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Dividend Policy

Signaling Theory

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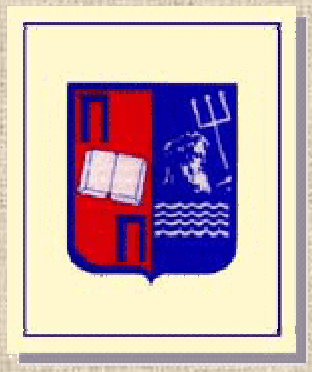

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CONTENTS

1. INTRODUCTION

Decisions concerning dividends have long been the focus of controversy and confusion among academics and financial practitioners. Dividend decision has remained one of the tough challenges for financial economists. We are yet to understand completely the factors that influence dividend decision and the manner in which these factors interact. Brealey, Myers, Sick and Giammarino list dividends as one of the ten important unsolved problems in finance. Although long a staple of financial management textbooks, corporate dividend policy remains a topic on which the field has failed to arrive at even a local sense of closure. Black (1976) has aptly described this lack of closure as the "Dividend Puzzle". The pivotal point in this puzzle is the classic work of Miller and Modigliani (1961), which demonstrated the irrelevance of dividend policy for determining the firm's cost of capital. Miller and Modigliani showed that with a given investment and financial policy, a firm's dividend policy should not affect the value of its shares (ignoring all imperfections). Although, under Miller and Modigliani proposition, there are no a priori reasons for firms to follow any systematic dividend policy, there are also any penalties if they choose to do so.

Exceptions to Miller and Modigliani's view are of course to be found in the literature. Gordon (1959) and Lintner (1962) claim that dividend does affect the firm's cost of capital (i.e. investors prefer capital gains). Linzenberger and Ramaswamy (1979) and Poterba and Summers (1984) offer empirical support for this view. Although some of this analysis might provide reasons to believe that

investors are not in differed between cash dividends and capital gains, the empirical evidence to date is still inconclusive for rejecting Miller and Modigliani's proposition.

Even with their view of investor indifference for dividends, Miller and Modigliani (1961) do point out that dividend policy can matter if firms use dividend changes to convey information not otherwise known to the market. This proposition has since become known as the "dividend information" hypothesis. The hypothesis has been explored in a number of recent theoretical papers that attempt to explain how and why dividend changes signal information to the market. Dividend signaling plays a prominent role in corporate finance theory, with numerous studies outlining scenarios in which managers use cash dividends to convey information about firm profitability [see, e.g., Bhattacharya, 1979; Miller and Rock, (1985); John and Williams, (1985); and more recent papers cited in Allen and Michaely's (1995) survey of the dividend literature]. However, few empirical studies indicate that signaling is pervasively important, although some research suggests it might be important in limited circumstances [see e.g., De Angelo et al., (1996); Benartzi, (1997); and many earlier studies cataloged by Allen and Michaely]. In their comprehensive survey, Allen and Michaely (1995) state, "…the empirical evidence (on dividend signaling) is far from conclusive… more research on this topic is needed". The juxtaposition of continued strong theoretical interest in signaling models on the one hand, with limited empirical support on the other, has made the relevance of dividend signaling an important unresolved issue in corporate finance. The basic idea behind dividend signaling

is simple. Paying dividends proves that a firm is able to generate cash, rather than just accounting numbers. By demonstrating its profitability in this manner, the firm can differentiate it from less profitable firms. Further, management then has an incentive to perform well enough to maintain its dividend and avoid the adverse consequences of a dividend cut or any equity issue to replace the funds paid out. Viewed in this framework, dividend changes reveal management's assessment of a firm's profitability.

Generally speaking, earnings are largely invisible to investors, except to the extent that they are paid out as dividends. A management decision to increase dividends provides a credible signal of strong future earnings, which leads to a higher stock price today. Conversely, lowering dividends signals deterioration in future prospects and reduces the stock price.

In this way, we are going to make an attempt to approach this topic.

The remainder of this paper is organized as follows: Section 2 presents the institutional environment in which a company decides to distribute dividend to its shareholders. Section 3 explains the meaning of dividend policy, the types of dividends, the main factors that affect the dividend policy of a company, theories about it, and reasons for paying large or small dividends and emphases in the meaning of signaling. Section 4 reviews the literature of dividend policy. Section 5 presents the most important empirical tests. Finally, Section 6 contains the conclusions of this paper.

2. INSTITUTIONAL ENVIRONMENT IN GREECE

1. Earnings on which are calculated regular reserves and first dividend.

According to the Greek Law, the article 45 of the Law 2190/1920, net profits are the result after the subtraction from the actual gross profits of all the expenses' and every loss according to the law of depreciation.

All the expenses and losses of the company go to the debit of the "Profit and Loss Account".

The Profit and Loss account (86) (according to the Greek Chart of Accounts) defines the result of the company and the "Available Balance Account" (88) distributes it.

The credit balance of the account "Profits for Distribution" (88.99) is disposed according to the article 45 §2 of the Law 2190/1920.

The percentages of calculation of the deductions for regular reserves and first dividend are not applied to the credit balance of the above account but to the first algebraically sum (aggregate) (S_1), that results from the following analysis of the table 1 earnings distribution.

The following table shows the way that Earnings of Disposal are calculated:

Net Profit / Loss that results from the Profit and Loss Account	$(\pm)X_1$
Minus: The remaining balance of the damages of the previous years, which can be covered from profits of the current year.	$(-)X_2$
Plus/Minus: The positive / negative differences from tax audit of the previous years.	$(\pm)X_3$
Minus: Taxes on the profits of the current year: - Income Tax	$(-)X_4$
- Other taxes not included in the operating cost	$(-)X_5$
TOTAL (A)	S_1
Plus: The remaining balance of the profits of the previous years	X_6
The reserves for disposal	X_7
Earnings for disposal	S_2

TABLE 1: Calculation of Earnings for Disposal

The result is as follows:

The regular reserve and the first dividend will be calculated on the remaining net profits of the current year after the subscription of the credit balance of the account 86.99 “Net Profit before Taxes” of the following damages and obligations:

a) Income Tax

b) Losses of the previous years

c) Other taxes not included in the operating cost

d) The credit discrepancies of the tax audit

2) Calculation of the regular reserve and the first dividend.

According to the commercial law, the calculation of deductions for the regular reserve and the first dividend is done as follows:

a) **The deduction for regular reserve will be subtracted.**

This deduction will be calculated as a percentage of the net profits. This

percentage should be, according to the article 44 of the law 2190/1920, at least 5% of the S_1 §17.1:

S_1*5% (1)

This deduction stops to be obligatory, just when the regular reserve reaches the 1/3 of the capital stock (subscribed or not).

b) **Deduction of the necessary amount for the payment of the first dividend.**

The percentage of dividend that the limited liability company is obliged to dispose to the shareholders, is according to the article 45(§2,b) of the law 2190/1920:

Paid Capital Stock *6% (2)

However, according to the article 3 of the law 148/1967 that has been modified to the article 1 of the law 876/1979, the limited liabilities companies are obliged to distribute the above dividend (article 45, §2.b), in case that it is bigger than the dividend which results from the following mathematical formula:

(TOTAL A – REGULAR RESERVE)*35%

But as we know:

REGULAR RESERVE = S_1*5%

So:

(S_1 - S_1*5%)*35% = S_1*(1-0,05)*0,35 = (S_1*0,95)*0,35 = S_1*0,3325 = S_1*33,25% (3)

But when the dividend that comes from the formula (3) is bigger than the dividend of the formula (2), the article 1 of the Law 876/1979 obliges the limited liabilities companies, to distribute the bigger dividend (formula 3).

However, the dividend that comes from the formula 3 may not be distributed if the majority of the Shareholders in the General Meeting of the shareholders with at least 70% of the paid capital stock decide not to do it.

c) No distribution and capitalization of dividend.

In the case, the dividend that comes from the following formula: (Distributed Profits – Regular Reserve) *35% is bigger than the similar amount that comes from the formula: (Paid Capital Stock *6%), then the General Meeting of the Shareholders with the majority at least of 65% of the paid capital, may distribute the smallest of the two amounts (6%) on condition that the difference between the two amounts of the dividends goes to a specific account which is called "Reserve for Capitalization". The limited liability company is obliged to capitalize this reserve within four years. It will be done with the issue of new shares. These shares will be delivered free to the shareholders (article 3, §18 of the law 2753/1999).

d) Profit from selling shares.

According to the article 25 of the law 148/1967, the limited liabilities companies are obliged to distribute in cash, every year to the shareholders, at least 35% of the net profits after the subtraction of the regular reserve and the profit from the sale of the shares which are possessed at least ten years and they represent participation above of 20% from the paid capital stock

subsidiary company. This legislation is valid for balance sheets with closing date 31/12/1999 and later.

e) Which is the maximum amount of distributed profits, which can be disposed to the shareholders?

In §2 of the article 44a in the law 2190/1920 is foreseen that the amount that has been distributed to the shareholders cannot exceed the amount of the profit and loss account of the last use that has expired. It will be augmented with the profits of previous years and the reserves that have decided to be disposed and deducted with the damages of the same years and the necessary amounts that should be distributed for the creation of reserves in accordance with the law and the statutes.

The meaning of distribution includes mainly the payment of dividends and interest from shares.

PROHIBITION OF PROFITS DISPOSAL

According to the article 43 of the law 2190/1920, companies are not allowed to distribute earnings when the remaining balance of the capital expenditure is not covered from the additional reserves and the retained earnings.

3.DIVIDEND POLICY

3.1 GENERAL

In this section, we are going to examine some aspects of the dividend policy. But before doing that we have to explain the meaning of dividend and the process that a company have to follow in order to pay dividend to its shareholders.

A dividend is a payment from a corporation to its shareholders. Investors will not give money to firms unless the firm plans to give money back to the investors. In some way there must be an expectation that the financial loop of investor to firm and back must be closed.

Dividends are declared or announced by the Board of Directors. The announcement of the dividend states that the payment will be made to all those stockholders who are registered on a particular *record date*. Then about three weeks later dividend checks are mailed to stockholders. Since it takes a while for the firm to record the new investors as owners, 3 days before the record date is the *ex-dividend date*. Investors who buy the stock on the ex-dividend date do not receive the dividend. For this reason the stock price drops by the amount of the dividend on the ex-dividend date.

According to American law, the company is not free to declare whatever dividend it chooses. Lenders, who are concerned that excessive dividend payments would not leave enough in the kitty to pay the company's debts, may impose some restrictions. State law also helps to protect the company's creditors

against excessive dividend payments. For example, companies are not allowed to pay a dividend out of *legal capital*, which is generally defined as the par value of outstanding shares.

Fama and French, who have studied dividend payments in the United States, found that only about a fifth of public companies pay a dividend. Some of the remainder paid dividends in the past but then fell on hard times and were forced to conserve cash. The other non-dividend-payers are mostly growth companies. They include such household names as Microsoft, Cisco, and Sun Microsystems, as well as many small, rapidly growing firms that have not yet reached full profitability. Of course, investors hope that these firms will eventually become profitable and that, when their rate of new investment slows down, they will be able to pay a dividend.

Fama and French also found that the proportion of dividend payers has declined sharply from a peak of 67% in 1978. One reason for this is that a large number of small growth companies have gone public in the last 20 years. Many of these newly listed companies were in high-tech industries, had no earnings, and did not pay dividends. But the influx of newly listed growth companies does not fully explain the declining popularity of dividends. It seems that even large and profitable firms are somewhat less likely to pay a dividend than was once the case.

Finally, another serious topic is that the optimal dividend policy should maximize the price of the firm's stock holding the number of shares outstanding

constant. In other words, it strikes a balance between current dividends and future growth as to maximize stock price.

$$Po = D_1 / k_e - g$$

Po: price of a share of stock

D_1: Dividend in period t

k_e: Cost of newly issued common stock

g: Growth rate

A decision to increase dividends will raise D_1 putting upward pressure on Po. Increasing dividends, however, means reinvesting fewer dollars, lowering g, and putting downward pressure on Po.

3.2 TYPES OF DIVIDENDS

There are a lot of types of dividends but most companies pay a *regular cash dividend* each quarter. A regular dividend policy is based on the payment of a fixed-dollar dividend each period. It provides stockholders with positive information indicating that the firm is doing well and it minimizes uncertainty. Generally, firms using this policy will increase the regular dividend once earnings are proven to be reliable.

A significant stream of prior research in the United States has empirically documented that unexpected increases (decreases) in regular cash dividends generally elicit a significantly positive (negative) stock market reaction [Fama (1969) and Petit (1972)]. Moreover, this finding persists even after controlling for

contemporaneous earnings announcements [Aharony and Swary (1980)]. In the same vein, Asquith and Mullins (1983) find that, like dividend increases, dividend initiations have a significant positive impact on shareholder wealth.

But occasionally this regular dividend is supplemented by a one-off *extra* or *special dividend*. When earnings are higher than normal, the firm will pay this additional dividend without the obligation to maintain it during subsequent periods. Firms whose sales and earnings are susceptible to swings in the business cycle often use this type of policy.

Dividends are not always in the form of cash. Frequently companies also declare *stock dividends*. A stock dividend is paid in stock rather than in cash. That means it sends each shareholder extra shares for every given number of shares currently owned. In other words, stock dividends effectively award existing shareholders a free share of common stock for every X shares currently owned. Many investors believe that stock dividends increase the value of their holdings. Moreover, stock dividends include some disadvantages: 1) the cost of issuing new share 2) taxes and listing fees on the new shares 3) other recording costs. On the other hand the advantages are: 1) the company conserves needed cash, 2) signaling effect to the shareholders that the firm is retaining cash because of lucrative investment opportunities.

Another form of dividend is the *stock split*. A stock split is a recapitalization that affects the number of shares outstanding, par value, earnings per share, and market price. The rationale for a stock split is that it lowers the price of the stock and makes it more attractive to individual investors.

We can see that a stock dividend is very much like a *stock split*. In fact, from a market value standpoint, stock dividend function much like stock splits. The investor ends up owning more shares, but the value of their shares is less. From a book value standpoint, funds are transferred from retained earnings to common stock and additional paid-in-capital. In other words, both stock dividends and splits increase the number of shares, but the company's assets, profits, and total value are unaffected. So both reduce value *per share*. The distinction between the two is technical. A stock dividend is shown in the accounts as a transfer from retained earnings to equity capital, whereas a split is shown as a reduction in the par value of each share.

Two predominant explanations for stock dividends are based on the information-signaling hypothesis and the "optimal" trading price-range hypothesis. Both hypotheses predict a positive impact of stock dividends on firm value and can explain why a firm may undertake such transactions given non-zero transaction costs. First, given information asymmetry between managers and investors, stock dividends are costly signals that convey management's positive private information about the firm's future prospects. Companies must maintain a minimum level of retained earnings. Therefore, companies would transfer Retained Earnings to Common stock only if they expect future earnings to increase and, thus, future retained earnings to replace capitalized retained earnings. Investors, therefore, may interpret the stock dividend as good news.

Second, it is argued that high trading prices are inaccessible to small investors who may be unable to buy shares in round lots. Therefore, to achieve

higher liquidity, many firms aim at lower trading prices. Conversely, larger institutional investors prefer trading shares at higher prices because of the fixed transaction cost component. Together, these influences suggest the existence of an optimal trading price range for firms to improve marketability of their stock. Stock dividends, like stock splits can therefore be a tool towards attaining such an optimal trading price for firm shares.

A *reverse stock split* reduces the number of shares outstanding and raises stock price-the opposite of a stock split. The rationale for a reverse stock split is to add respectability to the stock and convey the meaning that it is not a junk stock. Research on both stock splits and stock dividends generally supports the theory that they do not affect the value of shares. They are often used; however, to send a signal to investors those good things are going to happen.

The purchasing and retiring of stock by the issuing corporation is called *stock repurchase*. A repurchase is a partial liquidation since it decreases the number of shares outstanding. It may also be thought of as an alternative to cash dividends. Alternative reasons for stock repurchases are: 1) to use the shares for another purpose 2) to alter the firm's capital structure because it increases leverage, and can be used to move toward the optimal capital structure, quickly. 3) to increase EPS and ROE resulting in a higher market price. It happens because its information effect (signal) to the market is positive-which increases stock price. 4) to reduce the chance of a hostile takeover. For example, T.Boone Pickens attempted raids on Phillips Petroleum and Unocal in 1985. Both were unsuccessful because the target firms undertook stock repurchases.

The main disadvantages of repurchases are the following: 1) May be viewed as a negative signal because firm has poor investment opportunities, 2) IRS could impose penalties if repurchases were primarily to avoid taxes on dividends, 3) Selling stockholders may not be well informed, hence be treated unfairly, 4) Firm may have to bid up price to complete purchase, thus paying too much for its own stock.

The usual methods for stock repurchasing are the following:

1. Buy shares in the open market through a broker.
2. Buy a large block by negotiating the repurchase with a large block holder, usually an institution (targeted stock repurchase).
3. Tender offer: offer to pay a specific price to all current stockholders.

Many companies have automatic *dividend reinvestment plans (DRIPs).* Often the new shares are issued at a 5% discount from the market price; the firm offers this sweetener because it saves the underwriting costs of a regular share issue. Sometimes 10% or more of total dividends will be reinvested under such plans.

3.3 THE MAIN FACTORS THAT AFFECT THE DIVIDEND POLICY

The main factors that affect the dividend policy are the following:

1. Liquidity

The main factor that affects a firm's decision to pay dividends or not is liquidity. If the firm faces problems of liquidity or there are some signals that something like that will happen in the near future, and then the firm is

forced to pay lower dividends, or no dividend at all. Even if a developing firm has extra profits, it has necessity for capital. In this case, it is possible, this company not to pay dividend.

2. **Repayment of Debt**

   If the leverage ratio is high, that means that the firm has high loans, then it is certain that the company will pay low dividend. Under these circumstances, the firm has two choices; either to re-finance its loans on maturity with other securities or to decide the repayment of its liabilities with existing loans. It is obvious, if the firm follows the second choice, then it will pay lower dividend.

3. **Restrictions to loan contracts**

   Some loan contracts, especially for the long-term loans, have restrictions, which eliminate the ability of the firm to pay dividend. Two of the most common restrictions are the following:

   a. The future dividends can be paid only from the profits that have been made after the sign of the contract.
   b. Dividends cannot be paid when the working capital is lower than the predominant amount.

4. **Progress of the assets**

   The soonest the assets of a company are increased; the highest is the need of extra capital in order to finance the investment projects. In this case, it is possible that the firm will keep the retained earnings instead of paying them as dividend to the investors. If the firm has already paid

dividends to the shareholders in order to borrow from them, then a large amount of capital will have been lost because of the high tax rates, which are applied to the individual income.

5. **Access to the capital markets**

   It is easier for the big companies to have access in the capital markets in order to take loans with better conditions than smaller companies. In this case, there is less need for large amounts of retained earnings. So, it is easier for them to pay dividends.

6. **Controlling**

   Firms, which are borrowing from their shareholders to finance their investment plans, usually face problems of controlling. It happens because the continuous issue of large number of common shares creates uncertainty and higher risk. In this case, the amount of retained earnings should be bigger and the payment of dividend becomes impossible.

7. **Taxation**

   Taxation as we examine in the following section is one the most important factor that defines dividend policy in a company.

3.4 THEORIES OF DIVIDEND POLICY

3.4.1 DIVIDEND IRRELEVANCE THEORY

It has been argued that dividend policy has no effect on either the price of a firm's stock or its cost of capital. If dividend policy has no significant effects, then it would be *irrelevant*. The principal proponents of the dividend irrelevance theory

are Merton Miller and Franco Modigliani (MM). They argued that the firm's value is determined only by its basic earning power and its business risk. In other words, MM argued that the value of the firm depends only on the income produced by its assets, not on how this income is split between dividends and retained earnings.

To understand MM's argument that dividend policy is irrelevant, recognize that any shareholder can construct his or her own dividend policy. For example, if a firm does not pay dividends, a shareholder who wants a 5% dividend can "create" it by selling 5% of his or her stock. Conversely, if a company pays a higher dividend than an investor desires, the investor can use the unwanted dividends to buy additional shares of the company's stock. If investors could buy and sell shares and thus create their own dividend policy without incurring costs, then the firm's dividend policy would truly be irrelevant. Note, though, that investors who want additional dividends must incur brokerage costs to sell shares and perhaps pay capital gain taxes, and investors who do not want dividends must first pay taxes on the unwanted dividends and then incur brokerage costs to purchase shares with the after-tax dividends. Since taxes and brokerage costs certainly exist, dividend policy may well be relevant.

In developing their dividend theory, MM made a number of assumptions, especially the absence of taxes and brokerage costs (moreover no transactions costs to buy and sell securities, no flotation costs on new issues, perfect information, dividend policy does not affect k_e). Therefore, the MM irrelevance theory may not be true. However, MM argued (correctly) that all economic

theories are based on simplifying assumptions, and that the validity of a theory must be judged by empirical tests, not by the realism of its assumptions.

3.4.2 BIRD IN THE HAND THEORY

The principal conclusion of MM's dividend irrelevance theory is that dividend policy does not affect the required rate of return on equity, k_e. This conclusion has been hotly debated in academic cycles. In particular, Myron Gordon and John Lintner argued that k_e decreases as the dividend payout is increased because investors are less certain of receiving the capital gains which are supposed to result from retaining earnings than they are of receiving dividend payments. Gordon and Lintner said, in effect, that investors value a dollar of expected dividend more highly than a dollar of expected capital gains because the dividend yield component, D_1/P_o, is less risky than the g component in the total expected return equation, $k_e = D_1/P_o + g$.

MM disagreed. They argued that k_e is independent of dividend policy, which implies that investors are indifferent between D_1/P_o and g and, hence, between dividends and capital gains. MM called the Gordon –Lintner argument the bird-in-the-hand fallacy because, in MM's view, most investors plan to reinvest their dividends in the stock of the same or similar firms, and, in any event, the riskiness of the firm's cash flows to investors in the long run is determined by the riskiness of operating cash flows, not by dividend payout policy.

So, Bird-in-the-Hand Theory says that investors think dividends as less risky than potential future capital gains hence they like dividends. Therefore, high dividend payout ratios will lower k_s (reducing the cost of capital), and increase stock price.

3.4.3 TAX PREFERANCE THEORY

There are three tax-related reasons for thinking that investors might prefer a low dividend payout to a high payout: 1) Long – term capital gains are taxed at a maximum rate of 20%, whereas dividend income is taxed at effective rates which go up to 39.6%. Therefore, wealthy investors (who own most of the stock and receive most of the dividends) might prefer to have companies retain and plow earnings back into the business. Earnings growth would presumably lead to higher stock prices, and thus lower-taxed capital gains would be substituted for higher-taxed dividends. 2) Taxes are not paid on the gain until a stock is sold. Due to time value effects, a dollar of taxes paid in the future has a lower effective cost than a dollar paid today. 3) If a stock is held by someone until he or she dies, no capital gains tax is due at all- the beneficiaries who receive the stock can use the stock's value on the death day as their cost basis and thus completely escape the capital gains tax.

Because of these tax advantages, investors may prefer to have companies retain most of their earnings. If so, investors would be willing to pay more for low-payout companies than for otherwise similar high-payout companies.

IMPLICATIONS OF THE THREE THEORIES	
THEORY	**IMPLICATION**
• Irrelevance	Any payout OK
• Bird-in-the Hand	Set high payout
• Tax Preference	Set low payout

TABLE 2: Implications of the three theories.

But which, if any, is correct?

Empirical testing has not been able to determine which theory, if any is correct. Thus, managers use judgment when setting policy. In fact, analysis is used, but it must be applied with judgment.

3.5 REASONS FOR PAYING LARGE AND SMALLER DIVIDENDS

Reasons for paying out large dividends:

1. Managers invest with their own best interests and not shareholders' best interest at heart. Thus, a larger dividend may lower the number of poor investments that managers make. (This is a version of Jensen's 1986 Free Cash Flow Theory).
2. A bird in the hand theory is worth two in the bush. This hypothesis, which has been around since at least 1963 with the works of Gordon and Lintner, reasons that investors will view dividend-paying stocks as less risky than non-dividend paying stocks.
3. Transaction costs. Some investors cannot raise the money they need to live on and would rather receive dividends than to depend on selling a portion of their shares and paying high transaction costs.

4. Dividends act as a signal that managers can use to signal the financial future of the firm. This comes from work by Lintner who found that managers are afraid to cut dividends and thus only raise dividends when they believe the dividend can be maintained at the new level. (It must be noted that this is at best a noisy signal).

Reasons for paying smaller dividends:

Taxes are by far the most important reason why firms have been paying fewer dividends. There is a tax disadvantage of paying dividends. This is for three main reasons:

1. Investors must pay taxes on the dividends when the dividends are paid (capital gains can be forestalled by not selling),
2. Dividends come out of net income so the dividend is subject to double taxation: taxed at the corporate level and at the investor level, and
3. Finally, dividends are taxed as ordinary income and not the lower capital gains rate.

Empirically, when companies announce a dividend initiation or increase, the stock does increase in value. As would be expected, dividend cuts are associated with stock price drops.

Largely as a result of the tax-disadvantages of paying dividends, most firms are not placing as much emphasis on dividends. In lieu of dividends

many have decided to reinvest their earnings and/or do stock buybacks (which have increased dramatically in the past two decades).

Finally, some additional considerations about why firms pay smaller dividends are the following:

1. **Ownership Control:** Smaller firms may be averse to issuing new stock due to dilution of corporate control. Therefore, retain earnings and pay few dividends.
2. **Inflation:** Since replacement costs of assets are higher in inflationary periods, more retention of earnings may be required.
3. **Dividend Reinvestment Plans:** Investors can automatically reinvest dividends often at a discount with no transaction costs. Frequently good investments tool. Companies may use these plans to raise additional equity capital.

THE INFORMATION CONTENT OF DIVIDENDS

It is reasonable to believe that management has more information about the future earnings of the firm than does the public (which includes its own stockholders). This situation of asymmetric information suggests that managers will seek to convey the information to the public if they have an incentive to do so. If they do have such an incentive, one way of conveying information is to announce a change in the amount of the firm's dividends. When used in this manner, dividend announcements are said to be a signaling device.

3.6 SIGNALING

A relatively simple view of dividend changes is that an announced increase in dividends is a signal that management has increased its assessment of the firm's future earnings. The announced increase in dividends is therefore good news and will, in turn, cause investors to raise their expectations regarding the firm's future earnings. Conversely, an announced decrease in dividends is a signal that management has decreased its assessment of the firm's future earnings. The announced decrease in dividends is therefore bad news and will, in turn, cause investors to lower the expectations regarding the firm's future earnings. An implication is that an announced increase in dividends will cause the firm's stock price to rise, and an announced decrease will cause it to fall. On the other hand, if dividends are increased by a "normal" amount, this is a neutral signal.

So, managers should avoid dividend cuts, because such an action could have a significant negative impact on stock price that is much greater than the value of the cut itself. Also, managers would not want to increase dividends beyond the ability of the firm's earnings to maintain the new level, for a future decrease in dividends would be interpreted as a negative signal. Thus the signaling impact constrains dividend decisions by imposing a large cost on a dividend cut and by discouraging managers from raising dividends too quickly. Thus, managers tend to raise dividends only when they believe that future earnings can comfortably support a higher dividend level, and they cut dividends only as a last resort.

This simple model of dividend changes can be thought of as a special case of the model given in the following equation: $D_t - D_{t-1} = ap*E_t - aD_{t-1}$, where the speed of adjustment, *a*, is zero. With this model, the expected change in dividends will be viewed as good news. Conversely, a simple decrease in dividends will be viewed as bad news.

One way of testing to see if dividend changes do indeed convey information to the public is to see how stock prices react to announcements of changes in dividends. However, care must be exercised in conducting such a study because the firm's announcement of dividends is often made at the same time that the firm announces its earnings. When such announcements are made at the same time, any price change in the firm's common stock may be attributable to either (or both) announcements.

One study attempted to avoid this problem of contamination by looking only at cases in which the announcement of earnings was at least 11 trading days apart from the announcement of dividends.

In cases in which firms announced an increase in their dividends, there was a significant positive reaction in their stock prices. Conversely, for firms that announced a decrease in their dividends, there was a significant negative reaction in their stock prices. These findings strongly support **the information content of dividends hypothesis**, which asserts that dividend announcements contain inside information about the firm's future prospects.

It should be noted that there is nothing inconsistent with dividends being used as a signal and with the dividend irrelevancy argument of Miller and

Modigliani that was made earlier. In particular, stockholders will be neither better off nor worse off if the *level* of dividends, relative to earnings, is high and low. *Changes* in dividends may, however, be important because they convey information to the public about the future earnings prospects for the firm.

4. LITERATURE REVIEW

While the initial focus of the signaling literature was upon the information asymmetries within the product and labour markets [Akerlof (1970), Spence (1973)], several financial signaling models have been proposed using various financial variables as signals of “true” firm value. While these models differ as to the financial variable chosen to signal firm value, each assumes a similar information asymmetry in the capital market whereby the insiders (the firm’s owners or their agents) have superior information concerning the end- of- period firm value.

The first application of signaling to finance theory has been put forth by Ross (1977). He suggests that implicit in the Miller and Modigliani irrelevancy proposition is the assumption that the market *knows* the (random) return stream of the firm. What is valued in the market place, however, is the perceived stream of returns for the firm. Putting the issue this way raises the possibility that changes in the capital structure (or dividend payout) may alter the market’s perception. His incentive-signaling approach suggests that management might choose real financial variables such as financial leverage or dividend policy as the means of sending unambiguous signal to the public about the future performance of the firm. Unsuccessful firms cannot mimic these signals because such firms do not have sufficient cash flow to back them up and because managers have incentives to tell the truth. Without management incentives to signal truthfully there would be no signaling equilibrium.

He also demonstrated that if managers were penalized when the firm was bankrupt and their compensation was linked positively to the market value of the firm, they could then use leverage as a signaling device. As Ross point out, the existence of a signaling equilibrium relies heavily upon managerial aversion to increase leverage. If it was costless to do so, managers of firms with low expected market value would signal falsely and the value of the signal falsely and the value of the signal would drop to zero. Similarly, managers' reluctance to cut dividends is a necessary condition for them to be able to signal using dividend payments.

Although many informal references to dividends as signals can be found in both the non-academic and the academic literature in finance, the first formal modeling is due to Bhattacharya (1979). Bhattacharya develops a model closely related to that of Ross that can be used to explain why firms may pay dividends despite the tax disadvantage of doing so. If investors believe that firms that pay greater dividends per share have higher values, then an expected dividend increase will be takes as a favorable signal. Presumably dividends convey information about the value of the firm that cannot be fully communicated by other means such as annual reports, earnings forecasts, or presentations before security analysts. It is expensive for less successful firms to mimic the signal because they must incur extra costs associated with raising external funds in order to pay the cash dividend. Hence the signaling value of dividends is positive and can be traded off against the tax loss associated with dividend income (as opposed to capital gains). Even firms that are closely held would prefer to pay

dividends because current owners receive the value induced by the signal when the dividend message is communicated to outsiders. One of the important implications of this signaling argument is about that it suggests the possibility of optimal dividend policy. The signaling benefits from paying dividends may be traded off against the tax disadvantage in order to achieve an optimal payout.

Kalay (1980), however, makes a point that managerial reluctance to cut dividends is a necessary condition for the existence of a signaling equilibrium in which dividends are employed as a signaling device. He re-examines the existing empirical evidence on the reluctance to cut dividends assertion and finds it to be inconclusive. Kalay then tests the hypothesis that observed dividend reductions are not at the discretion of the manager, but rather are forced reductions resulting from an existing and binding dividend constraint. These dividends reductions cannot convey the managers' expectation of future earnings. Since forced reductions are not outcomes of managerial discretion, they cast doubt on the reliability of dividends to serve as a signaling device. Kalay finds in his sample that only 5 percent are forced reductions, and hence he is unable to refute the informational content of dividend cuts. Essentially, the argument of Kalay that managerial reluctance to cut dividends is a necessary condition to convey information resembles Bhattacharya's assumption that the cost of changes in dividend is asymmetrical (dividend reductions are more costly).

Talmor (1981) extends the work of Bhattacharya (1979) by developing a financial signaling equilibrium model for the general case of several valuation parameters and several signaling instruments. Bhattacharya (1980) develops a

two period model in which dividend –setting at time 0 signals first-period liquidation value. The corporate “insiders” (i.e. managers) are motivated to signal their knowledge via a contract containing elements dependent on both the promised dividend and on the discrepancy between the signal of the liquidation value in the following period and the realized cash flow.

Hakkanson (1982) derives the additional general equilibrium conditions required for dividend signals to improve investor welfare. He demonstrates that dividends, whether informative or not, serve not useful role when investors have homogenous beliefs and time-additive utility and markets exhibit full allocational efficiency – when associated with positive costs, dividends are under these circumstances deleterious to efficiency. On the other hand, dividends are capable of improving welfare (efficiency) when they are informative provided investors have heterogeneous beliefs, utility is not additive, or markets are incomplete, even in the presence of dead-weight costs. In this context, the power of informative dividends to serve as a substitute for additional financial markets is particularly notable; *dividend announcements may under certain circumstances bring an incomplete market to or even beyond the level of efficiency that would be attained if the market were complete.* Moreover, this demonstration was cast in the setting that does not compromise the portfolio problem, that treats information formally, that is sensible to possible deadweight costs, that employs a general equilibrium perspective, and that measures investor welfare in expected utility.

John and Williams (1985) identify a signaling equilibrium with taxable dividends. In equilibrium, insiders in firms with truly more valuable future cash inflows distribute larger dividends and receive higher prices for their stock whenever the demand for cash by both their firm and its current stockholders exceeds its internal supply of cash. Thus, many firms distribute dissipative dividends, rather than repurchasing shares, while others distribute dividends and simultaneously sell new shares. Because dividends reveal all private information not conveyed by corporate audits, current stockholders capture in equilibrium all economic rents net of dissipative signaling costs. Also, other things equal, firms that pay dividends have clienteles of stockholders who demand current cash – such as widows, senior citizens and financial institutions. For this signaling equilibrium, both the announcement effect and the relationship between dividends and cum- dividend market values are derived explicitly.

Miller and Rock (1985) develop a financial signaling model founded on the concept of “net dividends” (cash dividends net of cash inflows from bonds and bond sales). The cost of signaling that attribute to the market by increasing (net) dividends is the foregone use of the funds in the productive investment. Miller and Rock suggest that unexpected dividends convey information about the firm’s current earnings. In their framework, the dividend announcement serves to provide the information that the market needs to establish the firm’s true earnings. According to Miller and Rock, the earnings surprise and the net dividend surprise can convey the same information. In Miller and Rock’s signaling model, unexpected dividends are measured as the differences between

actual and expected net dividends (cash dividends net of cash inflows from stock and bond sales) rather than cash dividends. However, the financing announcement effect is merely the dividend announcement effect, but with the sign reversed. An unexpected increase in dividends will increase shareholder's wealth, and an unexpected issue of new equity or debt will be interpreted as bad news about the future prospects of the firm. The Miller – Rock-signaling approach shows that announcement effects (including earning surprises, unexpected dividend changes, and unexpected external financing) emerge naturally as implications of the basic model rather than as ad hoc appendages.

As mentioned above, Bhattacharya (1979) suggests that firms use dividends to signal profitability so that, in equilibrium, in a cross-section of comparable firm those that have higher value pay higher dividends. Markhija and Thompson (1986), however show that the dividend and the profitability of the least and the most profitable firm affect the nature and feasibility of such signaling equilibrium. Under Bhattacharya's characterization the least profitable firm has zero profits and pays no dividends. This leads to a linear relationship between dividends and maximum earnings across the cross section. Makhija and Thompson (1986) show that when the earnings of the least profitable firm are nonzero, the relationship between dividends and maximum earnings and value and dividends is not non- linear and so they modify the Bhattacharya' s model by considering different descriptions of at least profitable firms. Furthermore, to ensure feasible equilibrium, they argue that the dividend of the most profitable firm must be limited. In sum, Makhija and Thompson allow all firms to have

strictly positive quality, an assumption resulting in equilibrium dividend schedules that are nonlinearly related to firm quality.

Bar-Yosef and Huffman (1986) adopt the incentive –signaling framework and assuming that a reward-penalty managerial scheme is used, provide a possible explanation for the corporate dividend decision. They show that the size of the declared dividend is an increasing function of expected cash flow. Nonetheless, they observe a trend that points out that the higher the level of expected cash flow, the lower the marginal effects of cash flow on dividends. In addition, a similar relationship is observed with respect to changes in expected cash flows.

Ambarish, John and Williams (1987) identify an efficient signaling equilibrium with dividends, investments and the new issues of stock and develop its properties. The efficient signaling equilibrium, which they present, has the following properties. In general, corporate insiders signal with both dividends and investments or, equivalently, dividends and net new issues. If asymmetric information arises primarily from assets in place, then insiders optimally reject projects with positive NPV. Because the sources and uses of corporate funds must match, projects with positive (negative) NPV at the margin produce for net new issues negative (positive) costs at the margin. Consequently, the announcement effects of net new issues must be positive in the former case and negative in the latter. By contrast, dividends are always costly at the margin; hence, their announcement effect must always be positive. Thus, they generalize results familiar from John – Williams and Miller – Rock.

Kale and Noe (1990) develop a model where dividends act as a signal of systematic and asystematic riskiness of firm cash flows. They argue that dividend act as a credible signal because the promise of a higher dividend, ceteris paribus, increases the probability that the firm will have to issue equity in the future and thereby pay underwriting costs. This signaling model is used to derive empirically testable comparative static of dividend levels with respect to observable firm characteristics such as firm beta, unsystematic components of the variance of cash flows, expected profitability, flotation costs and managerial objectives.

As we have seen earlier, Bhattacharya suggests that if the lowest – quality firm has no cash flow, the equilibrium dividend payment increases linearly with firm quality. Makhija and Thompson (1986) allow all firms to have strictly positive quality, a more realistic assumption resulting in equilibrium dividend schedules that are nonlinearly related to firm quality. However, both Bhattacharya (1979) and Makhija and Thompson (1986) caution that the signaling equilibrium may not be feasible if there is too much quality dispersion among firms and some must pay an excessive dividend to signal quality. The literature does not offer a characterization of the maximum-allowable quality dispersion. In his model, Rodriguez (1992) does not allow firm's dividends to be more than its mean cash flow. With this restriction, he shows that the feasible signaling equilibrium can only occur if the amount of quality dispersion among comparable firms is limited, regardless of the firm's cash flow distribution. This implies that the model sets an absolute upper bound on quality dispersion beyond which a feasible signaling

equilibrium is impossible. He also shows that when each firm's cash flow distribution is specified, even tighter bounds on the maximum quality dispersion are necessary to avoid the breakdown of a feasible signaling schedule.

All the theoretical models described above are considered to be the most important in the dividend signaling literature. These models differ in the details of their assumptions and approach, but reach the same broad conclusion: firms pay dividends to convey information to investors that cannot be conveyed costless and credibly in other ways. After having reviewed the relevant theoretical aspects behind the dividend and signaling literature, let us now proceed to investigate the results of some empirical tests.

AUTHOR	SUGGESTIONS / CONCLUSIONS
Ambarish, John and Williams (1987)	Dividends are always costly at the margin; hence, their announcement effect must always be positive.
Bar – Yosef & Huffman (1986)	They adopt the incentive –signaling framework and assuming that a reward- penalty managerial scheme is used, provide a possible explanation for the corporate dividend decision.
Bhattacharya (1979)	Explain why firms may pay dividends despite the tax disadvantage of doing so. The signaling benefits from paying dividends may be traded off against the tax disadvantage in order to achieve an optimal payout.
Hakkanson (1982)	Dividend announcements may under certain circumstances bring an incomplete market to or even beyond the level of efficiency that would be attained if the market were complete.
John and Williams (1985)	He identified a signaling equilibrium with taxable dividends.
Kalay (1980)	Since forced reductions are not outcomes of managerial discretion, he cast doubt on the reliability of dividends to serve as a signaling device.
Kale & Noe (1990)	Develop a model where dividends act as a signal of systematic and asystematic riskiness of firm cash flows.

AUTHOR	SUGGESTIONS / CONCLUSIONS
Makhija & Thompson (1986)	Allow all firms to have strictly positive quality, an assumption resulting in equilibrium dividend schedules that are not linearly related to firm quality.
Miller & Rock (1985)	The earnings surprise and the net dividend surprise can convey information about the firm's current earnings.
Rodriguez (1992)	He does not allow firm's dividends to be more than its mean cash flow.
Ross (1977)	The market knows the (random) return of the firm. Without management incentives to signal truthfully there would be no signaling equilibrium.
Talmor (1981)	He developed a financial signaling equilibrium model for the general case of several valuation parameters and several signaling instruments.

TABLE 3: Suggestions / Conclusions of the Literature Review.

5. REVIEW OF EMPIRICAL RESEARCH OF SIGNALING

As it has already been mentioned in the previous section, models of dividend signaling [e.g. Bhattacharya (1979); Miller and Rock (1985)] suggest that dividend changes be employed by firms to convey future earnings information. The information content of dividends has been widely studied. Earlier empirical studies that addressed this issue have usually employed either the event study methodology[1](e.g. Petit, 1972; Charest, 1978; Aharony and Swary, 1980), or the time series regression analysis (e.g. Watts, 1972; Laub, 1976; Gonedes, 1978).

Petit (1972) uses monthly data to investigate the abnormal performance index of firms that have dividend changes. Petit finds a strong positive relationship between dividend changes and stock price changes, and that the size of the stock price reaction depends heavily on the size of the dividend change. This leads Petit to conclude that substantial information is conveyed by the announcement of dividend changes. However, Watts (1973) and Gonedes (1978) come to the opposite conclusion. Watts adopts the Lintner's partial adjustment model[2] to estimate unexpected dividends (the residuals of the dividend model). He then relates unexpected dividends to future earnings

[1] An event study is the name given to an empirical investigation of the relationship between security prices and economic events. Most event studies have focused on the behavior of share prices in order to test whether their stochastic behavior is affected by the disclosure of firm – specific events (in our case, the dividend announcement).

[2] Lintner's model is usually estimated in the following form:

$\Delta D_{i,t} = \alpha_i + \beta_{1,i} D_{i,t-1} + \beta_{2,i} E_{i,t} + z_{i,t}$

Where $\Delta D_{i,t}$ is the difference between dividends in year t-1; $D_{i,t-1}$ is the total dividends declared for firm i in year t-1; $E_{i,t}$ is the current earnings of firm i in year t; and $z_{i,t}$ is the error term.

changes and finds that dividend changes convey very little information about future earnings changes. Laub (1976) and Petit (1976) challenge Watt's findings, and Watts (1976) rebut these challenges. However, all of these studies are based primarily on monthly stock returns.

In his pioneering work, Lintner (1956) finds that managers tend to change dividends primarily in response to an anticipated and non-transitory change in their firm's earnings. Lintner's finding suggests that dividend decisions are driven by changes in some measure of long run sustainable or permanent, rather than current, earnings.

Two studies employ daily return data. Charest (1978) finds that the announcement of a dividend increase generates an excess return of about 1%. Because his study makes no effort to remove the effect of contemporaneous earnings announcements, Charest concludes that this evidence does not necessarily reveal the presence of information in dividend announcements. They examine only those quarterly dividend and earnings announcements made public on different dates within any given quarter. Their study also supports the semi-strong form of the efficient capital market hypothesis. There is no leakage of information prior to the dividend announcement, and the full impact of the announcement is concentrated in the 2 – day announcement period.

Kwan (1981) evaluates and extends Watt's methodology and he finds statistically significant abnormal returns when the firms announce unexpectedly large dividend changes. Three methodological issues are considering in the paper of the Kwan. First, the standard Lintner annual dividend model (which was

used to identify the firm's potential dividend information in Watt's study) is refined to incorporate quarterly earnings and dividend data. Second, the potential problem of misclassification of information due to inherent noise of empirical models, which may have contributed substantially to Watt's results, is treated in a filtering process based on the concept of prediction intervals. This study emphasizes an aspect in Watt's methodology, namely, the isolation of dividend information from the firm's other publicly available sources of information, including earnings information.

Woodridge (1982), however, observes that in order to measure the effects of dividend changes on stock prices, it is important to distinguish between anticipated and unanticipated changes in dividends. Dividend forecasts by Value Line are used as an estimate of the expected dividend. Thought his results are essentially similar to those of Petit and Aharony – Swary, the significant finding is that the announcement of dividend changes anticipated by the market has no effect on stock prices.

Downes and Heinkel (1982) attempt to estimate the extent to which the declaration of dividends, as modeled by Bhattacharya (1979), signal or convey to investors information about the firm value. The Bhattacharya's dividend signaling hypothesis is rejected by the data. The negative effect of dividends on firm value is inconsistent with any dividend-signaling model and not just with the Bhattacharya's model; such a negative effect is also inconsistent with the declaration of dividends by value-maximizing firms. According to Downes and Heinkel, the significant role found for dividend suggests that this may be

attributable to omitted, not readily observable, variables from the valuation equation.

Christie finds that for less than 20% reduction, prices fall by about 4,95% while for reductions exceeding 605, prices fall by about 8,785. In contrast, for dividend omissions, prices fall by about 6,94%. In other words, large dividend reduction is value more severely by the market than dividend omission.

Woolridge (1983) investigates the impact of one type of financial decision – dividend payments – on the values of alternative security classes- common stock and nonconvertible preferred stock and debt. Previous studies have shown the positive (negative) dividend change announcements produce positive (negative) common stock returns. Whereas these findings have been attributed to the signaling aspect of dividends, they are also consistent with a wealth transfer hypothesis. In his study, the dividend change-common stock price relationship was corroborated and it was demonstrated that unexpected dividend increases (decreases) are associated with positive (negative) debt and preferred stock returns. Overall, these results indicate that signaling is the primary factor influencing security prices around dividend change announcements. Although wealth transfer and / or confounding effects cannot be ruled out, the predominant effect is signaling.

Asquith and Mullins (1983) investigate the impact of dividends on stockholder's wealth by analyzing 168 firms that either pays the first dividend in their corporate history or initiate dividends after a 10-year hiatus. The empirical results exhibit larger positive excess returns (3,7%) that any previous study on

dividends. This result does not depend on any other events (such as earnings announcements) and the excess return is positively related to the size of the initial payment. Subsequent dividend increases for the same sample of firms is also investigated. The results for subsequent dividend increases (1,2%) are small compared to the initial increase and are comparable to those found by Charest and by Aharony and Swary. The findings for both initial and subsequent dividends are consistent with the view that dividends convey unique, valuable information to investors.

Ofer and Siegel (1987) document a relationship between announcements of unexpected changes in financial policy and unexpected changes in performance of firm. Using a new methodology that combines analysis of stock price movements and earnings forecast data, they show that, following the announcement of an unexpected dividend change, analysts revise their forecasts of earnings and they do so in a manner consistent with rationality. In particular, they document a systematic relationship between forecast errors for forecasts made before dividend announcements and either the size of the unexpected dividend change or the change in stock price surrounding the announcement. Furthermore, this systematic relationship disappears for forecasts made after the dividend announcement. Their results are therefore consistent with the hypothesis that unexpected dividend changes contain information about the firm's expected performance and therefore provide support for dividend-signaling models.

Jaharaman and Shastry (1988) examine the valuation impact of specially designated dividends (SDDs) – those labeled by management as “extra”, “special” or “year-end”-by analyzing the behavior of stock and bond prices on dates surrounding their announcements. The evidence presented in their study is considered positive signals by the market, with most of the gains associated with their announcements accruing to stockholders. They also examine the relationship between the frequency of SDD declarations by firms and the announcement – related returns to the firm’s security holders. The evidence supports the hypothesis that repeated announcements of SDDs conveys less information than do infrequent SDD announcements.

Finally, Kao and Wu (1994) propose a generalized friction formulation of the Marsh – Merton model (1987) to examine the information content of a firm’s dividends. The model resolves the estimation problem associated with the stepwise movement of observed dividends. The structure of the model is based on an extension of Marsh and Merton’s framework. More specifically, the model encompasses characteristics of both the dynamic dividend adjustment and information-signaling hypothesis. By distinguishing dividend changes due to both purposes the model offers a cohesive framework for joint or separate tests of dividend smoothing and signaling. In contrast to Watt’s finding, their results show a much stronger positive relation between unexpected dividends and unexpected earnings changes. They therefore provide direct evidence consistent with the hypothesis that unexpected dividend changes signal information about firm

performance to market participants and therefore provide support for dividend – signaling models.

It is worthy of attention that the classical dividend signaling theory is shaken again by the most recent two studies in the area. DeAngelo and Skinner (1996) study the signaling content of managers' dividend decisions for 145 NYSE firms whose annual earnings decline after nine or more consecutive years of growth. Using a variety of model specifications and definitions of favorable dividend signals, the authors find virtually no support for the notion that dividend decision help identify firms with superior future earnings and conclude that dividends tend not to be reliable informative signals.

Benartzi, Michaely and Thaler (1997) investigate NYSE and AMEX firms' earnings and dividends, and find limited support for the view that changes in dividends have information content about future earnings changes. While there is a strong past and concurrent link between earnings and dividend changes, the predictive value of changes in dividends seems minimal. The only strong predictive power this study finds is that dividend cuts reliably signals an *increase* in future earnings. There is some evidence that dividend – increasing firms are less likely to have subsequent earnings decreases than firms that do not change their dividend despite similar earnings growth. The authors conclude that changes in dividends mostly tell us something about what has happened. If there is any information content in dividends announcement, it is that the concurrent change in earnings is permanent rather than transitory.

As discussed above, the value-relevance of dividend policy has been in the forefront of financial research since Miller and Modigliani's (1961) pioneering work. Prior empirical research, generally focused on firms listed in developed stock markets, suggests that the announcement of dividend increases, either in cash or stock, is associated with significantly positive stock market excess returns. In the case of cash dividends, this evidence is attributed to information signaling and agency cost effects; in the case of stock dividends it is attributed to information signaling and "optimal" trading price range effects. While the focal point in studies performed in developed markets has shifted to explaining the positive wealth effects of dividend increases, the wealth impact of dividend policy changes in emerging markets is currently not well established. Given alternative market microstructure and different information, tax and control environments, the impact of dividend changes is likely to vary across economic environments in different countries.

Travlos, Trigeorgis and Vafeas (2001) evaluate the role of cash and stock dividends (bonuses) in an emerging stock market. The Cyprus market was an interesting choice of an emerging market in assessing dividend policy changes because it differs from developed markets in several notable dimensions: First, firms listed in the market have, for the most part, highly concentrated ownership structures that may render a standard free-cash-flow explanation for dividend policy changes less likely. Second, over the period under study the Cyprus stock market generally lacked transparency, potentially allowing for exploitation of smaller shareholders by larger ones; such exploitation may be mitigated by

dividend increases. Finally, the lack of fixed transactions costs and round-lot restrictions in trading in this market suggests that there is limited use for an optimal trading range for share prices. In this regard, empirical evidence on the value-relevance of dividend increases in this market provides a useful venue for revisiting alternative traditional explanations for dividend policy.

The test results reveal significantly positive stock market returns for firms announcing increases in cash and in stock dividends in line with our expectations. Additional tests, however, are unable to provide convincing evidence about the validity of alternative explanations for dividend policy. These results may be driven by methodological considerations such as imperfect empirical constructs and small sample sizes, or naïve investors that are unable to distinguish between information, agency and liquidity considerations in a small emerging market.

AUTHOR	SUGGESTIONS / CONCLUSIONS
Asquith & Mullins (1983)	Dividends convey unique, valuable information to investors.
Benartzi, Michaely & Thaler (1997)	They find limited support for the view that changes in dividends has information content about future earnings changes.
Charest (1978)	There is no leakage of information prior to the dividend announcement, and the full impact of the announcement is concentrated in the 2-day announcement period.
Christie	Large dividend reduction is valued more severely by the market than dividend omission.
De Angelo & Skinner (1996)	They conclude that dividends tend not to be reliable informative signals.
Downes & Heinkel (1982)	The significant role found for dividend suggests that this may be attributable to omitted, not readily observable, variables from the valuation equation.
Jaharaman & Shastry (1988)	Repeated announcements of SDDs convey less information than do infrequent SDD announcements.
Kao & Wu (1994)	Their results show a much stronger positive relation between unexpected dividends and unexpected earning changes.

AUTHOR	*SUGGESTIONS / CONCLUSIONS*
Kwan (1981)	He finds statistically significant abnormal returns when the firms announce unexpectedly large dividend changes.
Ofer & Siegel (1987)	Unexpected dividend changes contain information about the firm's unexpected performance and therefore provide support for dividend-signaling models.
Petit (1972)	Substantial information is conveyed by the announcement of dividend changes.
Watts & Gonedes (1973)	Dividend changes convey very little information about future earnings changes.
Woolridge (1982)	The announcement of dividend changes anticipated by the market has no effect on stock prices.

TABLE 4: Suggestions / Conclusions of the Empirical Research

EMPIRICAL EVIDENCE ON DIVIDENDS THEORIES

	Signaling Hypothesis	
Research	**Accept**	**Reject**
Aharony and Swary	✔	
Asquith & Mullins (1983)	✔	
Benartzi, Michaely & Skinner (1996)		✔
Charest (1978)		✔
Christie		✔
De Angelo & Skinner (1996)		✔
Downes and Heinkel (1982)		✔
Jaharaman & Shastry (1988)		✔
Kao & Wu (1994)	✔	
Kwan (1981)	✔	
Ofer & Siegel (1987)	✔	
Petit (1972)	✔	
Watts & Gonedes (1973)		✔
Woolridge (1982)		✔

TABLE 5: Signaling Hypothesis

6. CONCLUSIONS

From the above discussion, it may be deduced that it is not strange that the dividend policy has received a lot of interest in the academic community. As we see, many theoretical models have been developed to explain the effect that a dividend policy has on the value of the firm's shares. There have been a number of empirical tests of the "signaling effect' of dividends, too.

This paper examines the impact of dividend signaling behavior on firms' earnings and share prices. In some cases, it shows that the only opportunity for communication that managers had with traders was through dividend announcements. It assumes that outside investors have imperfect information about firm's profitability and that cash dividends are taxed at a higher rate than capital gains.

As we see, the basic idea behind dividend signaling is simple. Paying dividends proves that a firm is able to generate cash, rather than just accounting numbers. By demonstrating its profitability in this manner, the firm can differentiate it from less profitable firms. Further, management then has an incentive to perform well enough to maintain its dividend and avoid the adverse consequences of a dividend cut or any equity issue to replace the funds paid out. Viewed in this framework, dividend changes reveal management's assessment of a firm's profitability.

However, there are many ways for the stockholders of a firm to take cash out without receiving dividends. The most obvious is that the firm can buy back cash out without receiving dividends. This has the advantage the most investors

are not taxed as heavily on shares sold as they are on dividends received. Under the assumptions of the Modigliani – Miller theorem, a firm has value even if it pays no dividends. Indeed, it has the same value it would have if it paid dividends.

So, nobody can say if it is the best policy for a company to choose to pay dividends to its shareholders in order to maximize firms' value.

This paper, however, has demonstrated that the earnings of a firm have a significant effect on how investors interpret a dividend change. Further research will be necessary to determine the cause of this interaction.

7. REFERENCES

Αληφαντής, Γ., "Λογιστικές Εργασίες Τέλους Χρήσεως", 2000, *Εκδόσεις ΠΑΜΙΣΟΣ, γ΄ Έκδοση, 364-368.*

Aharony, J., and Swary, I., 1980, "Quarterly Dividend and Earnings Announcements and Stockholder's Returns: An Empirical Analysis". *Journal of Finance 35, no.1: 1-11.*

Akerlof, G. A., 1970, " Quality Uncertainty and the Market Mechanism". *Quarterly Journal of Economics: 488-500.*

Ambarish, R., John, K., and Williams, J., 1986," Efficient Signaling with Dividends and Investments". *Journal of Finance 40, 321-343.*

Asquith, P., and Mullins, D.W., 1983, "The impact of initiating Dividend Payments on Shareholders Wealth". *Journal of Business 56, no.1: 77-95.*

Bar – Yosef, S., and Huffman, L., 1986," The Information Content of Dividends: A Signaling Approach". *Journal of Financial and Quantitative Analysis 21: 47-58.*

Benartzi, S., Michaely R. & Thaler, R., 1997, "Do changes in dividends signal the future or the past?*" The Journal of Finance, 52, 1007-1033.*

Bhattacharya, S., 1979, "Imperfect Information, Dividend Signaling, and "the Bird in the Hand" Fallacy". *Bell Journal of Economics 10: 259-270.*

Bhattacharya, S., 1980, " No dissipative Signaling Structure and Dividend Policy". *Quarterly Journal of Economics 95: 1-24.*

Black, F., 1976, " The Dividend Puzzle". *Journal of Portofolio Management. 2: 5-8.*

Boyd, J., Jagannathan R., 1994, ”Ex-Dividend Price Behavior Of Common Stocks”. *Federal Reserve Bank Of Minneapolis, Research Department: 173.*

Brealey R. and Myers S., “Principles of Corporate and Finance”, McGraw – Hill, 7th Edition, 433-434.

Brigham, F.E., Gapenski C.L., Ehrhardt, C.M., *“Financial Management Theory and Practice“, 9th Edition, 660-662.*

Charest, G., 1978, “ Dividend Information, Stock Returns and Market Efficiency II”. *Journal of Financial Economics 6: 297-330.*

De Angelo, H., De Angelo, L. & Skinner D.J., 1996, “Reversal of Fortune: Dividend Signaling and the disappearance of sustained earnings growth”. *Journal of Financial Economics, 40, 341-371.*

De Angelo, H., De Angelo, L. & Skinner D.J., 2000, “Special Dividends and the evolution of Dividend Signaling”. *Journal of Financial Economics, 57, 309-354*.

Downes, D.H., and Heinkel, R., 1982, “ Signaling and the Valuation of Unseasoned New Issues”. *Journal of Finance, 37: 1-10.*

Frankfurter, G., Wood, B., 2002, “Dividend Policy Theories and their Empirical Tests”, *International Review of Financial Analysis, 111-138.*

Gonedes, N.J., 1959, “ Dividends, Earnings and Stock Prices”. *Review of Economics and Statistics 44, no. 1: 37-51.*

Griffiths, E.W., Hill, R. C., Judge, G.R. 1993, “ Learning and Practicing Econometrics”. *John Wiley & Sons, Inc.*

Gordon, M.J., 1959, “Dividends, Earnings and Stock Prices”. *Review of Economics and Statistics 41: 99-105.*

Hakkanson, N. H., 1982, “To pay or not to Pay Dividends”. *Journal of Finance 37, no.2: 415-428.*

Hsiao, C.1986, “Analysis of Panel Data”. *Cambridge University Press.*

John, K., and Williams, J., 1985, “ Dividends, Dilution and Taxes: Signaling Equilibrium”. *Journal of Finance 40: 1053-1070.*

Kalay, A., 1980, “Signaling Information Content and the Reluctance to Cut Dividends”. *Journal of Financial and Quantitative Analysis 15: 855-863.*

Kale, R.J., and Noe, H.T., 1990, “Dividends, Uncertainty, and Underwriting Costs under Asymmetric Information. *Journal of Financial Research 4: 265-277.*

Kao, C., and Wu, C., 1994, “ Tests of Dividend Signaling using the Marsh – Merton Model: A Generalized Friction of Approach”. *Journal of Business 67”. No.1: 45-68.*

Kwan, C.C., 1981, “ Efficient Market Tests of the International Content of Dividend Announcements: Critique and Extension”. *Journal of Financial and Quantitative Analysis, no.2: 193-206.*

Laub, M.P., 1976, “On the International Content of Dividends”. *Journal of Business 49: 73-80.*

Lintner, J., 1962, “ Dividends, Earnings, Leverage, Stock Prices and the Supply of Capital to Corporations”. *Review of Economics and Statistics 64, no.3: 243-269.*

Litzenberger, R.H., and Ramaswamy, K., 1979, " The effect of Personal Taxes and Dividends on Capital Asset Prices", *Journal of Financial Economics 7: 163-195.*

Makhija, A.K. and Thompson, H.E., 1986, " Some Aspects of Equilibrium for a Cross- Section of Firms Signaling Profitability with Dividends: A Note". *Journal of Finance, 249 – 253.*

Marsh, T.A., and Merton, R.C., 1987, "Dividend Behavior for the Aggregate Stock Market. *Journal of Business 60: 1-40.*

Miller, M.H., and Modigliani, F. 1961, " Dividend Policy, Growth and the Valuation of Shares". *Journal of Business 34: 411-433.*

Miller, M.H., and Rock, K. 1985, " Dividend Policy under Asymmetric Information". *Journal of Finance 40: 1031-1051.*

Ofer, A., and Siegel, D.W., 1983,"Corporate Financial Policy, Information, and Market Expectations: An Empirical Investigation of Dividends". *Journal of Finance 42: 889-911.*

Petit, R.R., 1976, " Comments on the Impact of Dividend and Earnings Announcements: Reconciliation". *Journal of Business: 97-106.*

Poterba, J.M., and Summers, L.H. 1984, " New Evidence that Taxes Affect the Valuation of Dividends". *Journal of Finance 39, no.5: 1397-1415.*

Ross, S.A., 1977, "The Determination of Financial Structure: The Incentive Signaling Approach". *Bell Journal of Economics 8: 23-40.*

Rodriguez, J.R., 1992, " Quality Dispersion and the Feasibility of Dividends as Signals". *Journal of Financial Research 4: 307-315.*

Sharpe, F. W., Alexander J.G., and Bailey, V.J*., "Investments" 6th Edition, 567.*

Spence, A.M., 1973, "Job Market Signaling ". *Quarterly Journal of Economics: 488-500.*

Talmor, E., 1980, " Asymmetric Information, Signaling and Optimal Corporate Financial Decisions". *Journal of Financial and Qualitative Analysis: 785-812.*

Travlos, N., Trigeorgis L., Vafeas N., 2001,"Shareholder Wealth Effects of Dividend Policy Changes in an Emerging Stock Market: The Case of Cyprus". *Multinational Finance Journal*, vol.5, no. 2: 87-112.

Watts, R., 1973, " The Information Content of Dividends". *Journal of Business 46, no.2: 191-211.*

Watts, R., 1976, " Comments on the Impact of Dividend Changes". *Journal of Financial Business: 97-106.*

Woodridge, J.R., 1982, "The Information Content of Dividend Changes ". *Journal of Financial Research: 237-247.*

Woodridge, J.R., 1983, " Dividend Changes and Security Prices". *Journal of Finance 38: 1607-1615.*