negatively on dividends payment. Thus, the firms with investment opportunity retain their earnings rather than financing externally and this effect negatively on dividends. This means firm with investment opportunity tend to pay less dividends in Sultanate of Oman.

Surprisingly we found a significant negative relationship between TANG and PAYOUT ratio. This means the firms with higher tangible assets tend to pay lower dividends. A possible explanation for this is that when assets are more tangible, fewer short-term assets are available for banks to lend against. This impose financial constraints on firms operating in more primitive financial systems, where source of debt is short term bank financing.

The result also shows a statistically significant and positive relationship between PROFITABILITY and payout ratio. This is explained by the fact that, highly profitable firms tend to declare and pay high dividend. Thus, they would have exhibited high payout.

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## AUTOBIOGRAPHY

I am Jasim Mohammed Al-Zaabi, 27 year old, and married. I did my under graduate program in United Arab Emirates, (Ajman University of Science and Technology) with specialization of accounting. In 2003 I have graduated from the university. During my under gradate studies I worked for eighteen months as an administrative coordinator in one of construction firms. After graduation I found a governmental job in Ministry of Endowment and Religious Affairs as accountant and I worked there for period of Two years. After Two year experience the government of Sultanate of Oman gave me an opportunity to do my master program by getting study vacation.

|  | Appendix 1: Firms |  |  |
| :---: | :---: | :---: | :---: |
| Industry | Food \& Beverages | Services | Tourism \& Hospitality |
| Name of the Company |  | Name of the Company |  |
| Areej Vegetable Oils \& Derivatives SAOG |  | Al Batnah Hotels Co SAOG (Sohar Beach Hotel) |  |
| Dhofar Beverage \& Food Suff Co. SAOG |  | Al Jazeira Services Co SAOG |  |
| Dhofar Cattle Feed Co SAOG |  | Gulf hotels (Oman) Company Limited SAOG |  |
| National Beverages Co Ltd SAOG |  | Interior Hotels Co SAOG |  |
| National Biscuit Industries Ltd SAOG |  | Oman Hotels \& Tourism Co SAOG |  |
| National Mineral Water Co SAOG |  | Sahara Hospitality Co SAOG |  |
| Oman Flour Mills Co SAOG |  | Name of the Company |  |
| Oman Refreshment Co SAOG |  | National Hospitality Institute SAOG | Training |
| Salalah Mills Co. SAOG |  | Name of the Company |  |
| Name of the Company | construction \& Support | Oman Fisheries Co SAOG | Livestock |
| Oman Cement Co SAOG |  | Name of the Company | Petroleume |
| Raysut Cement Co SAOG |  | Oman Oil Marketing CO SAOG |  |
| Name of the Company | Chemicals \& Pharmaceuticals | Shell Oman Marketing Company SAOG |  |
| Oman Chlorine Co SAOG |  | Name of the Company | Energy |
| Name of the Company | Papers, Printing \& Packaging | Oman National Engineering \& Investment Company (SAOG) |  |
| Computer Stationery Industry SAOG |  | United Power Co SAOG |  |
| National Packaging Factory SAOG |  | Name of the Company | Logistics |
| Omani Packaging Co SAOG |  | Port Services Corporation SAOG |  |
| Name of the Company | Others | Port of Salalah |  |
| Al Anwar Holdings SAOG |  | Name of the Company | Others |
| Al Jazeera Steel Products Co SAOG |  | Al Fajar Al Alamia Co SAOG |  |
| Muscat Gases Co SAOG |  | Renaissance Services SAOG |  |
| National Aluminium Producsts Co SAOG |  |  |  |
| National Detergent Co SAOG |  |  |  |
| National Gas Co SAOG |  |  |  |
| Oman Cables Industry SAOG |  |  |  |
| Oman Chromite Co SAOG |  |  |  |
| Oman Fiber optic Co SAOG |  |  |  |

Appendix 2: Data

| Industry |  | Variables |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Name of the Company | Years | $Y=$ Dividend per share / Stock price | $\mathrm{Xl}=\mathrm{ROA} \%$ | X2 = Debt Ratio \% | X3 $=$ Log of Market Capitalization | X4 $=$ Tax / Net profit |
| Areej Vegetable Oils \& Derivatives SAOG | 2001 | 0,106 | 0,103 | 0,551 | 6,733 | 0,132 |
|  | 2002 | 0,137 | 0,055 | 0,623 | 6,768 | 0,130 |
|  | 2003 | 0,098 | 0,067 | 0,660 | 6,751 | 0,131 |
|  | 2004 | 0,079 | 0,079 | 0,669 | 6,942 | 0,248 |
|  | 2005 | 0,073 | 0,050 | 0,748 | 6,975 | 0,131 |
|  | 2006 | 0,071 | 0,109 | 1,550 | 6,985 | 0,131 |
| Dhofar Beverage \& Food Suff Co. SAOG | 2001 | 0,067 | 0,093 | 0,447 | 6,060 | 0,058 |
|  | 2002 | 0,086 | 0,095 | 0,280 | 5,952 | 0,094 |
|  | 2003 | 0,079 | 0,167 | 0,216 | 5,987 | 0,103 |
|  | 2004 | 0,134 | 0,052 | 0,220 | 6,245 | 0,221 |
|  | 2005 | 0,000 | 0,038 | 0,269 | 6,301 | 0,026 |
|  | 2006 | 0,000 | -0,110 | 0,529 | 6,230 | -0,021 |
| Dhofar Cattle Feed CoSAOG | 2001 | 0,100 | 0,030 | 0,222 | 6,924 | -0,027 |
|  | 2002 | 0,063 | 0,044 | 0,075 | 7,049 | 0,046 |
|  | 2003 | 0,059 | 0,026 | 0,088 | 7,073 | 0,000 |
|  | 2004 | 0,046 | 0,023 | 0,174 | 7,180 | -0,195 |
|  | 2005 | 0,046 | 0,022 | 0,306 | 7,186 | -0,279 |
|  | 2006 | 0,652 | 0,055 | 0,370 | 6,207 | -0,068 |
| National Beverages Co Ltd SAOG | 2001 | 0,000 | 0,015 | 0,483 | 6,052 | 0,000 |
|  | 2002 | 0,000 | 0,017 | 0,466 | 5,944 | 0,122 |
|  | 2003 | 0,101 | 0,018 | 0,462 | 5,994 | 0,084 |
|  | 2004 | 0,069 | 0,022 | 0,457 | 6,213 | 0,297 |
|  | 2005 | 0,000 | 0,012 | 0,478 | 6,245 | 0,327 |
|  | 2006 | 0,000 | -0,083 | 0,519 | 6,196 | 0,000 |
| National Biscuit Industries Ltd SAOG | 2001 | 0,000 | 0,046 | 0,759 | 6,675 | 0,122 |
|  | 2002 | 0,000 | -0,067 | 0,815 | 6,398 | 0,135 |
|  | 2003 | 0,000 | -0,011 | 0,804 | 6,380 | -0,067 |
|  | 2004 | 0,000 | 0,025 | 0,790 | 6,342 | 0,193 |
|  | 2005 | 0,000 | 0,041 | 0,749 | 6,342 | -1,160 |
|  | 2006 | 0,067 | 0,049 | 0,732 | 6,347 | 0,051 |


| Industry |  | Variables |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Name of the Company | Years | $\mathrm{Y}=$ Dividend per share / Stock price | X1 $=$ ROA \% | X2= Debt Ratio \% | X3= Log of Market Capitalization | X4= Tax / Net profit |
| National Mineral Water Co SAOG | 2001 | 0,049 | 0,078 | 0,541 | 6,516 | 0,125 |
|  | 2002 | 0,056 | 0,095 | 0,495 | 6,556 | 0,144 |
|  | 2003 | 0,055 | 0,066 | 0,443 | 6,643 | 0,147 |
|  | 2004 | 0,036 | 0,020 | 0,416 | 6,643 | 0,127 |
|  | 2005 | 0,060 | 0,019 | 0,358 | 6,204 | 0,057 |
|  | 2006 | 0,044 | 0,012 | 0,412 | 6,158 | 0,000 |
| Oman Flour Mills Co SAOG | 2001 | 0,000 | 0,035 | 0,171 | 7,258 | 0,140 |
|  | 2002 | 0,000 | 0,023 | 0,048 | 7,294 | 0,121 |
|  | 2003 | 0,000 | 0,019 | 0,051 | 7,353 | 0,115 |
|  | 2004 | 0,000 | -0,007 | 0,075 | 7,404 | 0,000 |
|  | 2005 | 0,000 | 0,045 | 0,040 | 7,350 | 0,055 |
|  | 2006 | 0,084 | 0,063 | 0,052 | 7,448 | 0,163 |
| Oman Refreshment Co SAOG | 2001 | 0,080 | 0,212 | 0,290 | 7,301 | 0,134 |
|  | 2002 | 0,057 | 0,123 | 0,323 | 7,243 | 0,135 |
|  | 2003 | 0,074 | 0,130 | 0,348 | 7,211 | 0,134 |
|  | 2004 | 0,050 | 0,143 | 0,364 | 7,304 | 0,134 |
|  | 2005 | 0,054 | 0,148 | 0,285 | 7,362 | 0,139 |
|  | 2006 | 0,000 | 0,109 | 0,336 | 7,299 | 0,139 |
| Salalah Mills Co. SAOG | 2001 | 0,078 | 0,054 | 0,644 | 6,585 | 0,080 |
|  | 2002 | 0,026 | 0,061 | 0,634 | 6,677 | 0,064 |
|  | 2003 | 0,039 | 0,087 | 0,576 | 6,804 | 0,006 |
|  | 2004 | 0,045 | 0,032 | 0,622 | 6,742 | 0,000 |
|  | 2005 | 0,063 | 0,038 | 0,604 | 6,602 | 0,000 |
|  | 2006 | 0,086 | 0,032 | 0,713 | 6,641 | 0,044 |
| $\begin{aligned} & \text { Oman Cement Co } \\ & \text { SAOG } \end{aligned}$ | 2001 | 0,059 | 0,047 | 0,253 | 7,650 | 0,182 |
|  | 2002 | 0,063 | 0,073 | 0,203 | 7,798 | 0,134 |
|  | 2003 | 0,060 | 0,105 | 0,166 | 8,000 | 0,153 |
|  | 2004 | 0,045 | 0,141 | 0,157 | 8,188 | 0,135 |
|  | 2005 | 0,039 | 0,169 | 0,135 | 8,326 | 0,136 |
|  | 2006 | 0,060 | 0,170 | 0,112 | 8,284 | 0,133 |


| Industry |  | Variables |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Name of the Company | Years | $\mathrm{Y}=$ Dividend per share / Stock price | $\mathrm{X} 1=\mathrm{ROA}$ \% | X2 = Debt Ratio \% | X3 $=$ Log of Market Capitalization | X4= Tax / Net profit |
| Raysut Cement Co SAOG | 2001 | 0,000 | -0,030 | 0,529 | 6,845 | -0,042 |
|  | 2002 | 0,000 | -0,002 | 0,511 | 7,229 | 0,000 |
|  | 2003 | 0,035 | 0,111 | 0,399 | 7,634 | 0,027 |
|  | 2004 | 0,017 | 0,145 | 0,341 | 7,857 | 0,113 |
|  | 2005 | 0,000 | 0,127 | 0,322 | 8,252 | 0,107 |
|  | 2006 | 0,437 | 0,214 | 0,267 | 7,359 | 0,119 |
| $\begin{gathered} \text { Oman Chlorine Co } \\ \text { SAOG } \end{gathered}$ | 2001 | 0,000 | 0,001 | 0,541 | 6,364 | 0,000 |
|  | 2002 | 0,083 | 0,048 | 0,508 | 6,647 | 0,173 |
|  | 2003 | 0,048 | 0,056 | 0,483 | 6,895 | 0,129 |
|  | 2004 | 0,049 | 0,052 | 0,484 | 6,898 | 0,130 |
|  | 2005 | 0,000 | 0,076 | 0,488 | 7,071 | 0,327 |
|  | 2006 | 0,000 | 0,101 | 0,409 | 6,079 | 0,099 |
| Computer Stationery <br> Industry SAOG | 2001 | 0,138 | 0,085 | 0,420 | 6,043 | 0,045 |
|  | 2002 | 0,102 | 0,115 | 0,370 | 6,222 | 0,034 |
|  | 2003 | 0,086 | 0,060 | 0,567 | 6,250 | 0,101 |
|  | 2004 | 0,083 | 0,056 | 0,620 | 6,310 | 0,010 |
|  | 2005 | 0,071 | 0,083 | 0,560 | 6,462 | 0,233 |
|  | 2006 | 0,050 | 0,067 | 0,584 | 6,477 | 0,117 |
| National Packaging <br> Factory SAOG | 2001 | 0,000 | 0,114 | 1,100 | 5,492 | 0,000 |
|  | 2002 | 0,000 | 0,169 | 0,915 | 5,492 | 0,000 |
|  | 2003 | 0,000 | 0,196 | 0,729 | 5,511 | 0,000 |
|  | 2004 | 0,000 | 0,143 | 0,584 | 5,793 | 0,000 |
|  | 2005 | 0,040 | 0,182 | 0,444 | 5,834 | 0,220 |
|  | 2006 | 0,040 | 0,178 | 0,331 | 5,834 | 0,103 |
| $\begin{gathered} \text { Omani Packaging Co } \\ \text { SAOG } \end{gathered}$ | 2001 | 0,112 | 0,067 | 0,617 | 6,095 | 0,000 |
|  | 2002 | 0,085 | 0,108 | 0,593 | 6,515 | 0,000 |
|  | 2003 | 0,104 | 0,095 | 0,524 | 6,447 | 0,000 |
|  | 2004 | 0,088 | 0,105 | 0,469 | 6,563 | 0,051 |
|  | 2005 | 0,040 | 0,069 | 0,470 | 6,679 | 0,144 |
|  | 2006 | 0,029 | 0,057 | 0,506 | 6,740 | 0,125 |


| Industry |  | Variables |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Name of the Company | Years | $Y=$ Dividend per share $/$ Stock price | X1 = ROA \% | X2 $=$ Debt Ratio \% | X3 $=$ Log of Market Capitalization | X4= Tax / Net profit |
| Al Anwar HoldingsSAOG | 2001 | 0,000 | -0,036 | 0,537 | 6,255 | -0,257 |
|  | 2002 | 0,000 | 0,004 | 0,480 | 6,643 | 8,065 |
|  | 2003 | 0,000 | 0,114 | 0,364 | 6,845 | 0,046 |
|  | 2004 | 0,049 | 0,059 | 0,442 | 6,886 | 0,015 |
|  | 2005 | 0,043 | 0,046 | 0,461 | 6,944 | 0,096 |
|  | 2006 | 0,528 | 0,022 | 0,539 | 5,866 | 0,165 |
| Al Jazeera Steel Products Co SAOG | 2001 | 0,000 | 0,031 | 0,866 | 6,481 | 0,000 |
|  | 2002 | 0,000 | 0,063 | 0,735 | 6,749 | 0,000 |
|  | 2003 | 0,034 | 0,023 | 0,749 | 6,844 | 0,000 |
|  | 2004 | 0,000 | 0,162 | 0,647 | 7,463 | 0,037 |
|  | 2005 | 0,000 | -0,012 | 0,734 | 7,331 | -0,212 |
|  | 2006 | 0,000 | 0,014 | 0,795 | 6,278 | 0,170 |
| Muscat Gases Co SAOG | 2001 | 0,085 | 0,129 | 0,239 | 6,727 | 0,163 |
|  | 2002 | 0,074 | 0,155 | 0,234 | 6,913 | 0,154 |
|  | 2003 | 0,090 | 0,121 | 0,211 | 6,870 | 0,157 |
|  | 2004 | 0,071 | 0,085 | 0,231 | 6,845 | 0,180 |
|  | 2005 | 0,008 | 0,141 | 0,163 | 7,839 | 0,116 |
|  | 2006 | 0,114 | 0,133 | 0,183 | 6,725 | 0,098 |
| National Aluminium Producsts Co SAOG | 2001 | 0,000 | 0,048 | 0,445 | 6,311 | 0,188 |
|  | 2002 | 0,048 | 0,046 | 0,418 | 6,716 | 0,227 |
|  | 2003 | 0,036 | 0,051 | 0,516 | 6,965 | 0,063 |
|  | 2004 | 0,042 | 0,020 | 0,539 | 6,906 | -0,008 |
|  | 2005 | 0,037 | -0,017 | 0,582 | 6,653 | 0,233 |
|  | 2006 | 0,517 | 0,060 | 0,682 | 5,910 | 0,140 |
| National Detergent Co SAOG | 2001 | 0,062 | 0,064 | 0,597 | 6,892 | 0,149 |
|  | 2002 | 0,069 | 0,113 | 0,515 | 6,890 | 0,127 |
|  | 2003 | 0,058 | 0,070 | 0,487 | 6,888 | 0,125 |
|  | 2004 | 0,000 | -0,003 | 0,535 | 6,599 | -2,000 |
|  | 2005 | 0,000 | -0,080 | 0,609 | 6,573 | 0,054 |
|  | 2006 | 0,000 | 0,013 | 0,533 | 6,326 | 0,037 |


| Industry |  | Variables |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Name of the Company | Years | Y = Dividend per share / Stock price | $\mathrm{Xl}=\mathrm{ROA} \%$ | X2 = Debt Ratio \% | X3 $=$ Log of Market Capitalization | X4= Tax / Net profit |
| National Gas Co SAOG | 2001 | 0,074 | 0,170 | 0,199 | 7,033 | 0,126 |
|  | 2002 | 0,044 | 0,134 | 0,237 | 7,057 | 0,123 |
|  | 2003 | 0,066 | 0,093 | 0,140 | 6,881 | 0,122 |
|  | 2004 | 0,056 | 0,102 | 0,134 | 6,951 | 0,112 |
|  | 2005 | 0,000 | 0,116 | 0,095 | 6,892 | 0,083 |
|  | 2006 | 0,083 | 0,085 | 0,088 | 6,681 | 0,066 |
| Oman Cables Industry SAOG | 2001 | 0,048 | 0,055 | 0,608 | 6,798 | 0,120 |
|  | 2002 | 0,038 | 0,057 | 0,652 | 6,886 | 0,122 |
|  | 2003 | 0,076 | 0,032 | 0,702 | 6,953 | 0,116 |
|  | 2004 | 0,027 | 0,041 | 0,748 | 7,144 | 0,136 |
|  | 2005 | 0,026 | 0,056 | 0,771 | 7,356 | 0,137 |
|  | 2006 | 0,093 | 0,106 | 0,846 | 6,982 | 0,136 |
| Oman Chromite Co SAOG | 2001 | 0,000 | 0,026 | 0,071 | 5,989 | 0,000 |
|  | 2002 | 0,045 | 0,039 | 0,109 | 6,121 | 0,000 |
|  | 2003 | 0,036 | 0,049 | 0,132 | 6,322 | 0,096 |
|  | 2004 | 0,044 | 0,097 | 0,117 | 6,530 | 0,103 |
|  | 2005 | 0,079 | 0,145 | 0,109 | 6,455 | 0,230 |
|  | 2006 | 0,100 | 0,108 | 0,151 | 6,380 | 0,097 |
| Oman Fiber optic CoSAOG | 2001 | 0,000 | 0,252 | 0,477 | 6,758 | 0,067 |
|  | 2002 | 0,000 | 0,089 | 0,404 | 6,655 | -0,135 |
|  | 2003 | 0,031 | 0,012 | 0,430 | 6,766 | 0,103 |
|  | 2004 | 0,048 | 0,058 | 0,411 | 6,958 | 0,000 |
|  | 2005 | 0,044 | 0,074 | 0,371 | 6,994 | 0,000 |
|  | 2006 | 0,056 | 0,071 | 0,337 | 6,958 | 0,000 |
| Al Batnah Hotels Co SAOG (Sohar Beach Hotel) | 2001 | 0,049 | 0,031 | 0,487 | 6,009 | 0,000 |
|  | 2002 | 0,041 | 0,022 | 0,473 | 6,086 | 0,000 |
|  | 2003 | 0,048 | 0,016 | 0,449 | 6,021 | 0,424 |
|  | 2004 | 0,048 | 0,050 | 0,423 | 6,021 | 0,121 |
|  | 2005 | 0,045 | 0,127 | 0,362 | 6,045 | 0,124 |
|  | 2006 | 0,043 | 0,157 | 0,304 | 6,362 | 0,108 |


| Industry |  | Variables |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Name of the Company | Years | $\mathrm{Y}=$ Dividend per share / Stock price | $\mathrm{X} 1=\mathrm{ROA} \%$ | X2 = Debt Ratio \% | X3 $=$ Log of Market Capitalization | X4= Tax / Net profit |
| Al Jazeira Services CoSAOG | 2001 | 0,000 | 0,036 | 0,430 | 6,318 | 0,036 |
|  | 2002 | 0,769 | 0,274 | 0,301 | 6,352 | 0,043 |
|  | 2003 | 0,103 | 0,221 | 0,368 | 7,181 | 0,043 |
|  | 2004 | 0,114 | 0,173 | 0,342 | 7,329 | 0,011 |
|  | 2005 | 0,000 | 0,230 | 0,252 | 7,346 | 0,066 |
|  | 2006 | 0,787 | 0,090 | 0,266 | 6,198 | 0,079 |
| Gulf hotels (Oman) Company Limited SAOG | 2001 | 0,000 | 0,021 | 0,420 | 6,724 | -0,045 |
|  | 2002 | 0,000 | 0,003 | 0,347 | 6,618 | 0,033 |
|  | 2003 | 0,000 | -0,067 | 0,406 | 6,654 | 0,071 |
|  | 2004 | 0,000 | 0,002 | 0,295 | 6,727 | 0,000 |
|  | 2005 | 0,000 | 0,065 | 0,183 | 7,077 | 0,105 |
|  | 2006 | 0,071 | 0,092 | 0,160 | 7,158 | 0,160 |
| Interior Hotels CoSAOG | 2001 | 0,000 | 0,056 | 0,747 | 5,889 | 0,000 |
|  | 2002 | 0,000 | 0,065 | 0,670 | 5,908 | 0,253 |
|  | 2003 | 0,000 | 0,001 | 0,644 | 5,908 | -2,500 |
|  | 2004 | 0,051 | 0,048 | 0,583 | 5,950 | 0,133 |
|  | 2005 | 0,053 | 0,070 | 0,523 | 5,932 | 0,112 |
|  | 2006 | 0,042 | 0,114 | 0,426 | 6,034 | 0,119 |
| Oman Hotels \& Tourism Co SAOG | 2001 | 0,000 | -0,020 | 0,450 | 6,793 | -0,069 |
|  | 2002 | 0,000 | 0,029 | 0,482 | 6,759 | 0,085 |
|  | 2003 | 0,041 | 0,029 | 0,361 | 6,670 | 0,110 |
|  | 2004 | 0,067 | 0,045 | 0,333 | 6,662 | 0,106 |
|  | 2005 | 0,049 | 0,120 | 0,281 | 6,972 | 0,090 |
|  | 2006 | 0,154 | 0,079 | 0,194 | 6,939 | 0,136 |
| Sahara Hospitality Co SAOG | 2001 | 0,000 | 0,002 | 0,492 | 6,774 | -0,042 |
|  | 2002 | 0,039 | 0,050 | 0,431 | 6,873 | 0,130 |
|  | 2003 | 0,043 | 0,066 | 0,387 | 6,912 | 0,131 |
|  | 2004 | 0,028 | 0,062 | 0,319 | 7,096 | 0,130 |
|  | 2005 | 0,028 | 0,067 | 0,273 | 7,096 | 0,142 |
|  | 2006 | 0,045 | 0,097 | 0,217 | 7,067 | 0,130 |


| Industry |  | Variables |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Name of the Company | Years | $\mathrm{Y}=$ Dividend per share $/$ Stock price | $\mathrm{Xl}=\mathrm{ROA}$ \% | X2 = Debt Ratio \% | X3 $=$ Log of Market Capitalization | X4 = Tax / Net profit |
| National Hospitality Institute SAOG | 2001 | 0,066 | 0,179 | 0,109 | 6,179 | 0,103 |
|  | 2002 | 0,054 | 0,188 | 0,097 | 6,362 | 0,081 |
|  | 2003 | 0,053 | 0,146 | 0,089 | 6,371 | 0,000 |
|  | 2004 | 0,000 | -0,057 | 0,104 | 6,415 | -0,051 |
|  | 2005 | 0,020 | 0,075 | 0,115 | 6,405 | 0,214 |
|  | 2006 | 0,000 | 0,006 | 0,129 | 6,400 | 0,000 |
| Oman Fisheries Co SAOG | 2001 | 0,000 | 0,006 | 0,115 | 6,796 | 0,057 |
|  | 2002 | 0,000 | 0,032 | 0,106 | 6,960 | 0,119 |
|  | 2003 | 0,084 | 0,050 | 0,096 | 7,016 | 0,128 |
|  | 2004 | 0,059 | 0,060 | 0,053 | 7,227 | 0,207 |
|  | 2005 | 0,079 | 0,091 | 0,063 | 7,154 | 0,053 |
|  | 2006 | 0,100 | 0,039 | 0,044 | 6,944 | 0,048 |
| Oman Oil MarketingCO SAOG | 2001 | 0,059 | 0,102 | 0,519 | 7,381 | 0,124 |
|  | 2002 | 0,081 | 0,120 | 0,387 | 7,301 | 0,124 |
|  | 2003 | 0,075 | 0,125 | 0,417 | 7,335 | -0,171 |
|  | 2004 | 0,066 | 0,104 | 0,427 | 7,406 | 0,147 |
|  | 2005 | 0,047 | 0,122 | 0,468 | 7,615 | 0,146 |
|  | 2006 | 0,563 | 0,123 | 0,535 | 6,736 | 0,135 |
| Shell Oman Marketing Company SAOG | 2001 | 0,104 | 0,134 | 0,387 | 7,797 | 0,136 |
|  | 2002 | 0,090 | 0,138 | 0,410 | 7,826 | 0,140 |
|  | 2003 | 0,086 | 0,141 | 0,385 | 7,842 | 0,141 |
|  | 2004 | 0,196 | 0,177 | 0,345 | 7,708 | 0,136 |
|  | 2005 | 0,062 | 0,171 | 0,498 | 7,934 | 0,122 |
|  | 2006 | 0,646 | 0,167 | 0,564 | 7,144 | 0,139 |
| Oman National <br> Engineering \& Investment Company (SAOG) | 2001 | 0,077 | 0,036 | 0,765 | 6,756 | 0,133 |
|  | 2002 | 0,034 | 0,035 | 0,771 | 6,948 | 0,127 |
|  | 2003 | 0,031 | 0,010 | 0,792 | 7,065 | 0,099 |
|  | 2004 | 0,029 | 0,021 | 0,771 | 6,956 | 0,214 |
|  | 2005 | 0,052 | 0,025 | 0,782 | 6,958 | 0,112 |
|  | 2006 | 0,083 | 0,037 | 0,786 | 6,920 | 0,123 |


| Industry |  | Variables |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Name of the Company | Years | Y = Dividend per share / Stock price | X1 = ROA \% | X2 = Debt Ratio \% | X3 $=$ Log of Market Capitalization | X4= Tax / Net profit |
| United Power Co SAOG | 2001 | 0,113 | 0,073 | 0,536 | 7,761 | 0,098 |
|  | 2002 | 0,138 | 0,077 | 0,486 | 7,681 | 0,103 |
|  | 2003 | 0,171 | 0,060 | 0,456 | 7,510 | 0,141 |
|  | 2004 | 0,136 | 0,073 | 0,365 | 7,460 | 0,025 |
|  | 2005 | 0,103 | 0,022 | 0,363 | 7,329 | 0,133 |
|  | 2006 | 0,118 | 0,048 | 0,316 | 7,349 | 0,139 |
| Port Services Corporation SAOG | 2001 | 0,063 | 0,105 | 0,178 | 7,061 | -0,071 |
|  | 2002 | 0,074 | 0,118 | 0,182 | 7,243 | 0,097 |
|  | 2003 | 0,058 | 0,146 | 0,195 | 7,495 | 0,121 |
|  | 2004 | 0,040 | 0,191 | 0,188 | 7,729 | 0,116 |
|  | 2005 | 0,085 | 0,151 | 0,156 | 7,532 | 0,084 |
|  | 2006 | 0,068 | 0,154 | 0,180 | 7,624 | 0,113 |
| Port of Salalah | 2001 | 0,000 | 0,034 | 0,624 | 7,767 | 0,000 |
|  | 2002 | 0,000 | 0,048 | 0,560 | 7,661 | 0,000 |
|  | 2003 | 0,014 | 0,077 | 0,514 | 7,805 | 0,000 |
|  | 2004 | 0,023 | 0,071 | 0,457 | 7,889 | 0,000 |
|  | 2005 | 0,020 | 0,072 | 0,466 | 7,962 | 0,000 |
|  | 2006 | 0,023 | 0,061 | 0,516 | 7,979 | 0,137 |
| Al Fajar Al Alamia Co SAOG | 2001 | 0,000 | 0,021 | 0,289 | 6,274 | 0,000 |
|  | 2002 | 0,050 | 0,057 | 0,148 | 5,966 | 0,000 |
|  | 2003 | 0,129 | 0,088 | 0,240 | 5,858 | -0,250 |
|  | 2004 | 0,000 | 0,001 | 0,277 | 6,034 | 0,000 |
|  | 2005 | 0,000 | 0,107 | 0,222 | 6,080 | 0,000 |
|  | 2006 | 0,047 | 0,075 | 0,420 | 6,204 | 0,129 |
| Renaissance ServicesSAOG | 2001 | 0,000 | -0,142 | 0,849 | 6,213 | -0,020 |
|  | 2002 | 0,073 | 0,032 | 0,826 | 6,956 | 0,149 |
|  | 2003 | 0,061 | 0,090 | 0,779 | 7,489 | 0,361 |
|  | 2004 | 0,076 | 0,242 | 0,551 | 7,591 | 0,203 |
|  | 2005 | 0,028 | 0,074 | 0,630 | 8,258 | 0,125 |
|  | 2006 | 0,472 | 0,063 | 0,586 | 7,031 | 0,252 |


| Industry |  | Variables |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Name of the Company | Years | X $5=$ Log of Total Assets | X6= Log of Total Sales | X7 = Market Capitalization / Net Worth | $\mathrm{X} 8=$ Net plant \& Equipment / Total Assets | X9 = EBIT / Total Assets | $\mathrm{X} 10=\mathrm{ROE}$ |
| Areej Vegetable Oils \& Derivatives SAOG | 2001 | 6,939 | 7,125 | 1,388 | 0,426 | 0,116 | 0,229 |
|  | 2002 | 6,984 | 7,194 | 1,613 | 0,371 | 0,062 | 0,146 |
|  | 2003 | 7,057 | 7,332 | 1,452 | 0,349 | 0,076 | 0,197 |
|  | 2004 | 7,105 | 7,438 | 2,061 | 0,340 | 0,098 | 0,237 |
|  | 2005 | 7,243 | 7,477 | 2,141 | 0,551 | 0,056 | 0,198 |
|  | 2006 | 6,966 | 7,577 | 2,058 | 1,050 | 0,123 | 0,214 |
| Dhofar Beverage \& Food Suff Co. SAOG | 2001 | 6,310 | 6,134 | 1,015 | 0,144 | 0,098 | 0,167 |
|  | 2002 | 6,225 | 6,119 | 0,740 | 0,157 | 0,104 | 0,131 |
|  | 2003 | 6,258 | 6,126 | 0,684 | 0,135 | 0,184 | 0,213 |
|  | 2004 | 6,265 | 6,140 | 1,225 | 0,129 | 0,063 | 0,066 |
|  | 2005 | 6,316 | 6,195 | 1,320 | 0,128 | 0,039 | 0,051 |
|  | 2006 | 6,416 | 6,276 | 1,385 | 0,332 | -0,108 | -0,234 |
| Dhofar Cattle Feed Co SAOG | 2001 | 7,334 | 6,804 | 0,501 | 0,113 | 0,030 | 0,039 |
|  | 2002 | 7,310 | 6,773 | 0,593 | 0,126 | 0,046 | 0,047 |
|  | 2003 | 7,401 | 6,902 | 0,515 | 0,144 | 0,026 | 0,028 |
|  | 2004 | 7,483 | 6,987 | 0,602 | 0,158 | 0,019 | 0,028 |
|  | 2005 | 7,615 | 7,003 | 0,534 | 0,145 | 0,016 | 0,032 |
|  | 2006 | 7,631 | 7,034 | 0,060 | 0,277 | 0,051 | 0,087 |
| National Beverages Co <br> Lid SAOG | 2001 | 6,900 | 6,733 | 0,275 | 0,671 | 0,015 | 0,029 |
|  | 2002 | 6,899 | 6,761 | 0,208 | 0,677 | 0,019 | 0,031 |
|  | 2003 | 6,905 | 6,765 | 0,228 | 0,683 | 0,019 | 0,033 |
|  | 2004 | 6,909 | 6,799 | 0,371 | 0,687 | 0,029 | 0,041 |
|  | 2005 | 6,926 | 6,808 | 0,399 | 0,669 | 0,016 | 0,024 |
|  | 2006 | 6,892 | 6,670 | 0,419 | 0,580 | -0,083 | -0,173 |
| National Biscuit Industries Lid SAOG | 2001 | 6,830 | 6,699 | 2,905 | 0,483 | 0,052 | 0,191 |
|  | 2002 | 6,768 | 6,626 | 2,306 | 0,522 | -0,076 | -0,363 |
|  | 2003 | 6,719 | 6,644 | 2,341 | 0,539 | -0,011 | -0,059 |
|  | 2004 | 6,744 | 6,757 | 1,890 | 0,463 | 0,030 | 0,120 |
|  | 2005 | 6,743 | 6,747 | 1,585 | 0,505 | -0,007 | 0,162 |
|  | 2006 | 6,803 | 6,844 | 1,307 | 0,550 | 0,052 | 0,184 |


| Industry |  | Variables |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Name of the Company | Years | X5 $=$ Log of Total Assets | X6= Log of Total Sales | 7= Market Capitalization / Net Wort | 88= Net plant \& Equipment / Total Asset | k9 = EBIT / Total Asset | X10 = ROE |
| National Mineral Water Co SAOG | 2001 | 6,728 | 6,575 | 1,335 | 0,625 | 0,087 | 0,169 |
|  | 2002 | 6,740 | 6,621 | 1,295 | 0,596 | 0,109 | 0,188 |
|  | 2003 | 6,713 | 6,711 | 1,528 | 0,584 | 0,075 | 0,118 |
|  | 2004 | 6,700 | 6,685 | 1,505 | 0,515 | 0,023 | 0,035 |
|  | 2005 | 6,662 | 6,687 | 0,549 | 0,532 | 0,020 | 0,030 |
|  | 2006 | 6,692 | 6,701 | 0,498 | 0,505 | 0,012 | 0,020 |
| Oman Flour Mills Co SAOG | 2001 | 7,596 | 7,402 | 0,554 | 0,437 | 0,037 | 0,042 |
|  | 2002 | 7,539 | 7,067 | 0,598 | 0,375 | 0,026 | 0,024 |
|  | 2003 | 7,538 | 7,107 | 0,689 | 0,352 | 0,021 | 0,020 |
|  | 2004 | 7,532 | 7,120 | 0,804 | 0,352 | -0,007 | -0,008 |
|  | 2005 | 7,540 | 7,416 | 0,671 | 0,332 | 0,047 | 0,047 |
|  | 2006 | 7,561 | 7,457 | 0,814 | 0,302 | 0,074 | 0,067 |
| Oman Refreshment Co SAOG | 2001 | 7,009 | 7,299 | 2,755 | 0,334 | 0,240 | 0,298 |
|  | 2002 | 7,009 | 7,311 | 2,529 | 0,286 | 0,140 | 0,182 |
|  | 2003 | 7,055 | 7,331 | 2,196 | 0,244 | 0,148 | 0,200 |
|  | 2004 | 7,099 | 7,376 | 2,518 | 0,203 | 0,162 | 0,224 |
|  | 2005 | 7,090 | 7,424 | 2,612 | 0,236 | 0,168 | 0,206 |
|  | 2006 | 7,134 | 7,481 | 2,202 | 0,453 | 0,124 | 0,164 |
| Salalah Mills Co. SAOG | 2001 | 6,973 | 6,906 | 1,152 | 0,632 | 0,059 | 0,153 |
|  | 2002 | 6,993 | 6,909 | 1,317 | 0,634 | 0,065 | 0,166 |
|  | 2003 | 7,006 | 6,950 | 1,485 | 0,595 | 0,088 | 0,206 |
|  | 2004 | 7,065 | 4,047 | 1,260 | 0,503 | 0,032 | 0,085 |
|  | 2005 | 7,063 | 4,054 | 0,874 | 0,474 | 0,038 | 0,096 |
|  | 2006 | 7,230 | 4,092 | 0,899 | 0,306 | 0,033 | 0,111 |
| Oman Cement Co SAOG | 2001 | 7,915 | 7,330 | 0,727 | 0,686 | 0,056 | 0,063 |
|  | 2002 | 7,910 | 7,336 | 0,972 | 0,655 | 0,082 | 0,091 |
|  | 2003 | 7,924 | 7,424 | 1,427 | 0,586 | 0,121 | 0,126 |
|  | 2004 | 7,967 | 7,530 | 1,974 | 0,497 | 0,160 | 0,167 |
|  | 2005 | 8,032 | 7,643 | 2,276 | 0,403 | 0,192 | 0,195 |
|  | 2006 | 8,082 | 7,694 | 1,793 | 0,390 | 0,193 | 0,192 |


| Industry |  | Variables |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Name of the Company | Years | X $5=$ Log of Total Assets | X6= Log of Total Sales | 77 Market Capitalization / Net Wort | 88= Net plant \& Equipment / Total Asset | K9 = EBIT / Total Asset | X10 $=$ ROE |
| $\underset{\text { SaOG }}{\text { Raysut Cement }} \mathrm{Co}$ | 2001 | 7,665 | 7,067 | 0,321 | 0,829 | -0,029 | -0,063 |
|  | 2002 | 7,647 | 7,129 | 0,781 | 0,826 | -0,002 | -0,005 |
|  | 2003 | 7,645 | 7,235 | 1,623 | 0,785 | 0,114 | 0,186 |
|  | 2004 | 7,685 | 7,333 | 2,257 | 0,751 | 0,162 | 0,220 |
|  | 2005 | 7,904 | 7,447 | 3,285 | 0,636 | 0,141 | 0,188 |
|  | 2006 | 7,985 | 7,681 | 0,323 | 0,607 | 0,239 | 0,292 |
| Oman Chlorine Co SAOG | 2001 | 7,015 | 6,245 | 0,486 | 0,891 | 0,001 | 0,002 |
|  | 2002 | 7,026 | 6,417 | 0,849 | 0,846 | 0,056 | 0,097 |
|  | 2003 | 7,019 | 6,440 | 1,453 | 0,838 | 0,063 | 0,107 |
|  | 2004 | 7,042 | 6,440 | 1,393 | 0,872 | 0,059 | 0,100 |
|  | 2005 | 7,088 | 6,572 | 1,882 | 0,867 | 0,101 | 0,149 |
|  | 2006 | 7,090 | 6,578 | 0,165 | 0,810 | 0,111 | 0,172 |
| Computer Stationery Industry SAOG | 2001 | 6,316 | 6,065 | 0,920 | 0,307 | 0,089 | 0,147 |
|  | 2002 | 6,309 | 6,026 | 1,299 | 0,274 | 0,119 | 0,183 |
|  | 2003 | 6,477 | 6,419 | 1,367 | 0,491 | 0,066 | 0,138 |
|  | 2004 | 6,549 | 6,417 | 1,517 | 0,499 | 0,057 | 0,147 |
|  | 2005 | 6,548 | 6,501 | 1,868 | 0,479 | 0,102 | 0,188 |
|  | 2006 | 6,608 | 6,505 | 1,780 | 0,478 | 0,075 | 0,162 |
| National Packaging <br> Factory SAOG | 2001 | 5,674 | 5,634 | -6,606 | 0,475 | 0,114 | -1,149 |
|  | 2002 | 5,736 | 5,741 | 6,750 | 0,373 | 0,169 | 2,000 |
|  | 2003 | 5,787 | 5,867 | 1,952 | 0,409 | 0,196 | 0,723 |
|  | 2004 | 5,784 | 5,885 | 2,455 | 0,385 | 0,143 | 0,344 |
|  | 2005 | 5,829 | 5,929 | 1,822 | 0,321 | 0,222 | 0,328 |
|  | 2006 | 5,850 | 5,936 | 1,441 | 0,277 | 0,196 | 0,266 |
| Omani Packaging Co SAOG | 2001 | 6,572 | 6,575 | 0,870 | 0,440 | 0,067 | 0,174 |
|  | 2002 | 6,635 | 6,581 | 1,864 | 0,456 | 0,108 | 0,265 |
|  | 2003 | 6,605 | 6,607 | 1,460 | 0,446 | 0,095 | 0,200 |
|  | 2004 | 6,612 | 6,652 | 1,681 | 0,433 | 0,111 | 0,198 |
|  | 2005 | 6,634 | 6,647 | 2,097 | 0,400 | 0,079 | 0,131 |
|  | 2006 | 6,690 | 6,671 | 2,273 | 0,352 | 0,065 | 0,116 |


| Industry |  | Variables |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Name of the Company | Years | X $5=$ Log of Total Assets | X6= Log of Total Sales | 7 7 Market Capitalization / Net Wort | 8 $8=$ Net plant \& Equipment / Total Asset | K9 = EBIT / Total Asset | X10 $=$ ROE |
| Al Anwar Holdings SAOG | 2001 | 7,082 | 6,649 | 0,322 | 0,154 | -0,027 | -0,078 |
|  | 2002 | 7,024 | 6,656 | 0,800 | 0,168 | 0,039 | 0,008 |
|  | 2003 | 7,015 | 6,574 | 1,062 | 0,110 | 0,119 | 0,179 |
|  | 2004 | 7,133 | 6,830 | 1,016 | 0,167 | 0,059 | 0,105 |
|  | 2005 | 7,171 | 6,913 | 1,102 | 0,201 | 0,050 | 0,084 |
|  | 2006 | 7,245 | 7,077 | 0,091 | 0,175 | 0,026 | 0,049 |
| Al Jazeera Steel Products Co SAOG | 2001 | 7,103 | 7,008 | 1,775 | 0,529 | 0,031 | 0,232 |
|  | 2002 | 7,158 | 7,062 | 1,472 | 0,456 | 0,063 | 0,236 |
|  | 2003 | 7,195 | 7,233 | 1,777 | 0,394 | 0,023 | 0,090 |
|  | 2004 | 7,314 | 7,481 | 3,987 | 0,282 | 0,168 | 0,460 |
|  | 2005 | 7,419 | 7,534 | 3,073 | 0,252 | -0,009 | -0,044 |
|  | 2006 | 7,563 | 7,601 | 0,253 | 0,376 | 0,017 | 0,070 |
| Muscat Gases Co SAOG | 2001 | 6,608 | 6,485 | 1,729 | 0,604 | 0,150 | 0,169 |
|  | 2002 | 6,634 | 6,623 | 2,480 | 0,558 | 0,179 | 0,203 |
|  | 2003 | 6,629 | 6,572 | 2,206 | 0,581 | 0,140 | 0,153 |
|  | 2004 | 6,646 | 6,594 | 2,056 | 0,521 | 0,100 | 0,111 |
|  | 2005 | 6,663 | 6,598 | 17,894 | 0,470 | 0,157 | 0,168 |
|  | 2006 | 6,696 | 6,616 | 1,310 | 0,401 | 0,146 | 0,163 |
| National Aluminium <br> Producsts Co SAOG | 2001 | 6,951 | 6,936 | 0,414 | 0,394 | 0,057 | 0,086 |
|  | 2002 | 6,983 | 6,921 | 0,928 | 0,360 | 0,056 | 0,079 |
|  | 2003 | 7,073 | 6,942 | 1,614 | 0,422 | 0,054 | 0,105 |
|  | 2004 | 7,083 | 7,062 | 1,445 | 0,476 | 0,019 | 0,042 |
|  | 2005 | 7,074 | 7,176 | 0,908 | 0,468 | $-0,021$ | -0,041 |
|  | 2006 | 7,253 | 7,321 | 0,143 | 0,307 | 0,068 | 0,189 |
| National Detergent Co SAOG | 2001 | 6,919 | 6,992 | 2,329 | 0,250 | 0,073 | 0,159 |
|  | 2002 | 6,887 | 7,000 | 2,078 | 0,246 | 0,127 | 0,233 |
|  | 2003 | 6,859 | 6,979 | 2,084 | 0,262 | 0,079 | 0,137 |
|  | 2004 | 6,843 | 6,913 | 1,228 | 0,246 | 0,003 | -0,006 |
|  | 2005 | 7,004 | 6,972 | 0,950 | 0,437 | -0,084 | -0,204 |
|  | 2006 | 7,002 | 7,006 | 0,452 | 0,498 | 0,014 | 0,029 |


| Industry |  | Variables |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Name of the Company | Years | X5 = Log of Total Assets | X6= Log of Total Sales | 7 = Market Capitalization / Net Wort | K8= Net plant \& Equipment / Total Asset | 99 = EBIT / Total Asset | X10=ROE |
| National Gas CoSAOG | 2001 | 6,691 | 6,707 | 2,747 | 0,314 | 0,191 | 0,212 |
|  | 2002 | 6,716 | 6,715 | 2,872 | 0,461 | 0,150 | 0,176 |
|  | 2003 | 6,695 | 6,751 | 1,784 | 0,454 | 0,104 | 0,108 |
|  | 2004 | 6,721 | 6,710 | 1,961 | 0,368 | 0,113 | 0,118 |
|  | 2005 | 6,736 | 6,685 | 1,583 | 0,325 | 0,125 | 0,128 |
|  | 2006 | 6,683 | 6,630 | 1,090 | 0,318 | 0,091 | 0,093 |
| Oman Cables Industry SAOG | 2001 | 7,193 | 7,221 | 1,027 | 0,346 | 0,062 | 0,140 |
|  | 2002 | 7,283 | 7,318 | 1,150 | 0,319 | 0,064 | 0,164 |
|  | 2003 | 7,361 | 7,346 | 1,312 | 0,415 | 0,036 | 0,109 |
|  | 2004 | 7,523 | 7,556 | 1,658 | 0,301 | 0,047 | 0,163 |
|  | 2005 | 7,671 | 7,782 | 2,122 | 0,253 | 0,063 | 0,243 |
|  | 2006 | 7,952 | 8,099 | 0,696 | 0,187 | 0,121 | 0,692 |
| $\begin{gathered} \text { Oman Chromite Co } \\ \text { SAOG } \end{gathered}$ | 2001 | 6,226 | 5,652 | 0,624 | 0,146 | 0,026 | 0,028 |
|  | 2002 | 6,266 | 5,574 | 0,804 | 0,131 | 0,039 | 0,043 |
|  | 2003 | 6,285 | 6,044 | 1,254 | 0,116 | 0,053 | 0,056 |
|  | 2004 | 6,304 | 6,079 | 1,904 | 0,122 | 0,107 | 0,110 |
|  | 2005 | 6,335 | 6,158 | 1,481 | 0,119 | 0,178 | 0,163 |
|  | 2006 | 6,361 | 6,026 | 1,232 | 0,181 | 0,119 | 0,127 |
| Oman Fiber optic Co SAOG | 2001 | 6,895 | 6,762 | 1,528 | 0,625 | 0,269 | 0,529 |
|  | 2002 | 6,887 | 6,572 | 0,983 | 0,570 | 0,077 | 0,150 |
|  | 2003 | 6,915 | 6,424 | 1,248 | 0,486 | 0,013 | 0,021 |
|  | 2004 | 6,928 | 6,464 | 1,820 | 0,411 | 0,058 | 0,099 |
|  | 2005 | 6,914 | 6,525 | 1,910 | 0,371 | 0,074 | 0,117 |
|  | 2006 | 6,901 | 6,578 | 1,721 | 0,319 | 0,071 | 0,106 |
| Al Batnah Hotels Co SAOG (Sohar Beach Hotel) | 2001 | 6,361 | 5,916 | 0,864 | 0,766 | 0,031 | 0,060 |
|  | 2002 | 6,348 | 5,889 | 1,038 | 0,792 | 0,022 | - 0,043 |
|  | 2003 | 6,321 | 5,841 | 0,909 | 0,832 | 0,022 | 0,029 |
|  | 2004 | 6,299 | 5,846 | 0,913 | 0,779 | 0,056 | 0,086 |
|  | 2005 | 6,333 | 6,009 | 0,808 | 0,686 | 0,143 | 0,199 |
|  | 2006 | 6,373 | 6,090 | 1,398 | 0,630 | 0,174 | - 0,226 |


| Industry |  | Variables |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Name of the Company | Years | X5 = Log of Total Assets | X6 6 Log of Total Sales | 7 = Market Capitalization / Net Wort | K8= Net plant \& Equipment / Total Asset | K9 = EBIT / Total Asset | $\mathrm{X} 10=\mathrm{ROE}$ |
| Al Jazeira Services Co SAOG | 2001 | 7,005 | 6,756 | 0,360 | 0,015 | 0,037 | 0,063 |
|  | 2002 | 7,075 | 6,835 | 0,271 | 0,011 | 0,285 | 0,392 |
|  | 2003 | 7,134 | 6,682 | 1,763 | 0,008 | 0,231 | 0,350 |
|  | 2004 | 7,228 | 6,556 | 1,917 | 0,004 | 0,175 | 0,262 |
|  | 2005 | 7,313 | 6,614 | 1,443 | 0,003 | 0,245 | 0,307 |
|  | 2006 | 7,357 | 6,669 | 0,094 | 0,006 | 0,097 | 0,123 |
| Gulf hotels (Oman) <br> Company Limited SAOG | 2001 | 7,067 | 6,422 | 0,782 | 0,827 | 0,021 | 0,036 |
|  | 2002 | 7,007 | 6,399 | 0,626 | 0,912 | 0,004 | 0,005 |
|  | 2003 | 7,002 | 6,345 | 0,755 | 0,910 | -0,071 | -0,113 |
|  | 2004 | 7,114 | 6,459 | 0,581 | 0,921 | 0,003 | 0,003 |
|  | 2005 | 7,129 | 6,602 | 1,085 | 0,880 | 0,077 | 0,080 |
|  | 2006 | 7,161 | 6,709 | 1,181 | 0,806 | 0,107 | 0,110 |
| Interior Hotels Co SAOG | 2001 | 6,465 | 6,010 | 1,047 | 0,897 | 0,056 | 0,221 |
|  | 2002 | 6,445 | 5,962 | 0,879 | 0,896 | 0,082 | 0,198 |
|  | 2003 | 6,413 | 5,877 | 0,879 | 0,920 | -0,001 | 0,002 |
|  | 2004 | 6,398 | 5,965 | 0,855 | 0,895 | 0,054 | 0,115 |
|  | 2005 | 6,388 | 6,017 | 0,733 | 0,861 | 0,077 | 0,146 |
|  | 2006 | 6,387 | 6,091 | 0,773 | 0,813 | 0,127 | 0,198 |
| Oman Hotels \& Tourism Co SAOG | 2001 | 6,942 | 6,480 | 1,291 | 0,895 | -0,036 | -0,036 |
|  | 2002 | 6,978 | 6,474 | 1,166 | 0,758 | 0,023 | 0,055 |
|  | 2003 | 6,908 | 6,454 | 0,905 | 0,826 | 0,033 | 0,046 |
|  | 2004 | 6,903 | 6,495 | 0,862 | 0,771 | 0,049 | 0,067 |
|  | 2005 | 6,923 | 6,560 | 1,557 | 0,682 | 0,131 | 0,167 |
|  | 2006 | 7,200 | 6,670 | 0,680 | 0,788 | 0,089 | 0,097 |
| Sahara Hospitality Co SAOG | 2001 | 7,057 | 6,377 | 1,027 | 0,913 | 0,002 | 0,004 |
|  | 2002 | 7,048 | 6,477 | 1,174 | 0,893 | 0,057 | 0,088 |
|  | 2003 | 7,043 | 6,526 | 1,205 | 0,862 | 0,075 | 0,108 |
|  | 2004 | 7,016 | 6,464 | 1,769 | 0,876 | 0,070 | 0,092 |
|  | 2005 | 7,006 | 6,465 | 1,693 | 0,853 | 0,077 | 0,093 |
|  | 2006 | 7,010 | 6,589 | 1,457 | 0,806 | 0,109 | 0,123 |


| Industry |  | Variables |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Name of the Company | Years | X5 = Log of Total Assets | X6= Log of Total Sales | 7 7 Market Capitalization / Net Wort | K8= Net plant \& Equipment / Total Asset | K9 = EBIT / Total Asset | $\mathrm{X} 10=\mathrm{ROE}$ |
| National Hospitality Institute SAOG | 2001 | 5,908 | 5,768 | 2,094 | 0,035 | 0,198 | 0,201 |
|  | 2002 | 5,933 | 5,810 | 2,972 | 0,048 | 0,203 | 0,208 |
|  | 2003 | 5,928 | 5,811 | 3,044 | 0,050 | 0,146 | 0,161 |
|  | 2004 | 5,833 | 5,705 | 4,269 | 0,056 | -0,054 | -0,064 |
|  | 2005 | 5,876 | 5,822 | 3,820 | 0,045 | 0,091 | 0,084 |
|  | 2006 | 5,852 | 5,727 | 4,057 | 0,056 | 0,006 | 0,006 |
| $\begin{gathered} \text { Oman Fisheries Co } \\ \text { SAOG } \end{gathered}$ | 2001 | 7,237 | 6,714 | 0,409 | 0,073 | 0,006 | 0,007 |
|  | 2002 | 7,238 | 6,768 | 0,590 | 0,066 | 0,036 | 0,036 |
|  | 2003 | 7,258 | 6,720 | 0,634 | 0,101 | 0,056 | 0,055 |
|  | 2004 | 7,242 | 6,827 | 1,020 | 0,094 | 0,072 | 0,063 |
|  | 2005 | 7,264 | 6,823 | 0,828 | 0,084 | 0,096 | 0,097 |
|  | 2006 | 7,244 | 6,820 | 0,524 | 0,080 | 0,041 | 0,041 |
| Oman Oil Marketing CO SAOG | 2001 | 7,344 | 7,846 | 2,262 | 0,282 | 0,115 | 0,212 |
|  | 2002 | 7,262 | 7,817 | 1,784 | 0,331 | 0,134 | 0,195 |
|  | 2003 | 7,321 | 7,837 | 1,770 | 0,322 | 0,103 | 0,214 |
|  | 2004 | 7,350 | 7,850 | 1,989 | 0,403 | 0,119 | 0,182 |
|  | 2005 | 7,422 | 7,955 | 2,934 | 0,365 | 0,140 | 0,229 |
|  | 2006 | 7,513 | 8,084 | 0,359 | 0,327 | 0,140 | 0,265 |
| Shell Oman <br> Marketing Company SAOG | 2001 | 7,611 | 8,182 | 2,501 | 0,271 | 0,152 | 0,219 |
|  | 2002 | 7,623 | 8,226 | 2,703 | 0,241 | 0,157 | 0,234 |
|  | 2003 | 7,598 | 8,205 | 2,853 | 0,262 | 0,161 | 0,230 |
|  | 2004 | 7,478 | 8,145 | 2,592 | 0,325 | 0,201 | 0,270 |
|  | 2005 | 7,639 | 8,264 | 3,939 | 0,233 | 0,192 | 0,342 |
|  | 2006 | 7,727 | 8,355 | 0,599 | 0,216 | 0,191 | 0,384 |
| Oman National Engineering \& Investment Company (SAOG) | 2001 | 7,226 | 7,098 | 1,441 | 0,160 | 0,041 | 0,154 |
|  | 2002 | 7,286 | 7,240 | 2,007 | 0,132 | 0,040 | 0,153 |
|  | 2003 | 7,347 | 7,139 | 2,515 | 0,112 | 0,011 | 0,050 |
|  | 2004 | 7,332 | 7,140 | 1,838 | 0,096 | 0,025 | 0,091 |
|  | 2005 | 7,397 | 7,179 | 1,672 | 0,072 | 0,028 | 0,115 |
|  | 2006 | 7,436 | 7,153 | 1,423 | 0,088 | 0,041 | 0,172 |


| Industry |  | Variables |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Name of the Company | Years | X5 = Log of Total Assets | X6= Log of Total Sales | 7 = Market Capitalization / Net Wort | K8= Net plant \& Equipment / Total Asset | 29 = EBIT / Total Asset | $\mathrm{X} 10=\mathrm{ROE}$ |
| United Power Co SAOG | 2001 | 8,019 | 7,364 | 1,191 | 0,834 | 0,080 | 0,158 |
|  | 2002 | 7,975 | 7,331 | 0,989 | 0,853 | 0,085 | 0,151 |
|  | 2003 | 7,947 | 7,268 | 0,672 | 0,856 | 0,069 | 0,111 |
|  | 2004 | 7,884 | 7,228 | 0,593 | 0,852 | 0,075 | 0,115 |
|  | 2005 | 7,844 | 7,117 | 0,480 | 0,850 | 0,025 | 0,035 |
|  | 2006 | 7,789 | 7,153 | 0,531 | 0,871 | 0,055 | 0,071 |
| Port Services Corporation SAOG | 2001 | 7,217 | 6,919 | 0,851 | 0,500 | 0,107 | 0,128 |
|  | 2002 | 7,251 | 6,965 | 1,200 | 0,436 | 0,129 | 0,144 |
|  | 2003 | 7,309 | 7,063 | 1,907 | 0,365 | 0,164 | 0,181 |
|  | 2004 | 7,368 | 7,161 | 2,827 | 0,329 | 0,213 | 0,235 |
|  | 2005 | 7,419 | 7,115 | 1,537 | 0,301 | 0,164 | 0,179 |
|  | 2006 | 7,471 | ${ }^{5} 7,206$ | 1,737 | 0,283 | 0,172. | 0,188 |
| Port of Salalah | 2001 | 7,732 | 7,194 | 2,879 | 0,726 | 0,034 | 0,090 |
|  | 2002 | 7,698 | 7,218 | 2,092 | 0,743 | 0,048 | 0,110 |
|  | 2003 | 7,726 | 7,343 | 2,466 | 0,689 | 0,077 | 0,158 |
|  | 2004 | 7,707 | 7,391 | 2,801 | 0,735 | 0,071 | 0,131 |
|  | 2005 | 7,754 | 7,431 | 3,034 | 0,732 | 0,072 | 0,135 |
|  | 2006 | 7,831 | 7,446 | 2,904 | 0,743 | 0,070 | 0,127 |
| Al Fajar Al Alamia Co SAOG | 2001 | 6,171 | 6,140 | 1,782 | 0,042 | 0,021 | 0,029 |
|  | 2002 | 6,103 | 5,984 | 0,856 | 0,067 | 0,057 | 0,067 |
|  | 2003 | 6,176 | 6,113 | 0,633 | 0,151 | 0,066 | 0,116 |
|  | 2004 | 6,161 | 5,815 | 1,033 | 0,232 | 0,001 | 0,001 |
|  | 2005 | 6,194 | 5,960 | 0,989 | 0,196 | 0,107 | 0,138 |
|  | 2006 | 6,358 | 6,228 | 1,210 | 0,141 | 0,084 | 0,129 |
| Renaissance Services SAOG | 2001 | 7,621 | 7,444 | 0,259 | 0,425 | -0,133 | -0,945 |
|  | 2002 | 7,643 | 7,464 | 1,183 | 0,403 | 0,040 | 0,184 |
|  | 2003 | 7,756 | 7,663 | 2,448 | 0,345 | 0,125 | 0,409 |
|  | 2004 | 7,745 | 7,796 | 1,564 | 0,326 | 0,292 | 0,540 |
|  | 2005 | 8,268 | 8,027 | 2,641 | 0,549 | 0,084 | 0,201 |
|  | 2006 | 8,346 | 8,155 | 0,117 | 0,549 | 0,080 | 0,153 |

Appendix 3: PANEL DATA REGRESSION ESTIMATION

| Variable | Coefficient | t-statistics | Prob. |  |  |
| :--- | ---: | ---: | ---: | :---: | :---: |
| ROA | 0,018759 | 6,50328 | 0 |  |  |
| LEVERAGE | $-0,118748$ | $-3,78269$ | 0,0002 |  |  |
| LOG OF M. CAP. | $-0,265135$ | $-10,67221$ | 0 |  |  |
| TAX | $-0,007836$ | $-0,812104$ | 0,4176 |  |  |
| SIZE1 | 0,269771 | 10,04573 | 0 |  |  |
| SIZE2 | 0,015345 | 1,120321 | 0,2638 |  |  |
| MTBV | 0,01617 | 3,000685 | 0,003 |  |  |
| TANG | $-0,058915$ | $-2,55846$ | 0,0112 |  |  |
| PROF | 0,933255 | 7,854123 |  |  |  |
| ROE | $-0,084995$ | $-2,194284$ | 0,0292 |  |  |
| R-sequared | 0.468362 |  |  |  |  |
| S.E. of Regression | 0.084909 |  |  |  |  |

\footnotetext{


| Author and date of the article | Data and date | Methodology | Dependent Variable | Independent Variable | Findings |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Michael S. Rozeff Fall 1982. | Value Line Investment Survey of June S, 1981. From 1974 to 1980 and forecast From 1979 to 1984. | Multiple regression analyses. | $\begin{aligned} & \text { * Target } \\ & \text { Dividend } \\ & \text { payout ratio } \\ & (\mathrm{PAY}) \text {. } \end{aligned}$ | * (INS) Percentage of common stock held by insiders. <br> * (GROW1) Average growth rate of revenue. <br> * (GROW2) Value Line's forecast of average growth rate of revenue. <br> * (BETA) beta coefficient natural surrogate for operating and financial leverage, defined as the covariance of its stock return with the market return divided by the variance of the market return. <br> * (STOCK) natural logarithm of number of common stock holders. | * The dividend payout is a significantly negative function of the firm's past and expected future growth rate of sales. <br> * A significantly negative function of its beta coefficient. <br> * A significantly negative function of the percentage of stock held by insiders. <br> * A significantly positive function of the firm's number of common stockholders. |
| William P. Lioyd, John S. Jahera, and Daniel E. page 1985. | All the data utilized are taken from July to September 1984 edition of Value Line. The final data set includes 957 firms. | Ordinary least square. | * Dividend Payout Ratio. | * (INS) percentage of common stock held by insiders <br> * (GROW1) growth of revenue <br> * (GROW2) Value Line's forecasted average growth rate of revenue <br> * (BETA) Beta coefficient as reported by Value Line <br> (STOCK) natural logarithm of number of shareholders <br> * (STKSHR) number of shares per shareholder <br> * (SIZE) natural logarithm of sales for 1983 <br> * (RSINS) residual of insiders on size <br> * (RSTOCK) residual of shareholders on size. | * Introduction of a (SIZE) proxy based on sales found some weakening of the significance of agency variables. <br> * When separating agency effects and (SIZE) by using the residual approach, however, all variables are founded to be significant. Thus, when properly measured, dividend payout is affected by both agency cost effects and (SIZE) effects. |


| Author and date of the article | Data and date | Methodolo gy | Dependent Variable | Independent Variable | Findings |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Gerald R. <br> Jensen;  <br> Donald P. <br> Solberg;  <br> Thomas S. <br> Zorn - June  <br> 1992  <br>   | Value line  <br> investment  <br> survey. 565 <br> and 632 <br> firms for <br> 1982 and <br> 1987  <br> respectively.  | Three stage least square (3SLS). | * Debt <br> * Dividend * Insider ownership. | * Debt = Insider ownership, dividend, business risk, profitability, R\&D and fixed assets. <br> * Dividends = Insider ownership, debt, business risk, profitability, growth, and investment. <br> * Insider ownership = Debt, dividend, business risk, size, divisions, and R\&D. | Debt Equation. * The results shows negative coefficient on (insider ownership). <br> * The negative sign on the dividend ratio <br> * There is negative coefficients on the (Research and development) variable and the (Profitability) variable as are the observed positive coefficients on the (Fixed assets) variable. The (Business risk) variable has negative coefficient. <br> Dividend Equation. * The coefficient is negative and significance on insider ownership in the dividend equation. <br> * Investment and (growth) are related negatively to dividends, while profitability is related positively to dividends. The coefficient on the (business risk) variable is negative in both periods, but is significant only in 1987. <br> Insider Ownership Equation. * Both debt and dividend payout are insignificant in the insider ownership equation. <br> * (Size) has a consistently significant effect on the level of insider ownership. * Research and development and (business risk) are insignificant in both periods, while the (number of divisions) is negative in both periods, but significant only in the latter. |


| Author and date of the article | $\begin{aligned} & \text { Data and } \\ & \text { date } \end{aligned}$ | Methodology | Dependent Variable | Independent Variable | Findings |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Kasim L. Alli <br> A. Qayyum <br> Khan and <br> Gabriel <br> G.Ramirez. <br> November 1993. | S \& stock reports, Value line, COMPUS <br> TAT as of December 1985, and New York stock exchange. The final sample of 105 firms. | A two step multivariate procedure is used in out investigation. analysis analysis <br> Factor <br> Regress | * Dividend payout ratio (DPR) | * Firm size (LNTA). <br> * Transaction cost of equity financing (BETA). <br> * Standard deviation of capital structure (STDCDE). <br> * Average realized capital expenditure (EXCP). <br> *Institutional holdings (INSTHOL). <br> * Ratio of shares held by insiders to total shares outstanding (INSIDER), <br> * Ratio of No. of stockholders to No. of shares outstanding (HOLDING). <br> * Ratio of net plant to total assets (INTANG). <br> * Annual average growth rate in operating income (GROWTH). <br> * cash flow variability (CFV). <br> * (SLACK) sum of cash balance and marketable securities (scaled by market value of equity) and unused debt capacity. <br> * Past dividend policies dummy variable (STAB). | The result indicates following: * Significant negative coefficients on issuance cost and pecking order. <br> * Insignificant coefficient on (Ownership dispersion). <br> * Significant positive coefficient of (Dividends stability). <br> * Significant positive coefficient of (Tax and agency cost effects). <br> * Significant negative coefficient of (financial slack). <br> * Insignificant coefficient of (cash flow quality). <br> * Insignificant coefficient of (capital structure flexibility). <br> * The results from the two-step procedure were compared to the results of the ordinary least square regression analysis. The comparison indicates that five out of the seven variables with significant coefficients in the OLS equation have the highest loading on five of six significant factors: (GROWTH) (issuance cost), (EXCAP) (pecking order), (STAB) (dividend stability), (INTANG) (financial slack), and (STDCDE) (capital structure flexibility). <br> * the variables (HOLDING) has inverse relationship with (DPR)dividends payout ratio, In contrast, (SLACK) and (CFV) have positive relationship with (DPR) dividends payout ratio. |


| Author and date of the article | $\begin{gathered} \text { Data and } \\ \text { date } \\ \hline \end{gathered}$ | Methodology | Dependent Variable | Independent Variable | Findings |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { Juliet } \quad \text { D'Souza. } \\ & \text { 1999. } \end{aligned}$ | A ample of 349 firms is used worldwide. We obtained data from DataStream, and worldscope disclosure. | Multiple regression analyses. | Dividends payout ratio (PAYOUT) | * Beta (BETA). <br> * Past three years sales growth (GROWTH). <br> * Percentage of institutional holdings (INSH). <br> * Market-to-book value (MTBV). | * In the model dividend payout ratio is regressed against four explanatory variables. The results show a significantly negative relationship for explanatory variables INSH and BETA, and insignificant relationship for explanatory variables (GROWTH) and (MTBV). <br> * In the model dividend payout ratio is regressed against institutional holdings (INSH) and beta value (BETA). This regression confirms the statistically significant and negative relationship of dividend payout with the explanatory variables (INSH) and (BETA), with (INSH) showing significance at the five percent level and (BETA) showing significance at ten percent level. <br> * In the second model, dividend payout ratio is regressed against the historical sales growth rate (GROWTH) and the market-to-book value (MTBV) of the firms common stock. The results show statistically insignificant relationship for both the proxies of investment opportunities, (Growth) and (MTBV). Similarly, a firm with a high market-to-book value will have a bigger investment opportunity set. Hence, it will have a |

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| Author and date of the article | Data and date | Methodology | Dependent Variable | Independent Variable | Findings |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Varouj Aivazian and Laurence Booth - Fall 2003 . | The world Bank (International Finance Corporation, or IFC) database is described in Booth et al. (2001) for the eight countries and for U.S companies from (Compustat). | We use panel data technique to pool both time-series and cross-sectional data. | Dividend divided by total assets. | * (Tangibility), defined as total assets minus current assets divided by total assets. <br> * Firm's business risk (Busrisk), measured by the standard deviation of its return on investment. <br> * (Size), measured by the natural logarithm of sales. <br> * (Debt), defined as total liabilities divided by total assets. <br> * (ROE) and the firm's market-to-book ratio. <br> * (M/B), defined as the average common stock price divided by book value per share. <br> * (DUM) dummy variables. | * The results suggest that dividends are inversely related to (debt) and positively related to both (ROE) and the (market-to-book) value. <br> * There is little evidence that (business risk) or (size) affects dividend policy in a significant or consistent way. <br> * Dividends are negatively related to the (tangibility) of firm assets. <br> * Country dummies are significant even after adjusting for differences in firm-level characteristics such as (profitability) and (debt). This suggests that firms in these emerging markets pay out more in dividends than do similar firms in the United States. |

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| Author and date of the article | Data and date | Methodology | Dependent Variable | Independent Variable | Findings |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Mohammed Amidu and Joshua Abor. 2006. | Data derived from financial statement of firms listed in Ghana stock exchange during a six year period from 1998-2003 for 22 firms. | The panel character of the data allows for the use of panel data methodology. Panel data involves the pooling of observations on a cross-section of units over several time periods. | Dividend payout ratio is defined as the dividend per share divided by earnings per share. | *(PROF) Profitability. <br> * (RISK) risk. <br> * (CASH) cash flow. <br> * (TAX) corporate tax. holdings. <br> (INSH) institutional <br> * (GROW) sales growth. <br> * (MTBV) market-to-book value. | * The results show positive relationship between divided payout ratios and profitability, cash flow, and tax. <br> * The results also show negative associations between dividend payout and risk, institutional holding, growth and market-tobook value. <br> * However the significant variables in the results are profitability cash flow, sales growth and market-to-book value. |
| SAMY BEN NACEUR, MOHAMED GOAIED, AND AMEL BELANES - 2006. | The data used are provided by Tunisian Stock Exchange (TSE) and the Council of Capital market for period of 19962002 for 48 firms. | ${ }^{*} \quad$ (GMM) of moments, (POOLED) pooled estimation, (FEM) country-specific effects estimation, and (REM) random effect model. | * $\quad$ Dividends payout (DY). | * (ROA) $=$ net income/Total assets. <br> * $(\mathrm{MBV})=$ market value of equity/book value of equity. <br> * $($ GROWTH $)=$ annual rate of growth of total assts. <br> * $(\mathrm{MSH})=$ number of majority shareholders holding more than $5 \%$ of stocks. <br> * (LEV) $=$ total DEBT current year market value of equity. <br> * (MV) = logarithm of stock market capitalization. <br> * $($ TURN $)=$ annual value of stock traded / stock market capitalization. <br> * $($ LNSIZE $)=$ total market value of the firm. | * The results indicates that the only coefficient associated with the lagged (dividend yield), (profitability), (leverage), and (size) are significant. However when dynamic panel data are considered, those associated with (profitability), (size), (growth), and stock market (liquidity) have a significant impact on the dividend policy in Tunisian firms. <br> * The results reveal that (profitability) affects dividend payments. There is no relationship between dividend policy and (MBV). <br> * The dividend policy in our sample is positively affected by past growth. <br> * The findings of this research paper show that the coefficient on ownership concentration is not significant. <br> * The findings show that financial leverage has no impact on the dividend policy. <br> * The results show that (size) has a negative effect on dividend yield. <br> The results indicate that stock market (liquidity) is negatively correlated with dividend payment. |

