A CASE STUDY OF THE DETERMINANTS OF THE DIVIDEND POLICY OF
24 ELECTRONIC COMPANIES LISTED ON THE SHANGHAI STOCK
EXCHANGE

By
MENG WANG

A Thesis submitted in partial fulfillment of the requirements for the degree of
Master of Business Administration
Graduate School of Business
Assumption University
Bangkok, Thailand
November 2009
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Abstract

The objective of this research is to study the factors affecting the dividend policy of electronic companies listed on the Shanghai Stock Exchange. These factors include cash flow, corporate tax ratio, profitability, debt-to-equity ratio, market-to-book value, and sales.

This study is based on previous literature on the determinants of dividend payout ratio in various countries: Greece, India, Ghana, Jordan, and USA. The theoretical basis of this research are Bird in the hand, M&M irrelevance, Residual dividend theory, Cliente effect, Information asymmetry theory, Agency costs, Expectations theory, and Tax preference.

The data is collected from annual report of companies on Shanghai Stock Exchange over the fiscal year from 2003-2007. There are 24 electronic companies listed on the Shanghai Stock Exchange be chosen as research samples.

The data analysis methodology used is multiple regression along with goodness of fit, correlation analysis, Durbin-Watson Statistic, multicollinearity tests is conducted and the results interpreted. All analysis is done by SPSS and Excel program.

The results show that only corporate tax ratio value and profitability are significant independent variables effecting the dividend policy of listed electronic companies on the Shanghai Stock Exchange during the fiscal 2003-2007 period.

Finally, this writer gives some suggestions to electronic companies listed on the Shanghai Stock Exchange, investors and the government.
Acknowledgement

Thank Dr. Ismail Ali Siad who is my advisor and also may financial management teacher from the bottom of my heart. I really appreciate his assistance of guidance and valuable suggestions. Without his teaching and advice, I cannot interest in financial topic and complete this thesis.

Thank kindly to defense chairperson Dr. Charnchai Athichitskul, and committee members Dr. Ioan voicu and Dr. Chittipa Ngamkroeckjati, for their valuable suggestions which improve my thesis much better.

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Chapter 1 Introduction

1.1 Background to The Research

1.1.1 Dividend Policy: an Introduction

Dividends are taxable payments distributed by a company to its shareholders out of retained earnings. Dividends are usually paid in the form of cash, but companies can also distribute shares to shareholders instead of dividends. Dividend payments are a way for investors to judge the company stability level; high dividend payments will attract more investors, even if the company is not experiencing growth. However, when the company is in growth stage, dividends are not desired by investors as the value of shares increased. Therefore, in the absence of growth, the earnings of company are not required to be reinvested. The company will distribute dividends to its shareholders. It is also called payout.

1.1.2 Why is a Dividend Policy Necessary?

Investors and potential investors are willing to put their money in a company which has a certain dividend policy. An uncertain dividend policy will cause investors to lose confidence in the company, because they are not sure of the next dividend policy, even though, they like the last dividend policy. And stock prices are influenced by this uncertainty. When investors cannot know the expected return, normally they will end up selling the stocks and transfer their capital to other investments; which will, in turn, make the stock price drop. Therefore a certain dividend policy is a very important factor in a company’s business strategy. It can dispel the anxiety of investors and potential investors, and protect the stock price.
1.1.3 The Different Types of Dividend Policies

Generally speaking, a company's dividend policy will be decided by management according to the situation of the company.

If management cannot forecast the future clearly, this policy will be applied. This means that the dividend paid is equal to the company earnings minus the retained earnings necessary to finance the firm’s optimal capital budget. Or may be management will use a constant payout ratio; which is the dividend is fixed percentage of the earnings. Thus, the dividend depends on the amount of company earnings. However, management can forecast the future clearly, and stable, and predictable dividend policy be applied (the amount paid is a specific dividend or the dividend is increased periodically at a constant rate). The company pays a dividend that is relatively predictable by investors. The dividend therefore depends on the amount of the companies earnings.

1.1.4 Factors Affecting Dividend Policy

1. Funds requirement

Internal funds are the amount generated from a company’s operation of company’s. They can be used for investment or be distributed to investors as dividends. However, if the managers of the company make a decision to invest, they will retain the internal funds rather than pay dividends or pay the same amount as usual. Alternatively, the company runs a profitable projects and a large amount of cash flow in, the investors will get very high dividends payments.

2. Management forecast and dividend policy

If the managers of the company could clearly forecast that the future is a good period, they would like to get a dividend policy that can pay investors very high dividends, and the company would attract more investors. On the other hand, if
managers forecast bad times in the future, they may plan to reserve funds in order to protect against shortage of cash in the future. So, the management will pay fewer dividends or pay no dividends at all to investors.

3. Stockholder’s preferences

When a company is in a growth stage, management pay no or little dividends to investors but investors get capital gains. Capital gains are the profit that investors get from assets earnings. Capital gains may lead stock prices to increase. Normally, capital gains are a much higher percentage than dividend payments.

Wealthy investors prefer capital gains to dividends, because they like to avoid paying large amount of tax when they receive dividends (limited to 20%, which is the federal income tax rate paid by shareholders). The tax is collected only at the time stocks are sold. Shareholders are taxed dividend may start rate of 39.6%. However, if investors prefer current income, they will invest in companies that have a high dividend payment policy. So, the board of directors should analyze the preferences of investors when making dividend decisions.

4. Restrictions on dividend payments

A company may have dividend payment restrictions in its existing bond indentures or loan agreements. For example, a company’s loan contract with a bank may specify that the company’s current ratio cannot drop below 2.0 during the life of the loan. Because payment of a cash dividend draws down the company’s cash account, the current ratio may fall below the minimum level required. In such a case, the size of a dividend may have to be cut or omitted.

---

1 This was the maximum rate applied to capital gains for most individuals in the Taxpayer Relief Act of 1997.
2 Recall that the current ratio is found by dividing current assets (of which cash is a part) by current liabilities. Thus, decreasing cash to pay a dividend will lower the ratio.
Figure 1.1 Factors of dividend decision

<table>
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<tr>
<th>Factor</th>
<th>No-dividend more likely</th>
<th>Yes-dividend less likely</th>
</tr>
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<tbody>
<tr>
<td>Does the company need the cash for investment?</td>
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<td></td>
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<tr>
<td>Yes - dividend more likely</td>
<td></td>
<td></td>
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<tr>
<td>No - dividend less likely</td>
<td></td>
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<tr>
<td>Does the company have access to cash or</td>
<td></td>
<td></td>
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<tr>
<td>borrowing opportunity?</td>
<td>Yes-dividend more likely</td>
<td></td>
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<tr>
<td>No-dividend less likely</td>
<td></td>
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<tr>
<td>Does management expect the future to be bright?</td>
<td></td>
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<tr>
<td>Yes-dividend more likely</td>
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<td>No-dividend less likely</td>
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<tr>
<td>Do shareholders prefer capital gain?</td>
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<tr>
<td>Yes-dividend more likely</td>
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<td>No-dividend less likely</td>
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<td>Are there restrictions on dividend payments by</td>
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<td>law or agreement?</td>
<td>No-dividend more likely</td>
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<td>Yes-dividend less likely</td>
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1.1.5 Introduction to the Chinese Stock Market

Two stock markets have emerged in China in the early 1990s: the Shanghai Stock Exchange (SSE) and the Shenzhen Stock Exchange (SZSE). Until to 2008, there were 1588 companies listed on these two stock exchanges. The majority of listed companies in these two stock markets are state-owned enterprises (SOEs) which are large and medium sized companies. Both markets trade ‘A’ shares (shares designed for domestic investors in the Chinese currency the yuan) and ‘B’ shares (shares designed for overseas investors in U.S. dollars on the Shanghai market and in Hong Kong Yuan on the Shenzhen market). However, in March 2001, the ‘B’ share market also opened to citizens. The ‘A’ shares consist of: state shares owned by the government; legal-person shares owned by state-owned institutions; and negotiable shares owned by individual domestic investors. State shares and legal-person shares account for more than 60% of the total shares and they are not tradable on the stock
market because the government must retain control of these A-share companies. So only negotiable shares are only class ‘A’ shares that can be publicly traded on the stock exchange.

**1.1.6 Problems Specific to the Chinese Stock Market**

1. The number of stock investors is very large in China, and the amount of money they invest in quite substantial as well. The variety of the stocks, however, is less related to the number of investors than to the amount of investments made. So the stock is in short supply distinctly. So the investors just get a narrow margin profit or even loss from investing.

2. Chinese investors are very speculative and most of them get a profit from stock differentials. So the trading frequency is very high.

3. The Chinese legal and institutional framework is still immature and incomplete.

4. In China, the government still has a very strong influence on state-owned companies which are major economic entities. Thus, the government policy is for state-owned company to influence the stock market indirectly.

**1.1.7 Introduction to the Electronic Sector in China**

The electronic industry started in 1957. At the beginning China’s electronic factories produced only radios, and the main market was local market. In the 1990s, the varieties of products increased, new products such as televisions, fridges, VCDs and so on, but product quality is low and it primaries was low-cost manufacturing. In the last 17 years, China’s electronic industry started to attract advanced technologies. Many advanced technologies have been transferred from the Japan and the U.S.A to China.
The lack of core technology and weak capability of independent research is the main problems for China’s electronics industry.

To encourage electronics industry develops well in future, the Chinese government set two organizations to serve for electronics industry: the Ministry of Electronic Industry (MEI) and State Sciences and Technology Commission (SSTC).

1.2 Statement of the problems

Dividends are taxable payments to shareholders out of retained earnings. They can also be considered as a kind of returns to investors. They are also an indication of a company’s status.

The reasons the writer choose the electronic sector are (1) the electronics industry is a manufacturing sector, (2) They have existed in China for long-term already, so this industry is accustomed to China’s economic policy, and (3) they have a mature management system and policy.

The main research question of this research is thus as follows:
What are the determinants of the dividend payout ratio of the Electronic Companies listed on the Shanghai Stock Exchange?

Other related problems are as follows:
1. What is the relationship between the dividend payout ratio and sales?
2. What is the relationship between the dividend payout ratio and profitability?
3. What is the relationship between the dividend payout ratio and corporate tax ratio?
4. What is the relationship between the dividend payout ratio and cash flow?
5. What is the relationship between the dividend payout ratio and market-to-book value?
6. What is the relationship between the dividend payout ratio and debt-to-equity ratio?

1.3 Research objectives

The purpose of this research is to find out the determinants of the dividend payout ratio. It focuses on establishing the correlation between a company’s dividend policy and its determinants: its sales, profitability, corporate tax ratio, cash flow, market-to-book value, and debt-to-equity ratio.

This study has two objectives:

1. To determine the relationship between the dividend payout ratios of SSE-listed electronics companies and their determinants (sales, profitability, corporate tax ratio, cash flows, market-to-book value, and debt-to-equity ratio) using the SPSS program.

2. To find out the significant variables that affect the dividend payout ratios of SSE-listed electronic companies by using a multiple regression model.

1.4 Scope of the research

This research will identify and analyze the variables affecting the dividend payout ratio of SSE-listed electronics companies by using the accounting data of financial statements 2003 – 2007 fiscal years.

This research will be based on previous theories: Bird in the hand; M &M; irrelevance; Residual dividend theory; Clientele effect; Information asymmetry theory; Agency costs; Expectations theory; and Tax Preference. As a consequence, the writer will select only variables such as sales, profitability, corporate tax ratio, cash flows, market-to-book value, and debt-to-equity ratio to focus on. Other important variables such as Institutional holdings, insiders, share turnover, and age of the firm etc. will not be considered by the writer. The industry selected is the electronics sector.
1.5 Limitation of the research

The writer only selected the electronics and only companies list on the Shanghai Stock Exchange market as the research object. The electronics industry list on the Shenzhen Stock Exchange market is not included in this research. And Non-listed electronic companies are not included, because the financial information of those non-listed companies is not public, and very difficult to get full fiscal information. The writer will focus on the period 2003-2007 period. In addition, the writer will deal with the variables by using only one proxy; even these variables can be getting in other different ways.

1.6 Significance of the study

This research could further contribute to the study of the factors accounting for variances in the dividend payout ratios of electronics manufacturing companies listed on the SSE. It may also help investors judge which stage companies are in (mature or immature) and what kind of return they will get (capital gains or dividends) and help the managers develop a successful dividend policy. Besides, the writer wishes this study to encourage the future researchers to extent the studies to different countries and industries. Finally it also could be used for references to explore other factors affecting the dividend policy of electronics manufacturing companies.

1.7 Definition of the terms

‘A’ shares

‘A’ shares are shares that are issued by domestic (not including Hong Kong and Macao) companies, and supplied to domestic organizations and individual people to

**Annual report**

An annual report is a financial report or statement issued by a publicly listed company to its shareholders. It contains the balance sheet, income statement and cash flow statement (Finance glossary website, http://www.investorwords.com).

**‘B’ share**

‘B’ shares are shares issued by domestic companies; they are available to both domestic (since 2001) and foreign investors. But they are only quoted in foreign currencies (Finance glossary website, http://www.investorwords.com).

**Book value of equity**

The book value of equity is the amount of equity on the balance sheet or the sum of book value of shares (http://www.investopedia.com/terms/b/BVPS.asp).

**Cash flow**

Cash flow is equivalent that is changed by revenues and expense stream. It is also named FCFF (free cash flow for firm), (http://www.investopedia.com/terms/c/cashflow.asp).

**Corporate tax ratio**

The ratio is defined that tax are collected base on the profit before tax (http://www.taxadmin.org/fta/rate/corp_inc.html).

**Debt-equity (D/E) ratio**

The D/E ratio indicates the relationship between long-term debts and common shareholders’ market equity. It is a measurement of a company financial leverage.

The D/E ratio defined as the book value of total debt over the market value of equity (Kester, 1986; Rajan and Zingales, 1995).
Determinant

Determinant is a determining or causal element or factor.
(http://dict.veduchina.com/en/w/determinant)

Earning per share (EPS)

It is the earning that is attributed to each share in one-year period
(http://www.investopedia.com/terms/e/eps.asp).

Listed company

A listed company is a company that issues securities and is listing trade in exchange,
also called quoted company (Dai Guoqiang et al, 2000).

Market value of equity

The market value of equity represents the market price or capitalization of a
company. It is used the year-end stock price multiplied by the number of shares
outstanding (Rajan and Zingales, 1995).

Market value of total assets

The market value of total assets is obtained by the combination of the book value of
the total debts and the market value of equity (Rajan and Zingales, 1995).

Payout ratio

It is an index that shows whether a company pays out most of its earnings in
dividends or reinvests the earnings internally

Profitability

It shows the ability of a company to generate earnings. It is the ratio of earnings
before interest, tax, and depreciation to total assets (Gallagher and Andrew, 1999).
Research hypotheses

A research hypothesis is the statement created by researchers when speculating upon the outcome of a research or experiment. The form is a declarative statement, but it is a tentative statement to be tested in research. The variables in the research hypothesis are stated in operational definition terms (Saunders et al. 2007).

RMB (Ren Min Bi)

RMB is the Chinese currency.

Sales

It is a measure of overall sales that isn't adjusted for customer discounts or returns, calculated simply by adding all sales invoices, and not including operating expenses, cost of goods sold, payment of taxes, or any other charge (Gallagher and Andrew, 1999).

SSE

SSE is the Shanghai Stock Exchange for short.
Chapter 2

Literature Review

This chapter includes four sections: section one review relevant dividend policy theories. Section two discusses the variables and related theories. Section three looks at former studies which help this researcher design a model and elaborate a methodology; it also provides the information about the variables. And section four summarizes literature reviews; it shows the authors, data set, dependent variables, independent variables and method used of empirical studies.

2.1 Theories Related to Dividend Policy

Dividends still is one of the most misunderstood and unexplained mystery of modern finance. Why do the public companies distribute the cash dividends to their shareholders, Black (1976) wrote that it can not be explained convincingly. He researched for shareholders interest in the dividends and concluded that dividend payments are the “dividend puzzles”

There are two basic components in a company’s dividend policy.

1. The dividend payout ratio: a percentage of the dividends paid based on the company’s earnings.

2. The stability of the dividends paid: the degree of fluctuation of dividend payout. Dividend stability is considered as important as the amount of dividend received by investors.

In making a dividend payout decision, the financial manager has to face the problem of trade-offs. The earnings cannot satisfy both the dividend requirement and company’s investments. This means that when a company decides to invest in a project, less of the profit or earnings are retained for paying dividend. So, the only a alternative is for the company to incur debts to finance its investments and have liquidity. But companies will rely more on external equity financing. Conversely, if
companies pay fewer dividends or keep more earnings; the capital will turn into investment. Thus, the lower the dividend paid the higher the profits retention which will make it less necessary for the company to generate external funds.

Figure 2.1 Dividend-versus-Retention Trade-offs

Given a firm’s investment decisions and debt-equity mix, then it’s a choice between

- Large dividend
  - Low profit retention
  - Heavy external equity financing

or

- Small dividend
  - High profit retention
  - Negligible external equity financing


2.1.1 The Bird in the Hand Theory

Gordon (1963) and Lintner (1962) argued that investors prefer dividends to capital gains. Since capital gains are more risky than dividends and less certain than dividends. So, for the purpose of maximizing the stock price, the company should pay high dividend and set a high ratio for paying dividends; this is called the “bird in the hand” theory.

In this theory, these authors explained that a dividend policy may or may not be needed for a company, but it must be base on an assumption that investors can receive the same amount of return from their investment, whether it is in form of dividend or
capital gains. In reality, dividends are less risky than capital gains; the amount of dividend payout can be controlled by management, but the stock price is out of control of the management. So dividends can be paid in an amount that investors can predict. Capital that can not be predicted by investors and managers means much more uncertainly or risks. In activity investment, higher risks must be associated with higher profits or returns. However, if capital gains entail high risks, investors will discount a big amount of returns from the capital gains compared with dividend payments, meaning that even though the capital gains rate of return is much higher than the dividend payments, investors will still prefer dividends to capital gains. For example, a company may decide to pay a 10% dividend payment based on the value of stocks. Another choice is not to any dividend but to let the value of stock will growth 20 percent. Investors will likely choose dividend payments, because they think the valuation of dividend payment is much higher than capital gains.

Assuming, the dividend policy decision cannot influence investments, the operating cash flow, capital structure decisions, the expected amount and variability. The dividend policy will have no effect on the company’s overall cash flow, meaning that no effect on risks.

There is no relationship between dividend payout increasing or decreasing with the changing risks associate with the stock. However, managers could distribute high dividends in order to attract new investors; thus, the risk can partially be transferred to new investors from the current investors, but ownership will be transferred as well. In doing so, current investors get more dividends (cash) in their hands, and the risk and uncertainty associated with capital gains are lowered. But, the purpose to investors is maximizing their profits rather than reduce investment risk only. If they require lower risks, they should deposit their money in banks.

The writer found that the “bird-in-the-hand” theory ignores too many factors in reality. Suppose the bird-in-hand theory is perfect, if managers want to increase stock prices, they can pay higher dividends in order to attract more investors, then prices will increase and the increase will be higher than if the company reinvested its earnings. But there is still a strong perception among many investors and professional
investment advisors that dividends are important. They frequently argue their case based on their own personal experience (Keown, Martin, Petty, Scott, Jr 2003).

2.1.2 Miller & Modigliani (M & M) Irrelevance Theory

M&M (1961) argued that a dividend policy is irrelevant and does not influence the price of stocks. Thus, a dividend policy is not necessary, because dividends do not relate to stock prices. M&M’s proposition is called the “irrelevant theory”.

Dividends are not important base on two conditions.
- The amount of dividend payout does not affect the financial leverage of the company. There is no relationship between dividend payout and financial leverage.
- The capital market must be perfect, which means that:
  1. There is no transaction cost in the process of investors selling and buying stocks. For example: investors do not have to pay brokerage commissions.
  2. The company issues new shares without incurring any cost.
  3. The government never collects tax (corporate or personal).
  4. All information about the company is available and timely offered to investors.
  5. There are no conflicts of interest between managements and stockholders;
  6. There is no situation of financial distress and bankruptcy.

The first assumption means that the decision of investment has been made by investors, and only considers the effect of dividend decisions. And the second assumption means that investors only consider the effect of dividend decisions in a perfect capital market.

According to the above assumptions, whether the dividend increase or decrease, it will have no influence on the stock price. So the dividend payout decision cannot affect the value of stocks. There is no relationship between dividend policy and stock prices and no difference as to the dividend policy adopted. Investors do not know
about dividend payments and capital gains; they just want a certain return regardless of form of dividends or capital gains. Investors just know that the dividend policy is an investment policy for them and a financing strategy for the management. Thus, management has two choices. First, if they want to keep the company growing, they reinvest in assets and keep earnings. They will pay no dividend or pay little ones. Or they will distribute the earnings as dividends to shareholders, and keep the value of the shares unchanged. In the first choice, investors cannot get dividends but their shares value will increase and they will have capital gains. In the second choice, they get dividends instead of capital gains; the value of their stocks does not change. In these two choices, the value of the returns to the investors is the same. The only difference is the nature of the returns. But, it is better to pay dividends to investors, because they can actually pocket the money whereas with capital gains, they have nothing in hand since capital gains as the gains remain with the company.

Assuming the company is in a relatively efficient market, investors cannot get a return or dividends from their investments. However, they need income and sell the shares. This could affect the stock price. If the company can pay dividends to the shareholders, investors may end up keeping the shares. Or they may use these dividends to invest in another company or repurchase the shares in the company no matter what the dividend policy is (Keown, Martin, Petty, Scott, Jr 2003).

2.1.3 The residual Dividend Theory

The company should issue dividends equal to the capital left over after the financing of profitable investments.

If a company incurs flotation costs, that may have a direct bearing on the dividend decision. Because of these costs, a firm must issue a larger amount of securities in order to receive the amount required for investment. For instance, if a company needs $10,000 to finance its investment, the value of new company shares issued has to be more than $10,000. Because it must cover the flotation cost as well. This means that
new equity capital raised through the sale of common stocks will be more expensive than the capital rose through the retention of earnings.

In effect, flotation costs eliminate our indifference between financing by internal capital and by new common stocks. Earlier, the company could pay dividends and issue common stocks or retain profits. However, when flotation costs exist, internal financing is preferred. Dividends are paid as a last step the company has to satisfy the fund of investment to first pay tax, interest. Only the earnings left after these payments can be distributed to investors (Keown, Martin, Petty, Scott, Jr 2003).

Assuming flotation costs are removed, the firm’s dividend policy would be as follows:

1. Maintain the optimum debt ratio in financing future investments.
2. Accept an investment if the net present value is positive. That is, the expected rate of return exceeds the cost of capital.
3. The company has to use internal funds to finance the investment first. If internal funds cannot fully satisfy the investment, the company could issue new shares.
4. After financing investments, the company still has internally generated funds left which could be paid to investors as dividends. However, if there is no fund left in the company or company still has a deficit the funds for financing the equity, dividends do not need be paid.

2.1.4 The Clientele Effect theory

Investors receive the return in form of dividends and capital gains, Investors, who want high income, like to invest in companies which have high dividend payouts. Others may prefer very high capital gains to dividends in order to avoid taxes payments. Thus, investors are grouped into “clientele”.

Brokerage fees must be paid when investors are trading stocks. The ranging of fees are approximately 1% to 10% percent, or even more than 10%. Investors who
received cash dividends have to pay taxes after they get the dividends. And the value of shares must be evaluated again when investors buy or sell the shares. Time is costly for investors to acquire information for decision making.

Base on previous considerations, in fact, the purpose of investors is not just to create a dividend stream. They still require capital gains. So the preferences of investors are both dividends and capital gains or either one. Investors like to find companies which have a consistent dividend policy to match their requirements for dividends or capital gains. Thus, investors who expect a current income tend to invest in companies that have a dividend policy that can pay them high dividends. And investors who prefer maximizing their wealth and avoiding tax payments will invest in companies that have a dividend policy that keeps equity rather than pays cash dividends.

So, a dividend policy is a very important factor for management, because of it affects the clientele. Managers have to make dividend policy decisions which satisfy the expectation of investors. Companies have to try to have a dividend policy that is constant otherwise they will lose their investors, that is unless they want their investors shift to other companies (Keown, Martin, Petty, Scott, Jr 2003).

2.1.5. The Information Asymmetry Theory

Information asymmetry means that investors cannot have full access to information from company. It often results in investors selling their shares, and stock prices decreasing.

The dividend policy is a signal of the managerial and financial condition to investors. If a company distributes a certain amount of dividends or even more than investors expect, investors will consider the company that has a good earning power and is good financial condition as well, and the company will get higher earnings in the future. If dividends decrease, or are lower than investors expect, investors will consider the company to be in trouble and financial management will lose the
confidence of investors in future earnings.

Stock prices may decrease as a result of information asymmetry. Normally, management offers the information on dividend policy that enables the amount of dividend to be paid in future to investors to be forecast. Thus, the dividend policy can be a tool to minimize the flaw of information asymmetry and make stock prices more stable.

Dividend payment is the only credible way for management to inform investors about the company’s earnings in the future. It can be considered a communication tool between management and investors (Keown, Martin, Petty, Scott, Jr 2003).

2.1.6 The Agency Costs Theory

Agency costs happened in situation where a company’s the owners or investors are not in the same group as managers. This conflict can influence the price of the company’s stock.

It is impossible for investors and managers to be in the same group. So, they get information on the company through different channels. This writer assumes that investors and managers have the same purpose maximizing the investors’ wealth, meaning that there is no difference of perception of the company market value between investors and managers.

Two possibilities should help managers see things as the equity investors do:

1. Low market values may attract takeover bids.
2. A competitive labor market may allow investors to replace uncooperative managers.

If management is not sensitive to the need to maximize shareholders wealth, new investors may buy the stock, take control of the firm, and remove management. If the current management is being less than supportive of the owners, these owners can always seek other managers who will work in the investors’ best interests. If these two market mechanisms work perfectly without any cost, the potential conflict would be
nonexistent. In fact, it is impossible to dispel these conflicts, and normally the value of the stock which company held is more than the stock value which is held by investors who are not managers in company. So, this conflict influences the stock price, and it is a cost to the owners.

This problem must be recognized by managers in order to minimize agency costs. There are many ways to solve this problem: assigning supervisory functions for the board of directors, auditing by independent accountants, offering compensation to manager that encourage them to take the position of owners.

Company owners can use the dividend policy as a tool to minimize agency costs. When managers issue the new shares to finance new investments, the dividend policy becomes a very important factor to attract new investors. But managers must provide convincing information that the company is profitable as well. So, the dividend policy is a sign for owners to monitor investment activities (Keown, Martin, Petty, Scott, Jr 2003).

2.1.7 The Expectations Theory

When company issues information related to its stock price, the content of the information about investors’ expectations is more important than the actual of information.

A financial decision or financial information about a company still can influence its stock price. Managers should pay attention to the words they use which may relate to the expectations of investors. Sometimes investors do not care about what a company will do and they just want to see the words expected from the decision of management. This is the information effect: the stock price is not affected by how the company is operated, but by information or by the decisions that investors are expected managers to make.

When managers make a decision as to how much dividends will be distributed next. The investors form their expectations based on some factors: the previous
amount of dividend payout, investment strategies, current and expected earnings, financial strategies, a SWOT analysis for the industry, the government policy for the industry, and the economic environment.

After dividend payout decision comes out, and is definite investors will compare the amount of dividend payment with the amount expected. If the expected dividend is higher than the amount that the company announced, the stock price will not change. However, if the amount of the dividend payout is different from what investors expected, investors will reevaluate the company. They will look at the reason why the dividend changed. They may question the dividend policy that has leaded the dividend payment to change. An unexpected dividend payment indicates that the company’s earnings and other important factors have changed. So, whether or not the dividend policy is good, depends on whether it can satisfy the expectations of investors or not. If the dividend payment cannot satisfy the expectation of investors, it will affect the stock price immediately.

2.1.8 The Tax Preference theory

Investors prefer to retain capital gains rather than retain dividends since investors pay lower taxes for retaining capital gains than retaining dividends.

There are three situations in which retaining capital gains is better than retaining dividends:

1. Investors retain long-term capital gains: they are just taxed at a maximum rate of 20%. However, if they retain dividends, they will be taxed at a rate of 39.6%. Thus, wealthy investors (who own most of the equity) would like to have the companies retain and reinvest earnings back into equity. Higher earnings will presumably lead to stock price increases, and thus lower-taxed capital gains would be substituted for higher-taxed dividends.
2. Taxes are only paid on the gain at the time the stock is sold. Under the time value effects, a higher effective cost for paying a dollar of taxes today than a
dollar pay in the future.

3. If a legatee receives a stock in form of legacy, the legatee needs not to pay tax. The legatee can hold this stock until he dies, and needs not pay capital gains taxes forever unless somebody sells it. Because of these tax advantages, investors would be willing to pay more for low-payout companies than for otherwise similar high-payout companies (Brigham, Ehrhardt 2000).

2.2 Discussion of the theories related to the variables

2.2.1 Cash flow

The amounts of cash received and paid out during a specific period of time is called cash flow. The measurement of a company’s cash flow can be used for:

2. Testing the capability of liquidity. The company having good profitability does not meaning it has a good liquidity. A company may run into the trouble because of bad liquidity while being profitable.
3. Determining its rate of return a company uses the financial leverage to determine the time of cash flow into and cash low out from a project.
4. Examining its growth rate. When at a developing stage, the company will use a financial leverage to satisfy investments and solve the problem of cash shortage. Even the cash flow into the company, which will cover the debt immediately or be reinvested in.

A company’s liquidity (or cash flows) is a one of the important determinants of dividend payouts. Weak liquidity means that the company lacks cash to pay the dividends. Alli et.al (1993) reveal that cash flow is a very important factor to effect
dividends. It is even more important than current profits. Cash flow is the factor representing the ability of a company to pay out dividends. It is more or less influenced by accounting practices.

2.2.2 Corporate tax ratio

Investors would like to have certain, secured and expected returns on their investments. They do not like risk. Because of the tax-adjusted theory that makes investors a dividend tax clientele. Modigliani (1982) argues that portfolio composition has an effect on the clientele effect. And Masulis and Trueman (1988) model shows that with different tax liabilities, investors will perform differently in their expected company dividend policy. They conclude that if a company has a higher tax liability, the dividend payout will be less and the company will have more earnings to reinvest. If a company has a lower tax liability, the dividend payout will increase and the company will have fewer earnings to reinvest. The tax-adjusted model assumes that investors would like to maximize their after-tax income. According to the partial equilibrium framework developed by Farrar and Selwyn (1967), individual investors also accept the leverage from the amount of personal and corporate. Investors could receive distributions of company as dividends or capital gain.

However, the tax-adjusted theory ignores many factors. It is not suitable to explain rational behaviors. In fact, the dividend payout is an index of company’s operation. Frankfurter and Lane (1992) pointed out that managers use the information asymmetries and pay higher dividend to attract investors and increase equity issues. According to Michel (1979), when managers attract more investors from a competitive firm, they will adjust dividend payout levels in order to appease investors with regard to dividend expectations. If managers consider that investors want more dividends, they will pay higher dividends.

Frankfurter and Lane also argued that companies use dividend payments as a tradition and a way of dispelling the anxiety of investors. Shareholders see dividend
as a illustrating the relationship between managers and owners. Dividend payments also can help company to increase stability.

2.2.3 Profitability

A company deciding to pay dividends must base its decision on its profit or earnings. So, profitability is a key factor for dividend payments and the profitability ratio one important factor influencing its dividend policy. Linter (1956) studied the kind of dividend policies that U.S managers made at that time. He surveyed 28 listed U.S companies based on a compact mathematical model which he created for this research. According to his research, there are two factors influencing the dividend payout: the current-year profit and last year dividends payout. Baker, Farrelly and Edelman (1986) surveyed 318 New York-stock-exchange listed companies and they found that the factors to influencing their dividend payments previous dividend payments and the companies future earning capability. Pruitt and Gitman (1991) interviewed financial managers from the 1000 largest U.S companies and concluded that the current and previous year’s earnings or profit are major determinants influencing a company’s dividend policy. Baker and Powell (2000), surveying NYSE-listed companies, found that the characteristics of an industry and capability of a company future earnings are important factors in a company’s dividend policy.

2.2.4 Debt-to-equity Ratio

Debt to equity ratio is defined as the total debt divided by the total market equity. When a company uses debt financing to solve a shortage of cash, it must plan to charge principal debt amount and interests. But if the company cannot to carry out its debt obligations, it will run into liquidity trouble. So, a higher degree of financial leverage may cause higher risks, and will cause the make company to pay low
dividends, because it has to keep the cash to pay the interests and debt amount on time. Moreover, Rozeff (1982) concluded that companies tend to pay lower dividends when they have a higher debt level. They also have to increase the internal cash flow to reduce the cost of transaction related to external financing. Therefore, in the case of company with a low debt level, dividends are expected.

### 2.2.5 Dividend payout ratio

Dividend payout ratio is a dependent variable in this study. The income companies earn can be used in four ways: it can be (1) invested in company’s assets, (2) used to purchase securities, (3) pay the interest and principal debt amount, or (4) be distributed to shareholders as dividends. If the company issues a dividend to its shareholders, it will decide the proportion of the income to be distributed, and the dividend could be paid in two forms; cash dividends or new shares issued and distributed to shareholders as dividends.

Many theoretical models have been developed by researchers to identify and describe the factors influencing the dividend payout, and these factors must be considered by managers when articulating a dividend policy. In fact, the dividend policy is a payout policy decided by managers or distributing the cash to shareholders or investors. Miller and Modigliani argued that the dividend policy does not influence the market value of a company, and that there is no relationship between dividends and market values in a perfect capital market. However, many financial practitioners and academics dissented, because its managers will often impact stock prices and company the owners’ wealth by adjusting its dividend policy.

Since M&M study, many researchers have considered more realistic factors based on assumption of a perfect capital market and developed more theories. These theories showed real many factors influenced a company’s market value and decision of managers. Thus, more researchers devote to find out various factors influencing the dividend policy base on previous theories and factors. However, a company’s
dividend policy making are base on its own situation. It is very complex and involves uncertain judgment by company managers. So it is impossible to explain the dividend policy by only a single factor.

2.2.6 Market-to-book value

The market-to-book value is the ratio of the current share price to the book value per share. It measures how much a company worth at present, in comparison with the amount of capital invested by current and past shareholders into it.

2.2.7 Sales

Sales represent the size of firm, it also relates to risk a company risks and bankruptcy costs. Large companies run more stable operations than small companies do. So, for investors, investing in a large company carries lower risks than in a small company. Large companies are thus more attractive to investors. And large companies prefer to pay higher dividends to attract the investors.

2.3 Previous studies

2.3.1 Determinants of Dividend policy: Evidence from Greek Firms

Nikolaos Eriotis (2005) studied the dividend policy of corporations on the Greek market. Previous studies on the same topic showed a variety of information. Using a panel of data, Vasiliou & Eriotis, for instance, tested and improved, the classical study of John Lintner explains the amount dividend paid by firms using the earnings of the firm plus an adjustment according to the dividend paid the year before. The study
extend the Vasiliou & Eriotis’ work, which test the assumption that firms set their dividend policy not only by the net distributed earnings, but also by the change from the last year’s dividend, the change from the last year’s distributed earnings and the size of the firm. Between 1996-2001, 149 firms were analyzed; this model is applied out of a sample target of 718 Greek firms listed on the Athens Stock Exchange. The hypothesis is tested in this paper is that the dividend at time t depends on the distributed earnings at time t, the size of the firm and changes in dividend and distributed earnings from the last year (t-1). The empirical results confirm the hypothesis that the Greek companies prefer to distributing, rather than constant dividend of each year. They adjust dividend from year to year according as their distributed earnings and size.

Table 2.1 Variables and Hypothesized signs of Greek firms

<table>
<thead>
<tr>
<th>Variable</th>
<th>Proxy Used</th>
<th>Study’s Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Change in dividend from time ( t-1 ) to time ( t )</td>
<td>( \Delta D_{it} = D_{it} - D_{it-1} )</td>
<td>-</td>
</tr>
<tr>
<td>2. Distributed earnings of firm i at time ( t )</td>
<td>( DE_{it} = ) the distributed earnings of firm i at time ( t )</td>
<td>+</td>
</tr>
<tr>
<td>3. Change of the distributed earnings at time ( t ) and time ( t-1 )</td>
<td>( \Delta DE_{it} = DE_{it} - DE_{it-1} )</td>
<td>-</td>
</tr>
<tr>
<td>4. Sales</td>
<td>Logarithm of sales</td>
<td>+</td>
</tr>
<tr>
<td>5. the dividend of firm i at time ( t )</td>
<td>the dividend of firm i at time ( t )</td>
<td></td>
</tr>
</tbody>
</table>

2.3.2 Determinants of Dividend policy: Evidence from Indian IT Firms

Profitability has always been considered as a significant indicator to influence dividend payout ratio. Many of other factors similar to profitability affect dividend decisions of a corporation which are cash flows, corporate tax, market to book value ratio and sales growth. The empirical results suggest that dividend payout ratio has a positive relationship with profitability, but this ratio is negatively related to cash flow, corporate taxes, market-to-book value ratio and sales growth. Anil and Kapoor’s (2008) study is an attempt which empirically analyzed the indicators of dividend payout ratio of Information Technology industry in Indian. The paper also focuses on verifying whether various determinants have the existing results available with dividend payout ratio in IT industry in India. Statistical methods of correlation and regression have been used to seek the relationship between these variables. Thus, Anil and Kapoor’s (2008) targeted 102 firms out of all 105 IT firms in India during the period 2000-2006 and demonstrated the relationship of dividend payout policy decisions with various factors.

Table 2.2 Variables and Hypothesized signs of Indian IT Firms

<table>
<thead>
<tr>
<th>Variable</th>
<th>Proxy Used</th>
<th>Study’s Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Current and anticipated</td>
<td>earnings before interest and taxes /total assets</td>
<td>+</td>
</tr>
<tr>
<td>earnings</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Cash flow or liquidity</td>
<td>cash from operations</td>
<td>+</td>
</tr>
<tr>
<td>3. Corporate tax ratio</td>
<td>corporate tax /profit before tax</td>
<td>-</td>
</tr>
<tr>
<td>4. Risk (beta)</td>
<td>annual sales growth</td>
<td>-</td>
</tr>
<tr>
<td>5. Growth opportunities</td>
<td>Market price per share/book value per share</td>
<td>-</td>
</tr>
<tr>
<td>6. dividend payout ratio</td>
<td>Dividend/earnings per share</td>
<td></td>
</tr>
</tbody>
</table>

(Source: Kanwal Anil and Sujata Kapoor 2008, “Determinants of Dividend Payout Ratios-A Study of Indian Information Technology Sector”)
2.3.3 Determinants of Dividend policy: Evidence from Ghana

Amidu and Abor (2006) focused on testing the indicators of dividend payout ratios of listed 22 firms in Ghana during the period 1998-2003. They analyzed the panel data which derived from the financial statements of 22 firms listed on the Ghana Stock Exchange during a six-year period to demonstrate the relationship of dividend payout ratio with profitability, cash flow, market-to-book value, risk, sale growth, and tax of these firms. Ordinary Least Squares (OLS) model is used to estimate the regression equation in their paper. Growth in sales and market-to-book value are used as proxies for investment opportunities. Institutional holding is also used as a proxy for agency cost. The results show that dividend payout ratios positively related to profitability, cash flow, and tax. The results also show negative relationship between dividend payout and risk, institutional holding, growth and market-to-book value. However, the significant variables in the results are cash flow, market-to-book value, profitability, and sale growth. The objective of this study is the identification of the determinants that affect the dividend payout policy decisions of listed firms in Ghana.
Table 2.3 Variables and Hypothesized signs of Ghana firms

<table>
<thead>
<tr>
<th>Variable</th>
<th>Proxy Used</th>
<th>Study's Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Profitability</td>
<td>Earnings before interest and taxes/total assets for firm i in period t</td>
<td>+</td>
</tr>
<tr>
<td>Risk</td>
<td>Variability in profit for firm i in period t</td>
<td>-</td>
</tr>
<tr>
<td>Cash flow</td>
<td>Log of net cash flow for firm i in period t</td>
<td>+</td>
</tr>
<tr>
<td>Corporate tax</td>
<td>Corporate tax divided by net profit before tax for firm i in period t</td>
<td>+</td>
</tr>
<tr>
<td>Institutional holdings</td>
<td>Percentage of institutional holdings of equity stock for firm i in period t</td>
<td>-</td>
</tr>
<tr>
<td>Sales growth</td>
<td>Growth in sales for firm i in period t</td>
<td>-</td>
</tr>
<tr>
<td>Market-to-book value</td>
<td>Market price per share/book value per share for firm i in period t</td>
<td>-</td>
</tr>
<tr>
<td>Dividend payout ratio</td>
<td>Dividend per share/earnings per share for firm i in period t</td>
<td></td>
</tr>
</tbody>
</table>

(Source: Mohammed Amidu and Joshua Abor 2006, “Determinants of dividend payout ratios in Ghana”)

2.3.4 Determinants of Dividend policy: Evidence from Jordanian firms

Al-Malkawi’s research explores the corporate dividend policy using a full set of data available for 160 publicly traded companies listed on the Amman Stock Exchange between 1989 and 2000 in Jordan. The study performed eight research hypotheses, which are used to represent the main theories of corporate dividend policy. An approach named general-to-specific model was used to choose between the
competing hypotheses. Al-Malkawi’s study examines the determinants of the amount of dividends using Tobit specifications. The results suggest that the size, age, and profitability of the firm seem to be the determinant factors of corporate dividend policy in Jordan and the proportion of stocks held by insiders and state ownership significantly influence the amount of dividends paid.

### Table 2.4 Variables and Hypothesized signs of Jordanian firms

<table>
<thead>
<tr>
<th>Variable</th>
<th>Proxy Used</th>
<th>Study’s Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stock</td>
<td>Natural log of number of common stockholders</td>
<td>+</td>
</tr>
<tr>
<td>Insiders</td>
<td>Percentage held by insiders</td>
<td>-</td>
</tr>
<tr>
<td>Family dummy</td>
<td>family dummy = 1 if firm is family owned, and 0 otherwise.</td>
<td>-</td>
</tr>
<tr>
<td>State dummy</td>
<td>State dummy = 1 if firm is owned by the government or its agencies, and 0 otherwise.</td>
<td>+</td>
</tr>
<tr>
<td>Institution dummy</td>
<td>Institution dummy = 1 if firm is owned by an institution, and 0 otherwise.</td>
<td>+</td>
</tr>
<tr>
<td>Multiple owners dummy</td>
<td>Multiple owners dummy = 1 if firm has more than one type of owners who control at least 10% of the stock, and 0 otherwise.</td>
<td>+</td>
</tr>
<tr>
<td>Share turnover</td>
<td>Share turnover (proxy for information asymmetry)</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------------------------</td>
<td>--------------------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td>Market-to-book value</td>
<td>Market price per share</td>
<td>book value per share</td>
</tr>
<tr>
<td>Age</td>
<td>Age of the firm</td>
<td></td>
</tr>
<tr>
<td>The square of AGE</td>
<td>The square of AGE</td>
<td></td>
</tr>
<tr>
<td>Size</td>
<td>Natural log of market</td>
<td>capitalization</td>
</tr>
<tr>
<td>Debt-to-equity ratio</td>
<td>Debt/Market value of</td>
<td>Equity</td>
</tr>
<tr>
<td>Profitability</td>
<td>The after-tax earnings</td>
<td>per share</td>
</tr>
<tr>
<td>Tax dummy</td>
<td>Tax dummy = 1 for the</td>
<td>years 1996-2000, and 0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>otherwise</td>
</tr>
<tr>
<td>Dividend yield</td>
<td>Dividend-to-price ratio</td>
<td></td>
</tr>
</tbody>
</table>


2.3.5 Determinants of Dividend policy: Evidence from U.S. Firms

Casey and Frank (2007) attempted to find the determinants of dividend payout policy of the 238 insurance firms listed on the U.S. Stock Exchanges for the 1997-2006. This study is important since it is the first to apply this model to the insurance sector. After reductions for years with missing information and when considering only firms that pay dividends, there were 108 firms and 676 firm-year observations over the years 1997-2006, using a modification of Rozeff’s (1982) agency cost-transaction cost tradeoff model. It appears that a firm’s beta and level of insider ownership is directly related to dividend yield. Specific industry classification also appears to be important. Historical revenue growth and the leverage also appear to be inversely related to dividend yield.
Table 2.5 Variables and Hypothesized signs of US firms

<table>
<thead>
<tr>
<th>Variable</th>
<th>Proxy Used</th>
<th>Study’s Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>BETA</td>
<td>Estimated beta coefficient reported in Compustat</td>
<td>+</td>
</tr>
<tr>
<td>Growth rate</td>
<td>Revenue in year t-Revenue in year t-1/Revenue in year t-1</td>
<td>-</td>
</tr>
<tr>
<td>Insiders</td>
<td>Percentage of common stock held by insiders</td>
<td>+</td>
</tr>
<tr>
<td>Inside ownership</td>
<td>Percentage of common stock held by institutions</td>
<td>+</td>
</tr>
<tr>
<td>Capital surplus ratio</td>
<td>Capital/surplus-to-total-assets</td>
<td>-</td>
</tr>
<tr>
<td>Market-to-book ratio</td>
<td>Market price per share/book value per share</td>
<td>-</td>
</tr>
<tr>
<td>Dividend yield</td>
<td>Dividend yield</td>
<td></td>
</tr>
</tbody>
</table>

2.3.6 Summary of the major empirical studies

The following section concludes the summary of the empirical sample, dependent and independent variables and techniques used to study the dividend policy in the empirical studies discussed above.

<table>
<thead>
<tr>
<th>Author</th>
<th>Data set</th>
<th>Dependent variable</th>
<th>Independent variable</th>
<th>Method used</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>2. The distributed earnings of the firm $i$ at time $t$.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3. The change between the distributed earnings at time $t$ and time $t-1$.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>4. sales</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2. Cash flows or liquidity</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3. Corporate tax</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>4. Risk (beta)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>5. Growth opportunities</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2. Risk</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3. Cash flow</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>4. Corporate tax</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>5. Institutional holdings</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>6. Sales growth</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>7. Market-to-book value</td>
<td></td>
</tr>
<tr>
<td>Author(s)</td>
<td>Sample Size</td>
<td>Dependent Variable</td>
<td>Independent Variables</td>
<td>Methodology</td>
</tr>
<tr>
<td>-----------</td>
<td>-------------</td>
<td>--------------------</td>
<td>----------------------</td>
<td>-------------</td>
</tr>
</tbody>
</table>
2. Insiders  
3. Family dummy  
4. State dummy  
5. Institution dummy  
6. Multiple owners dummy  
7. Share turnover  
8. Market-to-book ratio  
9. Age  
10. The square of AGE  
11. Size  
12. Debt-to-equity ratio  
13. Profitability  
14. Tax dummy | Panel data, Regression analysis |
2. Growth rate  
3. Insiders  
4. Inside ownership  
5. Capital surplus ratio  

(Source: Made by the author for this study)
This chapter sets the conceptual framework of this study. There are four sections in this chapter. The first one describes the research framework based on studies of Greek, Ghana and Jordan. The second sets the conceptual framework, and variables are selected based on studies at Greek, Ghanaian and Jordanian. The third section defines the independent and dependent variables and the last section states the research hypotheses.

3.1 Research Frameworks

Framework is a conceptual model which can define the problems about the relationship among the several identified factors (Sekaran 1992). In this section, the writer picked out three conceptual frameworks (previous studies on Greek, Ghanaian and Jordanian stocks) as the source of the determinants of the dividend payout ratio.
Eriotis (2005) selected and used the dividend payout ratio as a dependent variable and the change in dividends, distributed earnings, change in distributed earnings, and sales as independent variables. He found that sales and distributed earnings were positively related with the dependent variable. However, the change in dividend and change in distributed earnings were negatively related with the dependent variable.
Amidu and Abor (2006) selected and used the dividend payout ratio as a dependent variable and profitability, risk, cash flow, corporate tax, institutional holdings, sales growth, and market-to-book value as independent variables. They found that profitability, cash flow and corporate tax were positively related with dependent variable. However, risk, institutional holdings, sales growth, and market-to-book value were negatively related with dependent variable.
Figure 3.3 The Determinants of Dividend payout ratio in Jordan

1. Stock
2. Insiders
3. Family dummy
4. State dummy
5. Institution dummy
6. Multiple owners dummy
7. Share turnover
8. Market-to-book ratio
9. Age
10. The square of AGE
11. Size
12. Debt-to-equity ratio
13. Profitability
14. Tax dummy


Al-Malkawi (2007) selected and used dividend yield as dependent variable and stock, insiders, family dummy, state dummy, institution dummy, multiple owners dummy, share turnover, market-to-book, age, the square of AGE, size, debt-to-equity ratio, profitability and tax dummy as independent variables. He found that stock, state dummy, institution dummy, multiple owners’ dummy, age, size, profitability were positively related with dependent variable Dividend yield. However, insiders, family dummy, share turnover, market-to-book ratio, the square of AGE, debt-to-equity ratio, tax dummy were negatively related with dependent variable Dividend yield.


3.2 The Conceptual Framework

The conceptual framework is the model that researchers develop to explain the relationship between independent and dependent variables.

In this research, this writer will select and use the factors which in the previous studies issued by Erriotis (2005), Amidu and Abor (2006), and Al-Malkawi (2007) affected the dividend payout ratio and will set a conceptual framework that includes the six variables that influence the dividend payout ratios of electronic manufacturers listed on the Shanghai Stock Exchange. Conceptual framework is as follows:

The writer selected 6 determinants of the dividend payout ratio

1. The level of liquidity of a company – cash flow
2. The level of tax payout – corporate tax ratio
3. The earnings ability – profitability
4. The degree financial leverage – debt to equity ratio
5. Investment opportunities – market to book value
6. A firm size - sales
<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Dependent variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash flow</td>
<td>Dividend payout ratio</td>
</tr>
<tr>
<td>(Logarithm of cash flow)</td>
<td>(Dividend divided by earnings per share)</td>
</tr>
<tr>
<td>Corporate tax ratio</td>
<td></td>
</tr>
<tr>
<td>(Corporate tax divided by profit before tax)</td>
<td></td>
</tr>
<tr>
<td>Debt-to-equity ratio</td>
<td></td>
</tr>
<tr>
<td>(Debt divided by the market value of equity)</td>
<td></td>
</tr>
<tr>
<td>Market-to-book value</td>
<td></td>
</tr>
<tr>
<td>(Market price per share / Book value per share)</td>
<td></td>
</tr>
<tr>
<td>Profitability</td>
<td></td>
</tr>
<tr>
<td>(EBIT divided by total assets)</td>
<td></td>
</tr>
<tr>
<td>Sales</td>
<td></td>
</tr>
<tr>
<td>(Logarithm of sales)</td>
<td></td>
</tr>
</tbody>
</table>

(Source: Made by the author for this study)
3.3 Operational definition of the independent and dependent variables

3.3.1 Dividend payout ratio

The dividend payout ratio is a dependent variable and is measured by the amount of dividend paid divided by the earning per share over some period of time, express as a percentage.

A dividend is the earning that management distributes to its investors. The amount of dividend is decided by the board of directors of the company. Investors must pay tax on the dividends they receive.

Normally, a company finances its investment with internal funds first; these funds may come from dividends. Thus, a company may retain the dividends or pay lower dividends to investors.

On the other hand, when a company has reached a certain level of maturity and its operations are stable. It may be hard for it to find opportunities to grow and in the absence of investment opportunities will distribute the earnings to its investors.

3.3.2 Cash flow

The cash flow represents the money a firm brings in and applies to its activities. This money is for a fixed accounting period, such as a quarter or a year and represents what left money after all fixed expenditures are deducted.

As a result, the term most often used in association with this money is EBITDA, which stands for Earnings before Interest, Taxes, Depreciation and Amortization.

The cash flow is an important factor of the dividend payout policy since a poor liquidity position means less capability for a firm to pay out a dividend (Ali et.al, 1993).
3.3.3 Corporate tax ratio

Taxes are the amount of money that the government collects from an individual or from an organization that posts profitability. As to the amount, it depends on the kind of industry, and where the company is located.

If a firm’s tax liability increases, the dividend payment decreases. Conversely its tax liability diminishes its dividend payment will be higher as there will be more capital available to pay dividends.

According to the Tax-adjusted model, investors like to maximize their income after-tax. Farrar and Selwyn (1967) showed that, in a partial equilibrium framework, individual investors select the amount of personal and corporate leverage and also whether to receive corporate distributions as dividends or capital gains.

3.3.4 Debt-to-equity ratio

When a company finances an investment by external funds, financial leverage will be applied. But interest have to be charged, which may result in low dividend payments. Moreover, Rozeff (1982) pointed out that companies with high financial leverage tend to have low payouts ratios to reduce the transaction costs associated with external financing.

3.3.5 Market-to-book value

The book value is the assets of a company minus its liabilities. It is the amount that investors can get after the company is sold and all liabilities paid. The book value can be ascertained only when the assets are sold or purchased. And it cannot reflect the market value directly.

The lower the market-to-book value, the better. It also stands for the willingness of
investors to buy the company’s assets,

The market-to-book value is very suitable to describe the condition of the assets of a company which has big tangible assets, such as factories and other production facilities. It is also very applicable to banks and insurance companies, because they possess many financial assets.

Market-to-book Ratio Advantages
1. It is easy to understand and calculate by investors.
2. Makes it easy for investors to compare the stocks they have targeted.
3. It indicates the conditions of a company’s assets compared with its earnings
4. It is a ratio suitable for most countries all over the world to use.

Market-to-book Ratio Disadvantages
1. It cannot reflect the effects of intangibles on the market value. For example, high technological developments may lead to the market value increase.
2. It is not applicable for any case, sometimes the number could be against theory.

3.3.6 Profitability

Profit is one of starting factors in terms of paying dividend. It will influence a company’s decisions and is a measure of a company’s earning ability. In this study, the writer will consider it to be the ratio of return on asset, meaning that a company’s profit is based on its total assets of.

3.3.7 Sales

Sales represent the size of a firm; and also include both the risks and related bankruptcy cost. Normally large firms are willing to pay higher dividends, because of
their being in a mature stage, and more independent and less risky than small firms. 
On the contrary, small firms are still in the stage of developing, so they cannot pay 
much dividends or any at all.

3.4 Research hypothesis

A hypothesis is an unproven proposition or supposition that tentatively explains 
certain facts or phenomena. It is a statement that specifies what the relationship 
between two or more than two measurable variables is. After the writer identified the 
proper variables, the relevant hypothesis were developed and subsequently tested. The 
testing results and conclusions will be expanded in the following two chapters.

**Hypothesis 1**

$H_0^1$: Cash flow is not a significant factor affecting the dividend payout ratios of the 
electronic firms listed on the SSE.

$H_a^1$: Cash flow is a significant factor affecting the dividend payout ratios of the 
electronic firms listed on the SSE.

**Hypothesis 2**

$H_0^2$: Corporate tax ratio is not a significant factor affecting the dividend payout ratios 
of the electronic firms listed on the SSE.

$H_a^2$: Corporate tax ratio is a significant factor affecting the dividend payout ratios of 
the electronic firms listed on the SSE.

**Hypothesis 3**

$H_0^3$: Debt-to-equity ratio is not a significant factor affecting the dividend payout ratios of 
the electronic firms listed on the SSE.

$H_a^3$: Debt-to-equity ratio is a significant factor affecting the dividend payout ratios of 
the electronic firms listed on the SSE.
Hypothesis 4

$Ho_4$: Market-to-book values are not a significant factor affecting the dividend payout ratio of the electronic firms listed on the SSE.

$Ha_4$: Market-to-book values are a significant factor affecting the dividend payout ratio of the electronic firms listed on the SSE.

Hypothesis 5

$Ho_6$: Profitability is not a significant factor affecting the dividend payout ratios of the electronic firms listed on the SSE.

$Ha_6$: Profitability is a significant factor affecting the dividend payout ratios of the electronic firms listed on the SSE.

Hypothesis 6

$Ho_7$: Sales are not a significant factor affecting the dividend payout ratio of the electronic firms listed on the SSE.

$Ha_7$: Sales are a significant factor affecting the dividend payout ratio of the electronic firms listed on the SSE.

($\alpha$: level of significance=5%)
### 3.5 Summary of operational definitions

Table 3.1 Operational definitions of variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>Operational Definition</th>
<th>Level of measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash flow</td>
<td>FCFF (net operating cash flow + net investment cash flow)</td>
<td>Ratio scale</td>
</tr>
<tr>
<td>Corporate tax ratio</td>
<td>Corporate tax divided by profit before tax</td>
<td>Ratio scale</td>
</tr>
<tr>
<td>Debt-to-equity ratio</td>
<td>Debt divided by market value of equity</td>
<td>Ratio scale</td>
</tr>
<tr>
<td>Market-to-book value</td>
<td>Market price per share divided by book value per share</td>
<td>Ratio scale</td>
</tr>
<tr>
<td>Profitability</td>
<td>EBIT divided by total asset</td>
<td>Ratio scale</td>
</tr>
<tr>
<td>Sales</td>
<td>Logarithm of sales</td>
<td>Ratio scale</td>
</tr>
</tbody>
</table>

(Source: Made by the author for this study)
Chapter 4
Research Methodology

After surveying the theories in the previous, the writer will focus on the research methodology which determines the research design, measurement progress, sampling procedures and other technical procedures for collecting data. This chapter is subdivided into five sections. The first section introduces the method of research applied. The second presents the target population and sample, the third, the data collection, the fourth, data measurement, and the last one, data analysis.

4.1 Method of research used

This research is a descriptive research. Descriptive research identifies the cause of something that is happening. Descriptive research must comply with strict research requirements in order to obtain the most accurate results possible. The major purpose of descriptive research is to describe the characteristics of a population or phenomenon (Zikmund, 1997). The writer collected data from the financial statements published on the SSE website during the 2003-2007 period with the goal to see the effect of cash flow, corporate tax, debt-to-equity ratio, growth rate, profitability, market-to-book value, and sales on the dividend payout ratio. The writer used Excel (financial ratios) and SPSS (multiple regression models).

4.2 Target population and sample

In this research, the target population consists 28 electronic firms listed on the SSE (data downloaded from the SSE website). This writer used judgmental sampling (or purposive sampling - sample is based on what a researcher thinks would be
appropriate for the study). This is used primarily when there is a limited number of people that have expertise in the area being researched. This writer incorporated data from financial statements of only 24 listed firms during the 2003 – 2007 fiscal years since the five-year-data records from all the 28 firms could not be completed (Only 24 companies’ complete five-year data could be obtained, since the other companies got listed after 2003).

4.3 Collection of data:

Secondary data are data previously collected by someone else (Zikmund, 1997). Secondary data include both raw data and published summaries. They are sourced from three areas: documentary secondary area, survey-based secondary data and multiple-source secondary data. In this study, the writer collected the secondary data from the annual reports on the Chinese electronic firms listed by Shanghai Stock Exchange for 2003 – 2007 the fiscal years. Because of some data could not be found or used directly from that annual reports, the writer reorganized, arranged, and calculated the data to make them realistic analytical steps.

4.4 Data measurement

The writer measured the data with various financial ratios by using Microsoft Excel 2003. Some data were directly taken from the annual reports of these electronic firms lists the variables and their measurements and some ratios were computed by data from their annual report. Table 4.1 below.
Table 4.1 Data measurement

<table>
<thead>
<tr>
<th>Variables</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash flow</td>
<td>Free cash flow divided by total asset</td>
</tr>
<tr>
<td>Corporate tax ratio</td>
<td>Corporate tax divided by profit before tax</td>
</tr>
<tr>
<td>Debt-to-equity ratio</td>
<td>Debt divided by market value of equity</td>
</tr>
<tr>
<td>Market-to-book value</td>
<td>Market price per share divided by book value per share</td>
</tr>
<tr>
<td>Profitability</td>
<td>Net profit divided by total asset</td>
</tr>
<tr>
<td>Sales</td>
<td>Logarithm of sales</td>
</tr>
</tbody>
</table>

(Source: Made by author for this study)

4.5 Data analysis

Data analysis is a process of gathering, modeling, and transforming data with the goal of highlighting useful information.

4.5.1 Ordinal Least Square Regression (OLS)

OLS is a technology designed to understand the relationship between the dependent variable (also called outcome variable) and the independent variables (also called predictor variables). All the statistics testing was done by SPSS program. In this study, panel data were used to run OLS regressions.

Panel data are the combination of cross section data and time series data (Gujarati 2003). Panel Data aggregates all the individuals, and analyzes them in a period of time.

The writer applied SPSS program to find out the value of the dependent and independent variables. The data ran into the SPSS for the calculation of supporting data analysis. In this research, panel data were used to run OLS regressions.
4.5.2 Multiple regression analysis

Multiple regression is a tool to define the relationship between an independent variable (which is unknown) with the known values of the other variables. The common method to estimate a regression model is OLS.

Let \( \alpha \) is a constant term or an intercept. \( \beta_1, ..., \beta_n \) denote the OLS estimates of the regression coefficient, and \( e \) is random error. So, the (equation of multiple regression) predicted value of \( Y \) is:

\[
Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \cdots + \beta_n X_n + e \quad \text{(Equation 1)}
\]

Then, the multiple regression equation in this study is:

\[
DPR = \alpha + \beta_1 S + \beta_2 TAX + \beta_3 PRFT + \beta_4 CASH + \beta_5 MTBV + \beta_6 DER + e \quad \text{(Equation 2)}
\]

Where,

- \( S \) = Sales
- \( TAX \) = Corporate tax
- \( PRFT \) = Profitability
- \( CASH \) = Cash flow
- \( MTBV \) = Market-to-book value
- \( DER \) = Debt-to-equity ratio
- \( DPR \) = Dividend payout ratio
- \( \alpha \) = Constant term or an intercept
- \( \beta_1, ..., \beta_6 \) = Beta coefficients
- \( e \) = Error term

When using regression analysis, it is necessary to calculate the values of the constant coefficient \( \alpha \) and the slope coefficient \( \beta_1 \) and \( \beta_2 \) from data that had already been collected from an amount of independent variables. Independent variables can be substituted into the regression equation to predict the dependent variables that would
be generated. When calculating a regression equation, the following assumptions are made:

1. Dependent and independent variables have a relationship and this relationship must be linear.
2. Data values of all dependent and independent variables have equal variances, also known as homoscedasticity.
3. The absence of correlation between two or more independent variables (multicollinearity), makes it difficult to determine the separate effects of individual variables.
4. The data for the independent variables and dependent variable are normally distributed.

4.5.3 Goodness of Fit

In a multiple regression, the R measures the correlation between the observed value of the dependent variable and the predicted value based on the regression model. The coefficient of multiple determinations $R^2$ tends to be an overestimate of the population parameter, and the adjusted $R^2$ is designed to compensate for the optimistic bias $R^2$.

$R^2$ is a value to explain the proportion of the variability in the dependent variable by multiple determinations. The value of $R^2$ is in an area of 0 to 1; normally it is presented to be a percentage. It indicates the strength of the relationship between a quantifiable dependent variable with two or more quantifiable independent variables. A value close to 1 means that they have a stronger relationship, and one close to 0 means that their relationship is weak.

An important property of $R^2$ is that it is a non-decreasing function of the number of explanatory variables in the model. As the number of explanatory variables increases, $R^2$ almost invariably increases and never decreases. But as the number of independent variables increases, the function loses its degree of freedom (Gujarati 2003). Thus the effort for a testing with a high $R^2$ may be misleading, which may include some irrelevant variables. But in this research, the regression is with different variables and
a conclusion will be made based on the overall result of the testing, not simply on $R^2$.

The equation for $R^2$ is

$$R^2 = 1 - \frac{SSR}{SST} \quad (0 \leq R^2 \leq 1)$$  \hspace{1cm} (Equation 3)

Where SSR is the unexplained variation was given by the square of standard error of estimate. SST is the total variation given by the variance in the criterion variable.

### 4.5.4 T test and F test

Both the T test and F test are used to work out the probability of the relationship among variables within the regression occurring by chance. The difference is that the T test is used to work out the probability of the relationship between one independent variable and one dependent variable, and the F test is used to find out the overall multiple regression; the relationship between independent variable and dependent variables.

Both the T test and F test are subjected to 95% confidence level.

$$F = \frac{R^2 / k}{(1 - R^2) / (n - k - 1)}$$  \hspace{1cm} (Equation 4)

where $n$ is the number of observations, $k$ the number of coefficient in the model, and $R^2$ multiple coefficient of determination.

The hypothesis is as follows:

$H_0 = b_1 = b_2 = \cdots = b_k = 0$

$H_a = $ at least one of the correlation coefficient is not equal to zero

Rejection region: $F > F_a$ the overall F test is a test of the null hypothesis that all the population values of the regression coefficients are equal to 0, if $H_0$ is rejected, this meaning that there is a significant linear relationship between the criterion variable
and the entire set of predictor variables. If it fails to reject $H_0$, means that there is no significant linear relationship between the criterion variable and the entire set of predictor variables.

4.5.5 **Durbin-Watson Statistic**

The Durbin–Watson is a statistic tool to test the reliability of the results of the regression analysis. In regression analysis test, variables may happen to have an autocorrelation or serial correlation among them. So, the Durbin–Watson can be used to find out the presence of this problem.

Suppose that $e_t$ is the residual associated with the observation at time $t$, then the test statistic equation is:

$$d = \frac{\sum_{t=2}^{T} (e_t - e_{t-1})^2}{\sum_{t=1}^{T} e_t^2}$$

(Equation 5)

$D$ is a value between 0 and 4, if $d$ is close to 0 or 4, this means that a autocorrelation exists in the test. If $d$ is close to 2, this means that there is no autocorrelation in the test. If the value of the Durbin–Watson is between 1 and 2, that indicates that there is a correlation more or less. If the value of the Durbin–Watson is less than 1, this indicates that a test correlation exists. If the value of Durbin–Watson is more than 2 mean that there are successive error terms.

4.5.6 **Test of Multicollinearity**

Even if the number $R^2$ is a high percentage, if P-value is very low and if Durbin-Watson is close to 2, the result still can not be considered successful because, perhaps there are relationships between independent variables. This is multicollinearity, meaning that, at least two independent variables are correlated.
When independents variables are correlated, they can contribute the whole model to be significant. If one of variables is removed, the result may not be significant. Only if these variables are correlated in a same model, the result may be significant. So may if the model does not fit the data, however, the correlated variables make it fit the data and tender the test result in false. Two values; tolerance and the variance inflation factor (VIF) can be used to avoid multicollinearity.

The equation of tolerance VIF show as follow:

\[ \text{tolerance} = 1 - R^2, \quad \text{VIF} = \frac{1}{\text{tolerance}}. \]  \hspace{1cm} (Equation 6)

In this study, Tolerance and the VIF measure collinearity by using the SPSS program.

Tolerance is a measure of collinearity reported by most statistical programs such as SPSS. The variable’s tolerance is 1-R\(^2\). A small tolerance value indicates that the variable under consideration is almost a perfect linear combination of the independent variables already in the equation and that it should not be added to the regression equation. All variables involved in the linear relationship will have a small tolerance. Some suggest that a tolerance value less than 0.1 should be investigated further. If a low tolerance value is accompanied by large standard errors and nonsignificance, multicollinearity may be an issue.

The VIF measures the impact of collinearity among the variables in a regression model. The VIF is 1/Tolerance. It is always greater than or equal to 1. There is no formal VIF value for determining the presence of multicollinearity. VIF values that exceed 10 are often regarded as indicating multicollinearity, but in weaker models values above 2.5 may be a cause for concern. In many statistics programs, the results are shown both as an individual R\(^2\) value (distinct from the overall R\(^2\) of the model) and a VIF. When those R\(^2\) and VIF values are high for any of the variables in the model, multicollinearity is probably an issue. When VIF is high there is high multicollinearity and instability of the b and beta coefficients. It is often difficult to
sort this out.

The above tools were thus used to assess the strength of the relationship of the dividend payout ratio with sales, profitability, cash flow, market-to-book value, and debt-to-equity ratio. Multiple regression models along with goodness of fit, correlation analysis, Durbin-Watson Statistic, multicollinearity tests were conducted and the results interpreted. All analysis were done by SPSS program (see Chapter 5, next)..
Chapter 5
Data Analysis

Following the methodology articulated in chapter four, the researcher collected the results of data analysis. And dealt with these data using EXCEL and the SPSS program, and obtained realistic data. This chapter will be divided into three sections: descriptive analysis, multiple regression analysis and hypothesis test.

5.1 Descriptive Analysis

This section will provide a description of the dependent variable (the dividend payout ratio) and the independent variables [cash flow (CASH), corporate tax ratio (TAX), debt-to-equity ratio (DTR), market-to-book value (MTBV), profitability (PRFT), sales (S)].

Table 5.1.1 The data of 24 companies

<table>
<thead>
<tr>
<th></th>
<th>CASH</th>
<th>TAX</th>
<th>DTR</th>
<th>DPR</th>
<th>MTBV</th>
<th>PRFT</th>
<th>S</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.03</td>
<td>0.26</td>
<td>0.12</td>
<td>-3.36</td>
<td>5.23</td>
<td>-0.03</td>
<td>8.00</td>
</tr>
<tr>
<td>2</td>
<td>0.01</td>
<td>-1.12</td>
<td>0.30</td>
<td>11.54</td>
<td>3.68</td>
<td>0.12</td>
<td>8.62</td>
</tr>
<tr>
<td>3</td>
<td>0.00</td>
<td>-0.03</td>
<td>0.52</td>
<td>-2.16</td>
<td>3.94</td>
<td>-0.02</td>
<td>9.20</td>
</tr>
<tr>
<td>4</td>
<td>0.01</td>
<td>-0.02</td>
<td>0.91</td>
<td>1.50</td>
<td>3.75</td>
<td>-0.04</td>
<td>9.76</td>
</tr>
<tr>
<td>5</td>
<td>-0.03</td>
<td>0.28</td>
<td>0.43</td>
<td>2.82</td>
<td>3.54</td>
<td>-0.04</td>
<td>9.71</td>
</tr>
<tr>
<td>6</td>
<td>-0.01</td>
<td>0.27</td>
<td>0.11</td>
<td>-0.63</td>
<td>1.50</td>
<td>0.02</td>
<td>10.00</td>
</tr>
<tr>
<td>7</td>
<td>-0.07</td>
<td>0.06</td>
<td>0.49</td>
<td>0.65</td>
<td>1.27</td>
<td>0.00</td>
<td>9.03</td>
</tr>
<tr>
<td>8</td>
<td>-0.02</td>
<td>0.18</td>
<td>0.38</td>
<td>-1.08</td>
<td>1.33</td>
<td>0.01</td>
<td>9.60</td>
</tr>
<tr>
<td>9</td>
<td>-0.03</td>
<td>0.09</td>
<td>0.11</td>
<td>1.12</td>
<td>2.60</td>
<td>0.02</td>
<td>8.82</td>
</tr>
<tr>
<td>10</td>
<td>0.05</td>
<td>0.70</td>
<td>0.28</td>
<td>1.10</td>
<td>2.36</td>
<td>0.00</td>
<td>9.51</td>
</tr>
<tr>
<td>11</td>
<td>-0.01</td>
<td>0.28</td>
<td>0.11</td>
<td>-0.60</td>
<td>1.88</td>
<td>0.01</td>
<td>8.37</td>
</tr>
</tbody>
</table>
Table 5.1.2 Descriptive Statistics

<table>
<thead>
<tr>
<th></th>
<th>CASH</th>
<th>TAX</th>
<th>DTR</th>
<th>DPR</th>
<th>MTBV</th>
<th>PRFT</th>
<th>S</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>-.01</td>
<td>.07</td>
<td>.42</td>
<td>.39</td>
<td>1.05</td>
<td>-.03</td>
<td>10.22</td>
</tr>
<tr>
<td>13</td>
<td>.09</td>
<td>.00</td>
<td>.06</td>
<td>1.59</td>
<td>89.41</td>
<td>-.07</td>
<td>8.16</td>
</tr>
<tr>
<td>14</td>
<td>.03</td>
<td>.25</td>
<td>.14</td>
<td>.43</td>
<td>2.23</td>
<td>.06</td>
<td>9.06</td>
</tr>
<tr>
<td>15</td>
<td>-.07</td>
<td>.09</td>
<td>.18</td>
<td>.29</td>
<td>2.65</td>
<td>.04</td>
<td>8.86</td>
</tr>
<tr>
<td>16</td>
<td>-.10</td>
<td>.23</td>
<td>.02</td>
<td>-.14</td>
<td>1.66</td>
<td>-.01</td>
<td>8.40</td>
</tr>
<tr>
<td>17</td>
<td>.00</td>
<td>.14</td>
<td>.23</td>
<td>.22</td>
<td>2.98</td>
<td>.05</td>
<td>8.84</td>
</tr>
<tr>
<td>18</td>
<td>-.02</td>
<td>.17</td>
<td>.22</td>
<td>.75</td>
<td>2.46</td>
<td>.03</td>
<td>9.12</td>
</tr>
<tr>
<td>19</td>
<td>-.05</td>
<td>.46</td>
<td>.23</td>
<td>-.74</td>
<td>2.70</td>
<td>.01</td>
<td>9.00</td>
</tr>
<tr>
<td>20</td>
<td>-.02</td>
<td>.15</td>
<td>.13</td>
<td>.66</td>
<td>4.17</td>
<td>.01</td>
<td>8.83</td>
</tr>
<tr>
<td>21</td>
<td>-.06</td>
<td>.32</td>
<td>.51</td>
<td>.31</td>
<td>2.93</td>
<td>.03</td>
<td>9.19</td>
</tr>
<tr>
<td>22</td>
<td>-.07</td>
<td>-2.03</td>
<td>.07</td>
<td>.57</td>
<td>1.95</td>
<td>-.01</td>
<td>8.32</td>
</tr>
<tr>
<td>23</td>
<td>-.06</td>
<td>.08</td>
<td>.19</td>
<td>.75</td>
<td>3.94</td>
<td>.03</td>
<td>8.70</td>
</tr>
<tr>
<td>24</td>
<td>-.04</td>
<td>-1.99</td>
<td>.30</td>
<td>3.99</td>
<td>1.51</td>
<td>-.03</td>
<td>9.34</td>
</tr>
</tbody>
</table>

(Source: Made by the author for this study)

A table 5.1 shows that there are 24 values and it illustrates the values available for each company are available.

The 24 companies’ average dividend payout ratio is 0.5603, the highest payment ratio is 11.54, and the lowest payment ratio -7.24, And the data shows that Xiamen Faratronic co., ltd issued the highest payment ratio, and the Dalia Daxian co., ltd issues the lowest payment ratio. The standard deviation is 3.16248 indicating that a
dividend was paid 56.03% from the earnings per share, and the observation (95%) within the range of -575.97% to 688.03%.

The average cash flow is -0.0185 indicating that the average cash flow ratio (a percentage of the total assets) is -1.85%, with the highest cash flow rate is, -0.10, and the lowest one, 0.09. The data shows that Guangdong Boxin co., ltd has the highest cash flow rate, and Jinglun co., ltd the lowest one. The standard deviation is 0.04309, and the observation (95%) within the range of -6.75% to 6.75%.

The average corporate tax ratio is -0.0762 indicating that the average tax paid is -7.6% of the earnings before tax with the highest tax ratio is 0.7, and the lowest tax ratio is -2.03. The data shows that company Shanghai Guangdiantronic co., ltd paid the highest tax ratio and Zhejiang Guoxiang co., ltd pay lowest one. The standard deviation is 0.67710 and the observation (95%) within the range of -134.01% to 121%.

The average debt-to-equity ratio is 0.2699 indicating that for every 1 Yuan of equity capital investment, the companies have to borrow 0.2699. The highest debt-to-equity ratio is 0.91, and the lowest one is 0.02. The data shows that Xiamen Huaqiaotronic co., ltd has the highest debt-to-equity ratio, and Jinglun co., ltd the lowest one. The standard deviation is 0.20276, and the observation (95%) within the range of -13.56% to 67.54%.

The average market-to-book value is 6.2797 indicating that the average share’s market value is 6.2797 times its book value with the highest market-to-book value 89.41 and the lowest 1.05. Guangdong Boxin co., ltd has the highest market-to-book value, and Sichuan Changhong co., ltd has the lowest one. The standard deviation is 17.73873 and the observation (95%) within the range of -29.2 to 41.76.

The average profitability is 0.0069 indicating that for every 1 Yuan of asset, one of these companies can earn 0.0069 Yuan in net profit. The highest profitability ratio is 0.12 and the lowest one -0.07. Xiamen Faratronic co., ltd has the highest profitability ratio, and Guangdong Boxin co., ltd has the lowest one. The standard deviation is 0.03933 and the observation (95%) within the range of -7.21% to 8.59%.

The average sales is 9.0268 indicating that the average Logarithm of sales is 9.0268.
The highest sales is 10.22 and the lowest 8.00. Sichuan Changhong co., LTD has the highest sales and Keda Chuanxin co., LTD the lowest one. The standard deviation is 0.57672 and the observation (95%) within the range of 7.87 to 10.18.

5.2 Multiple Regression Analysis

The writer used the multiple regression model to test hypotheses. There are linear relationships between the dependent variable dividend payout ratio and independent variables: sales (S), corporate tax ratio (TAX), profitability (PROF), cash flow (CASH), market-to-book value (MTBV) and debt-to-equity ratio (DE)

The multiple regression equation is:

\[ DPR = \alpha + \beta_1 S + \beta_2 \text{TAX} + \beta_3 \text{PRFT} + \beta_4 \text{CASH} + \beta_5 \text{MTBV} + \beta_6 \text{DER} + e \]

Where,

- \( S \) = Sales
- \( \text{TAX} \) = Corporate tax
- \( \text{PRFT} \) = Profitability
- \( \text{CASH} \) = Cash flow
- \( \text{MTBV} \) = Market-to-book value
- \( \text{DER} \) = Debt-to-equity ratio
- \( \text{DPR} \) = Dividend payout ratio
- \( \alpha \) = Constant term or an intercept
- \( \beta_1 \ldots \beta_6 \) = Beta coefficients
- \( e \) = Error term

5.2.1 Variables Entered/Removed

Table 5.2.1 Variables Entered/Removed(b)
This writer uses the enter model based on the conceptual framework at chapter 3.

### 5.2.2 Model Fit

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
<th>Durbin-Watson</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.759(a)</td>
<td>0.576</td>
<td>0.426</td>
<td>2.39615</td>
<td>2.506</td>
</tr>
</tbody>
</table>

a Predictors: (Constant), S, CASH, PRFT, TAX, DER, MTBV  
b Dependent Variable: DPR  
(Source: Made by the author for this study)

The R square standard for goodness of the regression equation is 0.576, indicating that approximately 57.6% of the variability of the dependent variable is explained by the independent variables in the model. The adjusted R square for the model is 0.426, and the standard error 2.39615. The standard error indicates the accuracy of the prediction model; the smaller, the better.

The number of Durbin-Watson is 2.506 which is close to 2, so the model has no autocorrelation among errors.

### Table 5.2.3 ANOVA(b)
<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Regression</td>
<td>132.424</td>
<td>6</td>
<td>22.071</td>
<td>3.844</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>97.606</td>
<td>17</td>
<td>5.742</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Total</td>
<td>230.030</td>
<td>23</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a  Predictors: (Constant), S, CASH, PRFT, TAX, DER, MTBV
b  Dependent Variable: DPR
(Source: Made by the author for this study)

F value is 3.844, and P value, 0.013 which less than 0.05. This indicates that all predictors in this model are statistically significant at 0.05 level of significance and useful for predicting the dividend payout ratio. It also validates the assumption.

### 5.2.3 Model and Multicollinearity

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
</tr>
</tbody>
</table>

(See Table 5.2.4 Coefficients (a))
As P value in Table 5.2.4 (column 5) shows, the corporate tax ratio (P value 0.002) and Profitability (P value 0.006) are statistically significant at level of 0.05. Other variables are not statistically significant at a level of 0.05. The T value of the corporate tax ratio is -3.621, and the T value of the profitability is 3.117. Profitability has a strong positive relationship with the dividend payout ratio. The corporate tax ratio, however, has a strong negative relationship with dividend payout ratio.

The multiple regression equation in this research is:

$$DPR = -7.185 + 0.661S - 2.756TAX + 47.846PRFT + 10.309CASH + 0.063MTBV + 3.832DER + e$$

The Beta coefficient demonstrates that the cash flow, debt-to-equity ratio, market-to-book value, profitability and sales have a positive relationship with the dividend payout ratio. On the other hand, only the corporate tax ratio has a negative relationship with the dividend payout ratio.

As shown in Table 5.2.4, the tolerance for all variables is more than 0.1, and the VIF for all variables is less than 10. This indicates that all independent variables are
uncorrelated, these independent variables can thus be entered into the model.

5.3 Hypotheses test

Based on section 5.2 (Multiple Regression Analysis) and table 5.2.4 Coefficients (a), the corporate tax ratio and profitability are statistically significant at 0.05 level. However, the cash flow, debt-to-equity ratio, market-to-book value, and sales are not statistically significant at 0.05 level. The sign of the debt-to-equity ratio and the market-to-book value are different with expected signs. Other variables are same with the expected sign.

Table 5.2.5 Results of Variables Test

<table>
<thead>
<tr>
<th>Variables</th>
<th>Dependent variable Dividend payout ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sig.</td>
</tr>
<tr>
<td>Cash flow</td>
<td>0.504</td>
</tr>
<tr>
<td>Corporate tax ratio</td>
<td>0.002</td>
</tr>
<tr>
<td>Debt-to-equity ratio</td>
<td>0.241</td>
</tr>
<tr>
<td>Market-to-book value</td>
<td>0.167</td>
</tr>
<tr>
<td>Profitability</td>
<td>0.006</td>
</tr>
<tr>
<td>Sales</td>
<td>0.576</td>
</tr>
</tbody>
</table>

(Source: Made by the author for this study)

5.3.1 Results of Hypotheses

Table 5.3.1 Coefficients

<table>
<thead>
<tr>
<th></th>
<th>B value</th>
<th>T value</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash flow</td>
<td>10.309</td>
<td>0.683</td>
<td>0.504</td>
</tr>
<tr>
<td>Corporate tax ratio</td>
<td>-2.756</td>
<td>-3.621</td>
<td>0.002</td>
</tr>
<tr>
<td>Debt-to-equity ratio</td>
<td>3.832</td>
<td>1.214</td>
<td>0.241</td>
</tr>
</tbody>
</table>
Market-to-book value | 0.063 | 1.445 | 0.167
Profitability | 47.846 | 3.117 | 0.006
Sales | 0.661 | 0.569 | 0.576
(Source: Made by the author for this study)

**Hypothesis 1**

Ho₁: The cash flow is not a significant factor affecting the dividend payout ratio of the electronic firms listed on the Shanghai Stock Exchange.

Ha₁: The cash flow is a significant factor affecting the dividend payout ratio of the electronic firms listed on the Shanghai Stock Exchange.

Based on the cash flow hypotheses and on Table 5.3.1, the T value is 0.683 and the P value 0.504, which is more than 0.05, meaning that the cash flow is not a statistically significant factor at a level of significance 0.05, so Ho₁ cannot be rejected and Ha₁ will be rejected.

**Hypothesis 2**

Ho₂: The corporate tax ratio is not a significant factor affecting the dividend payout ratio of the electronic firms listed on the Shanghai Stock Exchange.

Ha₂: The corporate tax ratio is a significant factor affecting the dividend payout ratio of the electronic firms listed on the Shanghai Stock Exchange.

Based on the corporate tax ratio hypotheses and Table 5.3.1, the T value is -3.621 and the P value 0.002, which is less than 0.05, meaning that the corporate tax ratio is a statistically significant factor at a level of significance 0.05, so Ho₂ will be rejected and Ha₂ cannot be rejected. The B value is -2.756, meaning that there is a negative relationship between the dividend payout ratio and corporate tax ratio. On other words, the dividend payout ratio will increase as the corporate tax ratio decreased.

**Hypothesis 3**

Ho₃: The debt-to-equity ratio is not a significant factor affecting the dividend payout ratio of the electronic firms listed on the Shanghai Stock Exchange.
Ha₃: The debt-to-equity ratio is a significant factor affecting the dividend payout ratio of the electronic firms listed on the Shanghai Stock Exchange.

Based on the debt-to-equity ratio hypotheses and Table 5.3.1, the T value is 1.214 and the P value 0.241, which is more than 0.05, meaning that the debt-to-equity ratio is not a statistically significant factor at a level of significance 0.05, so Ho₃ cannot be rejected and Ha₃ will be rejected.

**Hypothesis 4**

Ho₄: The market-to-book value is not a significant factor affecting the dividend payout ratio of the electronic firms listed on the Shanghai Stock Exchange.

Ha₄: The market-to-book value is a significant factor affecting the dividend payout ratio of the electronic firms listed on the Shanghai Stock Exchange.

Based on the market-to-book value hypotheses and Table 5.3.1, the T value is 1.445 and the P value 0.167, which is more than 0.05, meaning that the market-to-book value is not a statistically significant factor at a level of significance 0.05, so Ho₄ cannot be rejected and Ha₄ will be rejected.

**Hypothesis 5**

Ho₅: The profitability is not a significant factor affecting the dividend payout ratio of the electronic firms listed on the Shanghai Stock Exchange.

Ha₅: The profitability is a significant factor affecting the dividend payout ratio of the electronic firms listed on the Shanghai Stock Exchange.

Based on the profitability hypotheses and Table 5.3.1, the T value is 3.117 and the P value 0.006, which is less than 0.05, meaning that the profitability value is a statistically significant factor at a level of significance 0.05, so Ho₅ will be rejected and Ha₅ cannot be rejected. The B value is 47.846, meaning that there is a positive relationship between the dividend payout ratio and profitability value. On other words, the dividend payout ratio will increase as the profitability value increases.
Hypothesis 6

Ho₆: The sales is not a significant factor affecting the dividend payout ratio of the electronic firms listed on the Shanghai Stock Exchange.

Ha₆: The sales is a significant factor affecting the dividend payout ratio of the electronic firms listed on the Shanghai Stock Exchange.

Based on the sales hypotheses and Table 5.3.1, the T value is 0.569 and the P value is 0.576, which is more than 0.05, meaning that the sales is not a statistically significant factor at a level of significance 0.05, so Ho₆ cannot be rejected and the Ha₆ will be rejected.

(α: level of significance = 5%)

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ho₁</td>
<td>Fail to rejected</td>
</tr>
<tr>
<td>Ho₂</td>
<td>Rejected</td>
</tr>
<tr>
<td>Ho₃</td>
<td>Fail to rejected</td>
</tr>
<tr>
<td>Ho₄</td>
<td>Fail to rejected</td>
</tr>
<tr>
<td>Ho₅</td>
<td>Rejected</td>
</tr>
<tr>
<td>Ho₆</td>
<td>Fail to rejected</td>
</tr>
</tbody>
</table>

(Source: Made by the author for this study)

This writer concludes that Ho₂ and Ho₅ are rejected at 0.05 level of significance base on the results of the hypotheses. Finally, the regression model of the dividend payout ratio accepts only two significant variables: the corporate tax ratio and profitability.

5.4 The test of Significant Variables
5.4.1 Model Fit

Table 5.4.1 - Model Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
<th>Durbin-Watson</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.623(a)</td>
<td>0.388</td>
<td>0.330</td>
<td>2.58856</td>
<td>2.342</td>
</tr>
</tbody>
</table>

(Source: Made by the author for this study)

The number of R square is 0.388 indicating that 38.8% of the variability of the dependent variables is explained by the independent variable in the model. The standard error is 2.58856, the smaller the better.

The number of Durbin-Watson is 2.342 which close to 2, therefore the model does not have a autocorrelation among errors.

Table 5.4.2 ANOVA(b)

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Regression</td>
<td>89.316</td>
<td>2</td>
<td>44.658</td>
<td>6.665</td>
</tr>
</tbody>
</table>
The above table indicates that the regression model with two predictors (profitability and corporate tax ratio) has F value is 6.665, and P value 0.006 which is less than 0.05 indicating that all predictors in this model are statistically significant at 0.05 level of significance and useful for predicting the dividend payout ratio. It also validates the assumption is successful.

5.4.2 Model and Multicollinearity

Table 5.4.3 Coefficients(a)

<table>
<thead>
<tr>
<th>Model</th>
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<tr>
<td></td>
<td>PRFT</td>
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(a) Dependent Variable: DPR

(Source: Made by the author for this study)

According to Table 5.4.2 coefficients, the p values of the corporate tax ratio and profitability at lower than 0.05 level, therefore, these two variables are statistically significant at level 0.05. The corporate tax ratio has a negative relationship with dividend payout ratio, and the profitability has the positive relationship with dividend payout ratio. The tolerance of both the variables in the equation is obviously more than 0.1, the VIF of both the variables in the equation are less than 10. Therefore, the
multicollinearity that both variables to each other considered in zone allowed, means that there is no multicollinearity problem. In other words, the correlation among these independent variables is not strong. The B value of the corporate tax ratio is -2.450 and the B value of profitability 28.841. The constant B value is 0.174.

Therefore, the Multiple regression equation in this research is:

\[ DPR=0.174 - 2.450 \text{TAX} + 28.841 \text{PRFT} \]

Based on the above results, conclusions and recommendations to be make to managers, investors and governments, among others, will be presented in the next chapter.
Chapter 6
Conclusions and Recommendations

This research analyzed the financial data of 24 Chinese electronic industry companies listed on Shanghai Stock Exchange market (SSE). 22 of these 24 companies are state-owned companies being private-owned companies. Given the overwhelming majority of state-owned companies, their characteristics will be explained first before concluding this study and majority recommendations.

6.1 Specifics statistics of State-owned Companies

Before China embarked on reforms and opened-up, the nation operated under a command economy system where both the right of management and property rights belonged to the government. This system restrained the development of companies as the management was not adapted to market economy.

As China started to its up reform, state-owned companies also went through reforms. The government pushed companies to world market economy, and the right of management and property rights became separated stage by stage. Company managers are no longer governors or government officials. Companies have a clear corporate identity, a modern management structure, their own industry chain, and good financing channels. But their owner still is the government, so the influence from the government still exists in companies. For example, state-owned companies are one of the major sources of government fiscal income and are also the tool to regulate the nation’s market. And the purpose of managers is hard to identify as maximizing wealth and profit as the government policy is still major source of decisions.

6.2 Conclusions

Table 6.1 below shows all the results discussed in this section.
Table 6.1 Coefficients

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(Source: Made by the author for this study)

The corporate tax ratio and profitability are shown to be significant variables at level of significance of 0.05. Other variables, such as cash flow, debt-to-equity ratio, market-to-book value and sales are not significant variables at a level of significance of 0.05. Based on the beta coefficient, the cash flow, debt-to-equity ratio, market-to-book value, profitability and sales have a positive relationship with the dividend payout ratio. The only variable to have a negative relationship with the dividend payout ratio is corporate tax ratio.

6.2.1 Cash flow

This variable is shown to have a positive relationship with the dividend payout ratio, but it is not statistically significant at level 0.05. Cash flow is a sign of liquidity and a stable cash flow can increase the ability of a company to pay dividends.

6.2.2 Corporate tax ratio

This variable has a negative relationship with the dividend payout ratio statistically significant at level 0.05. A higher tax payout ratio will result in more cash flow out, and in the ability of company to pay dividends to be weakened. So whenever a company has a higher corporate tax ratio, the dividend payout ratio will be lower.
6.2.3 Debt-to-Equity Ratio

This variable is shown to have a positive relationship with the dividend payout ratio, but it is not statistically significant at level 0.05. As the study of the Jordanian, the debt-to-equity ratio has a negative relationship with the dividend payout ratio. In this study, test results show that there is a positive relationship between the debt-to-equity ratio and dividend payout ratio. This indicates that companies pay higher dividends while borrowing more debt. This means that when companies don’t have enough cash to pay dividends and their owners of company still require dividends. These companies have to borrow debt to pay dividend.

There are three would borrow (incur debts) to pay dividend:

1. The government borrows money in the name of a company (state-owned company).
2. The company needs more debt to avoid tax payout.
3. Shareholders need money capitalization.

6.2.4 Market-to-Book Value

This variable has a positive relationship (as shown in table 6.2 below) with the dividend payout ratio and is not statistically significant at 0.05 level. As the paper on Ghana stocks shows, the market-to-book value should have a negative relationship with the dividend payout ratio, because when the market value is higher than the book value, companies get a good opportunity for investment. They have to raise their external funds by paying fewer dividends. Since the results in this study are inconsistent with the theory, sees four reasons for it:

1. For state-owned companies, most shares belonged to the government, only a few of the shares can be sold in public. So when a share market value is higher than its book value, this indicates that the company is considered to be an enterprise with a government emphasized support and the government will help the company develop by injecting money. But government will also collect dividends from the company as a fiscal payout.
2. Companies pay high dividends by borrowing in order to attract more investors.

3. China is still a developing country, and its economic and political system is quite different from the American’s. So the theories generated from the American financial market are not really suitable for Chinese financial market, at least for the Chinese electronic sector which government-owned.

4. The Chinese stock market is still in a developing stage, which means it is immature. As a result, the price of stock floats greatly.

Table 6.2 comparison the movement of MTBV and DPR

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(Source: Made by the author for this study)

6.2.5 Profitability

This variable has a positive relationship with the dividend payout ratio and is statistically significant at 0.05 level. As the paper on Jordanian stocks, this can be interpreted as meaning that when a company get high profit, it tends to declare and pay high dividends to exhibited high payout ratios as to pay less tax.
6.2.6 Sales

This variable is shown to have a positive relationship with dependent variable the dividend payout ratio, but it is not statistically significant at 0.05 level. When sales increase, a company’s liquidity will be increased while, also enhancing its ability to pay dividends.

6.3 Implications for significant variables

6.3.1 Corporate tax ratio

In this study, there is a negative relationship between corporate tax ratio and dividend payout ratio. Thus, the managers can use this factor to regulate the dividend policy. When the managers want to distribute more dividends to investors, they can use financial leverage increasing the level of debt. Then, the tax will be paid lower, thus, the cash flow out is lower. The company can pay investors more dividends. If the managers don’t want to raising debt because of the investment environment is not good, they would like to pay more tax, and the cash can be distributed to investors will be lower.

6.3.2 Profitability

In this study, there is a positive relationship between profitability and dividend payout ratio. If the company has a high profitability, the company can get cash more and easier, so the company don’t worry about the shortage of cash. Thus, the company can pay more dividends to its investors. But, if the company is bad at profitability, it will face the problem of shortage of cash. So, the company has to keep more cash to defense the shortage of cash and the liquidation problem. Thus, the company will pay lower dividends to its investors.

6.4 Recommendations
As shown by the tests and analysis reported in the previous chapter, the corporate tax ratio and profitability are two major factors influence a company’s dividend policy. This writer will thus make some recommendations to the listed company’s managers, their investors and government officials focusing on these two factors and venture a few suggestions as well.

6.4.1 To the listed companies’ managers

Electronic manufacturing in China is very large, but not competitive. The company’s products are ordinary and production massive will make the results that supply exceeds demand. Price is low; as is profitability, very low indeed. The main problem is that Chinese electronic companies lack high technology or core technology.

The writer suggests managers should focus on developing technology rather than keep decreasing prices. Only new technology will make the products competitive and increase profitability.

Managers should use financial leverage to avoid tax liability, as higher tax payouts will cause cash flow to be out and companies not to have enough cash left to pay dividends. Managers could borrow debt instead to keep enough the cash on hand and avoid tax payouts.

6.4.2 To investors

Investors should consider the profitability of electronic companies and their corporate tax ratio when investing in them.

Furthermore, they should consider if the companies’ products are competitive or
not. Generally, high-technology-content products are competitive, and companies enjoy high profitability as well. Investors should therefore focus on companies that are leaders in the market or companies that have a technological edge in the industry.

Investors should also analyze the capital structure of the companies, are the companies good at using financial leverage, and securing a lower tax ratio? In which case, they would pay higher dividends.

This writer suggests that when inventory decide to invest, they should consider the economic environment and government political for this industry as well. Information dissymmetry is a major problem for individual investors investing in state-owned companies. Since shareholders cannot participate in management. They sometimes cannot get full information or real information about the companies.

Finally, the writer suggests that investors should request People’s Congress to flawless the related law for protecting their own right. In short, avoid investing blindly.

6.4.3 To the Government

China is still in the process of transforming its economy from a central plan economic to a market economy. The impact of the government on companies is still not suitable for companies and investors in a market economy.

First of all, the government should flawless the law to supervise the companies and make sure they distribute the full and real information so as to make confidence in investors. Second, they should issue more shares in public in order to attract more investors and strengthen company’s financing ability.
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Appendix A

Average value for proxy of variable during the period 2003-2007 in 24 Electronic companies

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Appendix B

Average value for variables corporate tax payout ratio and profitability

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