

IESE



University of Navarra

THE DETERMINANTS OF
DIVIDEND POLICY

Cezary Mech*

RESEARCH PAPER No 259
November, 1993

* Doctoral Candidate, IESE

Research Division
IESE
University of Navarra
Av. Pearson, 21
08034 Barcelona - Spain

Copyright © 1993, IESE
Do not quote or reproduce without permission

THE DETERMINANTS OF DIVIDEND POLICY

Abstract

Although in the absence of all market imperfections Modigliani-Miller's theory about dividend irrelevance is binding, in the «real world», dividend payments are influenced by factors related to asymmetric information, agency costs, personal tax, bargaining position and transaction costs.

This paper presents a model of dividend policy relevance. It uses two complementary frames of reference to analyze dividend policy. First, it describes the factors that affect dividend payment. Second, it considers the specific situation inside the company, mainly the legal and FCF characteristics of the sector, and the ownership structure.

For each type of external factor, a brief overview is given and the way it relates to the individual company is discussed. The unique position of dividend policy is defined by a bundle of unique internal factors and the way they relate to the external factors. Possible trade-offs between these factors in the course of optimizing dividend policy are also presented. The task for financial managers is to adjust and renew the relationships between these factors as time goes by and changes erode their relative importance.

According to this perspective, a firm's value depends not only on its having an optimal business strategy and a good implementation of that strategy, but also on its ability to communicate its optimizing attitude through dividend payment. For the firm in pursuit of excellence, production and marketing that production, on the one hand, and communicating about it to investors, on the other, are two sides of the same coin.

The approach to dividend policy presented in this paper focuses on specific attributes of the firm as sources of value expression through dividend payment. It differs not only with regard to the fundamental objective of dividend policy (which is to maximize firm value, rather than simply being the best way of giving investors a return on their investment), but also as regards the means that dividend policy makes available to the firm in order to realize this objective.

THE DETERMINANTS OF DIVIDEND POLICY

The objective of this paper is to address the basic question of the relevance of dividend policy for the value of the firm.

Understanding the sources of value creation has always been core issue in finance. Going back to the definition, the value of the firm, which is the sum of equity, debt and corporate taxes¹, could be defined as:

$$(1) \quad V=S-W-T-C-X$$

where:

V – value of a firm;

S – capitalized value of revenues;

W – capitalized value of wages and other fringe benefits;

T – capitalized transaction costs related to dividend policy;

C – capitalized other costs;

X – capitalized obligations to society in the form of paid marginal personal taxes.

Rearranging gives:

$$(2) \quad V=(S-C)-W-T-X$$

Having presented this value chain of the company, let us describe the factors through which dividend policy may affect each of the elements of the chain. This will lead us to reconsider the importance of dividend policy as a determinant of a company's value.

1. Dividend policy external factors

The asymmetric information factor

A quick look at the previous formulas, where all right-side elements are capitalized, shows the importance of the risk factor for the company value. Because all elements are capitalized we can find the importance of the risk factor more clearly if we show the value of the company as the sum of the present values of all future expected cash flows.

$$(3) \quad V = \sum \frac{E(CF)}{\rho}$$

where:

$E(CF)$ – the expected before-tax cash flow of the unlevered firm;

ρ – cost of capital, equal to the weighted average costs of capital before tax.

It is obvious that the value of information influences both the numerator and the denominator: the denominator because it reflects the perceived risk, which may vary with the size of asymmetric information, the numerator because information quality obviously affects future expectations.

The systematic risk factor related to the cost of capital could be reduced if the asymmetry of information between the activity of the firm and the investment community decreased. Hence, the value of the firm would rise, since cash flows in the numerator would be discounted at a lower rate.

When the capital market cannot adequately differentiate between good and bad firms, the good firms have an incentive to signal their quality by undertaking some action that would be too costly for poor firms to imitate². This happens because otherwise the investment community would assume the worst scenario for any expected cash flow. A reduction in the numerator, in consequence, would have a negative effect on the value of the company. This is the justification for the signaling models involving firms using their dividends as a signal to the capital market concerning their underlying value.

On the one hand, managers have an incentive to send out true information about the value of their company because it will benefit them; on the other hand, they are also forced to send true signal. The incentive stems from the fact that undervaluation always increases the threat of a takeover attempt, proxy contest and other undesirable actions for managers. If the incumbent management team is unwilling to send out true information, then another team may have an incentive to take over the firm and benefit from reducing asymmetric information costs.

Dividend smoothing phenomena give greater credibility to the signal since smoothing firms commit themselves to paying higher dividends in the future. After a time this dividend policy becomes a reputational asset and investors who «recognize the relationship between current dividends and future returns, pay higher prices for stocks with historically higher dividends, other things equal...»³.

Default on a dividend payment would seriously damage the value of a company, because it would reveal an internal crisis and the communication tool would be lost, which would create more risk in the assessment of firm value.

The asymmetric information explanation is nowadays the most satisfactory explanation of dividend payments. The empirical studies discussed in the previous chapter overwhelmingly support the hypothesis about the information content of dividends. From a firm's dividend policy the market learns how managers view the company's future cash flows. This tool used by managers to send signals to investors influences the value of the company and thus supports the thesis of dividend policy relevance.

Having presented the influence of the asymmetric information factor on the perceived risk of business activity, we shall now turn to the factors that affect the way the wealth generated by a firm is redistributed among employees, society and the owners.

The agency cost factor

First, we shall see how important the sum $(S-C)-W$ is in determining the value of a company. First of all, the relation between $(S-C)$, which we could call «added value», and W , «wages», makes the value of the company adversely related to the proportion of wages in the added value. Secondly, we note the importance of the total difference, which is such that even a high proportion of wages can be irrelevant if the total would be higher with the same capital involvement.

One of the factors that affect redistribution between employees and owners is related to agency cost reduction. The agency cost factor stimulates workers' and managers' performance, shifting wealth from them to the holders of the company and reducing costs related to monitoring and bonding activity. By reducing the agency cost some savings are made and more cash flows in for the owners at the expense of the employees, who at least partially compensate for this by working more efficiently and raising the level of company activity.

Dividend payments can decrease the agency cost by making life more difficult for managers: taking cash out of their hands implies reducing their chances of using it improperly and involving other monitoring parties to scrutinize managers.

By paying dividends a firm is forced to resort more frequently to the market for new capital to obtain funds for investment projects. When a firm raises new capital, its performance is carefully reviewed by an investment banker or some kind of indenture trustee, who monitors managers on investors' behalf. During this process, stockholders observe the terms on which new funds are raised. Equity and debt providers receive new information about the uses of their funds and about the firm's financial situation. Underwriters and lenders put their own money and reputation at stake, which makes their verification valuable to other investors.

To sum up, the practice of paying dividends increases a firm's presence in the capital market, which provides a form of verification that saves agency costs. This, in turn, improves the value of the company. If the incumbent management team is unwilling to reduce agency costs, then another team has an incentive to take over the firm and benefit from doing so. The empirical studies of Kaplan and Roll (1972), Rozeff (1982), and Kalay and Shimrat (1986) presented in the previous chapter support the existence of this agency cost factor in dividend policy.

The bargaining factor

Among the factors related to the redistribution between the firm and society the strongest is the firm's bargaining position. The transfer of wealth from society to the firm can be greater or smaller. The bargaining factor has to do with the possibility of increasing the value of the firm by changing the redistribution of the wealth generated by the company among the participants –consumers, suppliers, society, tax recipients, workers, debtholders and investors.

The bargaining factor could be found in the previous analysis. By bargaining, the pie could be shared out differently between the firm and its employees. Additionally, inside the company there is the possibility of dividing the firm's value up differently between tax recipients, debtholders and stockholders.

The strategy of transferring wealth in favor of the firm increases the value of the company; redistributing the pie in favor of stockholders is not neutral, either. So, if it is possible to find situations where this transfer is caused by dividend payments, then this will argue in favor of the importance of the bargaining factor in dividend policy.

The bondholder wealth expropriation hypothesis was analyzed in the previous chapter. Now we shall briefly analyze the use of strategically reduced dividend payments to increase negotiating power with trade unions. This is a behavioral method. It assumes that people perceive dividends as an unchangeable channel of return on investment, and this «common knowledge» could lead to sociological manipulations.

DeAngelo and DeAngelo (1990) found evidence that some managers voluntarily reduced dividends for strategic reasons, e.g., to enhance the firm's bargaining position with organized labor or its lobbying position with Congress. They investigated eight sample firms whose managers broke a long history (31 or more years) of dividends when debt constraints were far from binding. Investigating *Wall Street Journal* articles, DeAngelo and DeAngelo (1990, p.1429) found indications that managers of five of these eight firms attempted to use dividend policy strategically, e.g., as a negotiating tactic with unions. For example, in the Ford case, managers asked for labor concessions, and, as part of a Congressional lobbying effort, Bethlehem Steel called for «prompt implementation of import restraints».

Similarly, government sometimes uses dividends as a tool in bargaining with organized labor and lobbying public opinion. Nixon, fighting against inflation, imposed a «voluntary» 4% limit on dividend increases during the period August 1971 to June 1974, but «forgot» about share repurchases. In 1993, the Spanish government called for three-year wage and dividend curbs⁴. «Under the proposals, all wages and dividends would be frozen next year and would rise below inflation in 1995. Any increase in 1996 would depend on the state of the economy». It is hardly surprising that the CEOE, the Spanish employers' federation, had «no fundamental objection» to the proposals: implementing them would raise the value of companies.

The existence of dividend payment limits in debt convenience is well known. Also, workers, in their employment contracts, take into account the fact that because of their lower education they could be cheated. Hence, these actions raise conflicts between debtholders, employees and stockholders, as well as arguing in favor of the relevance of dividend payments. Now it is time to show the conditions in which dividends could be used to raise total revenue.

The value of the bargaining factor of dividends lies in the possibility of using dividends to give investors a return on their investment in a systematic way, and in the fact that this return, like that of bonds, is easy to calculate. This simplicity is used by business organizations that have limited freedom in establishing the prices of their products. The enforced routine whereby return on investment is provided in the form of dividends can help companies to negotiate the price level they need in order to satisfy the cash requirements for operations.

When other ways of taking generated cash out of the firm are questionable, then the role of dividends seems to be very important. A company's bad cash situation can be used to justify the proposed price increase and/or an unavoidable decrease in tax payment. These cases create incentives for management to adopt a high dividend payout policy. The incentive may stem from the fact that funds retained inside the firm are implicitly subject to expropriation by the monopolist consumer. If so, there is the possibility of raising leverage on them in order to justify a price increase that will provide necessary resources. At the same time, there is a risk that if the disposed resources had stayed in the company, this return would be lost for investors.

Hence, it could be expected that firms would pay dividends in order to have a stronger bargaining position vis-à-vis consumers when it comes to setting the price of their products. A similar line of reasoning could be applied when talking about bargaining with suppliers to obtain lower prices. In this way, companies could increase their price sensitivity regarding their own and their suppliers' products, both for internal control purposes and for investor return.

Personal tax factor

Finally the value of the dividend dollar is different for different investors, depending on their personal tax bracket.

Personal tax is a factor in dividend policy in that paying dividends to investors rather than giving them capital gains implies forcing them to pay more personal taxes rather than taxes on capital gains or cash from selling preemptive rights in below-market-value capital increases (which, in fact, is a cash part of capital gain). Capital gain is taxed at the moment of selling the stock, which delays tax payments, making the NPV of tax payment lower, even if the tax rate for capital gains is equal to that for other kinds of income, as is the case in most Western economies. In the case of rights, it is even better because investors receive cash now and pay taxes at the moment of selling the stock. Hence, paying dividends is very expensive and it would seem better to invest this cash in 0-NPV projects, or to buy-back own stock, if this is legally possible. Therefore, if tax were the only factor, we would expect to find companies virtually eliminating dividend payments, with the exception of a small cluster of people and institutions in a 0% tax bracket and with a preference for regular cash.

In the equation of the value of the company we introduced a marginal personal tax element as reducing the value of the company. Hence, the market value of the company is reduced only by a marginal personal tax factor. But from the point of view of a personal investor, the value depends on his or her personal tax bracket and the possibility of sheltering additional tax payments. This could be expressed in the equation :

$$(4) \quad V_p = \sum \frac{E(CF_{APT})}{\rho_p}$$

where:

V_p – the value of the investment, from investors' point of view;

$E(CF_{APT})$ – the expected after-personal-tax cash flow from the investment;

ρ_p – investment's cost of capital, from investors' point of view.

The nominal tax payment related to the dividend payment could be reduced, as Miller and Scholes (1978) suggested, by utilizing various sheltering techniques. But even if they are used, the cost of utilizing them remains, and, as we mentioned in the previous chapter, they have limited applicability.

Hence, in the numerator we got cash flow after tax and in the denominator a risk rate attached by the investor to this specific cash flow. The utilization of specific sheltering techniques influences the numerator as well as the denominator. They influence the numerator because, on the one hand, they reduce the effective tax rate and, on the other, any technique that is used has its own transaction costs. The denominator is not neutral, either, and the way it is influenced will be discussed together with other elements of transaction costs.

The personal tax factor is strictly related to dividend policy. A policy that favors dividend payments increases the amount of cash taxed as ordinary income. Hence, it decreases the effective amount of cash received by investors. Because of the reduced numerator, a company that pays dividends has to be worth less than one that gives return in the form of capital gain. Although some level of dividend payment might be appreciated because of liquidity needs for current consumption and Shefrin and Statman's (1984) self-control factor, dividend payments in excess of consumption needs are related to the costly reinvestment of dividends and additional tax payments.

Shareholders have voting power through which they can influence the company's action. One of the areas where they can exercise their power of control is that of dividend policy. The personal investor value of the firm expressed in equation (4) is directly related to the company's dividend policy, which could be denoted as $V_p(d)$. In order to maximize the benefits from holding stocks of the firm, investors will try to choose the dividend payment in the most favorable way. This action could be written in functional form as:

$$(5) \quad \max V_p(d)$$

where d is the chosen dividend policy.

The above-mentioned implications of transaction costs will be analyzed in greater detail in the following section.

The transaction cost factor

The whole of the previous chapter was devoted to three factors: asymmetric information, agency cost and personal tax. Now we deal with the more obvious factor of transaction costs, which effectively reduce the value of the firm.

In order to pay regular non-residual dividends it is necessary to issue new equity, as Miller and Modigliani showed. This action of paying dividends and issuing equity is an operation between two pockets, transferring the same money from one to the other and vice versa, losing a certain amount of it in the process. This action is not very rational, although in Shefrin and Statman's (1984) theory this is typical of persons.

From the transaction cost minimization point of view, the dividend payment needs to be residual, that is, dividends should only be paid when all of the investment needs are satisfied. Then, only a positive of free cash flow would be used for dividend payments or –better– for a share repurchase program. Any kind of program that is associated with regular dividend payments will at the same time bear new issues requirements and therefore additional transaction costs. Hence, the value of the firm is reduced by the amount of the capitalized future transaction costs. These are not as small as was usually thought. Smith (1977, p.349) found that, on average, the amount is 6.17% of total issues for underwritten cash offers and 6.05% for underwritten rights issues.

Additionally, it was found that the announcement of an issue results in a fall in the stock price⁵. These empirical studies are consistent with an asymmetric information model view of the company, in which equity cash flows communicate information to investors: unanticipated equity cash outflows are interpreted as positive signals and a company's new cash flow requirement for the equity market is viewed as a negative signal. These signals are then followed by corresponding changes in the stock price.

For equity issues in the United States, the fall in stock price consequent upon the announcement of an issue amounts to nearly three percent. Although this price effect may not sound overwhelming, the fall in market value is equivalent to nearly a third of the new money raised by the new issue. Asquith and Mullins (1986) found that the aggregate reduction in industrial firms' equity value as a percentage of the planned proceeds of primary issues averaged 31%, while secondary issues were diluted by as much as 77.6%⁶. They also found that larger equity issues are associated with larger announcement day price reductions. Hence, the cost associated with the necessary issue of new capital is large enough to be worth taking into consideration before deciding about the dividend level.

Additionally, as we mentioned before, the utilization of personal tax sheltering techniques influences the numerator presented in equation (4), because transaction costs reduce the received cash flow. The denominator is affected, too. Apart from the risk attached to the expected cash flow, which is mostly dependent on portfolio diversification, additional risk is incurred when sheltering techniques are used.

From the point of view of transaction costs that arise in the process of portfolio rebalancing, Barclay and Smith (1988, p.67) find it difficult to conclude which policy imposes larger total costs on shareholders. «With dividends, shareholders who engage in net savings incur reinvestment costs; with repurchases, reinvestment costs are avoided but additional expenditures on portfolio rebalancing appear. For investors who dissave, the costs of withdrawing funds from their portfolio appear to be lower with dividends than with repurchases.»

As suggested in the previous section, there is an interrelationship between dividend policy factors and capital structure factors, because the two are very similar. The above-mentioned costs could alternatively also be minimized by actions involving changes in the capital structure –e.g., having a larger than necessary cash position and easy access to bank loans, according to Myers and Majluf's (1984) theory about financial slack.

Hence, there could be some trade-off between transaction costs associated with establishing the dividend policy and costs associated with holdings' larger financial slack. And, of course, these minimized costs, together with other costs, need to be traded off against the advantages of dividend payments.

Compared to the previously mentioned transaction costs, the costs related to share repurchase are not as large. Vermaelen (1988, p.156) compares the transaction costs of tender offers, which equal 2.25% for brokerage fees and administrative costs, with the «representative» marginal investor savings. From a personal investor's point of view, the value is equal to the tax saving for a 30% tax bracket investor on ordinary income when the firm repurchases 15% of the value of the share outstanding as an alternative to a dividend payment. But these costs are still higher than those related to payment of dividends, because the dividend check is attached to usual company reports and these costs are marginally low.

Summary

The preceding description shows that five factors related to dividend policy are important in determining the value of a company: the information outflow from the company to the investors, i ; the agency cost, a ; the bargaining position, b ; personal tax, x ; and the transaction cost associated with dividend policy, t . This can be written in functional form as:

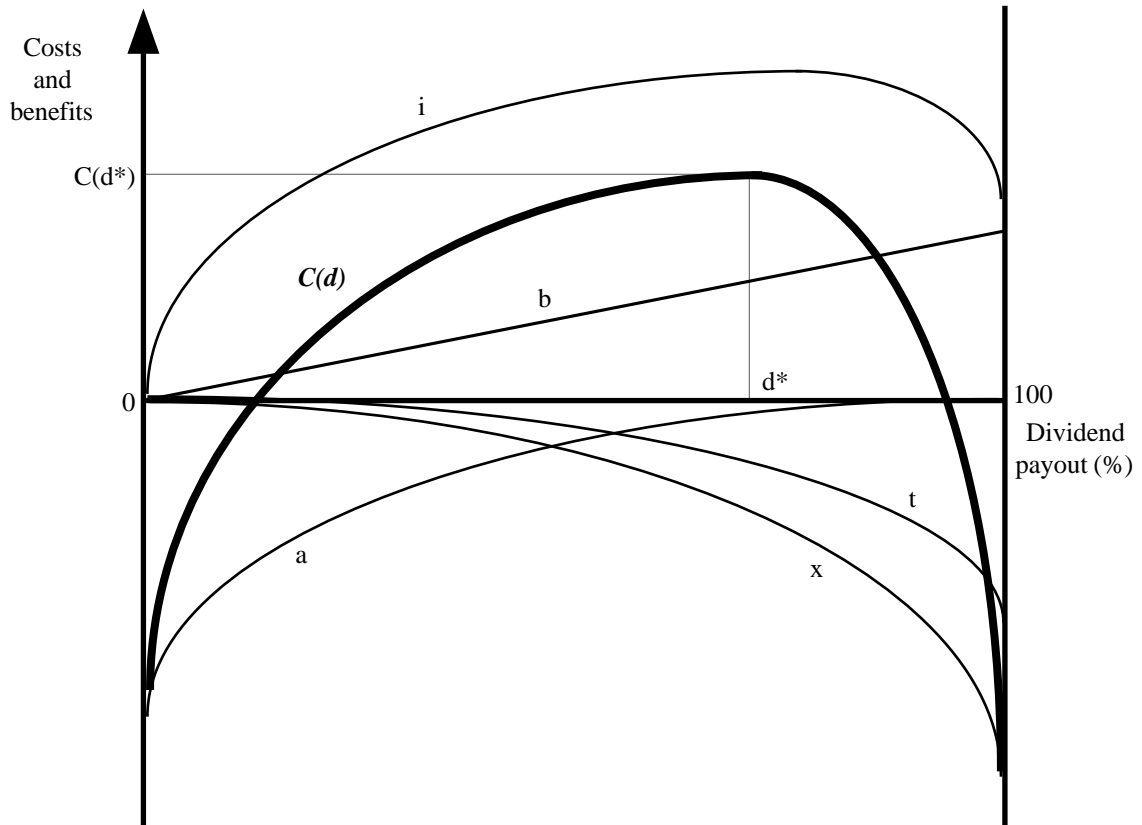
$$(6) \quad V=f(i,a,b,t,x)$$

From our discussion we can venture that the partial derivatives of the value of the company, V , with respect to its various arguments are:

$$(7) \quad \frac{\partial V}{\partial i} > 0, \quad \frac{\partial V}{\partial a} < 0, \quad \frac{\partial V}{\partial b} > 0, \quad \frac{\partial V}{\partial t} < 0, \quad \frac{\partial V}{\partial x} < 0,$$

The influence of dividend policy on the company value, through the relationship between the factors analyzed above, is graphically presented in Figure1.

Figure 1. Optimal dividend policy determined by maximization of the sum of external factors



Total of external factor costs and benefits $C(d)$, as a function of the earnings paid out as dividends, d ; i –the information benefit, a –the agency cost, b –the bargaining position, x –personal tax expense, t –the transaction cost; $C(d^*)$ –maximum total sum of external factors at optimal payout ratio.

The sum of the factors' costs and benefits show the dividend policy effect on the value of the firm. The task of dividend policy is to maximize the value of the company. This could be written in functional form as:

$$(8) \quad \max V(d)$$

where d is chosen dividend policy.

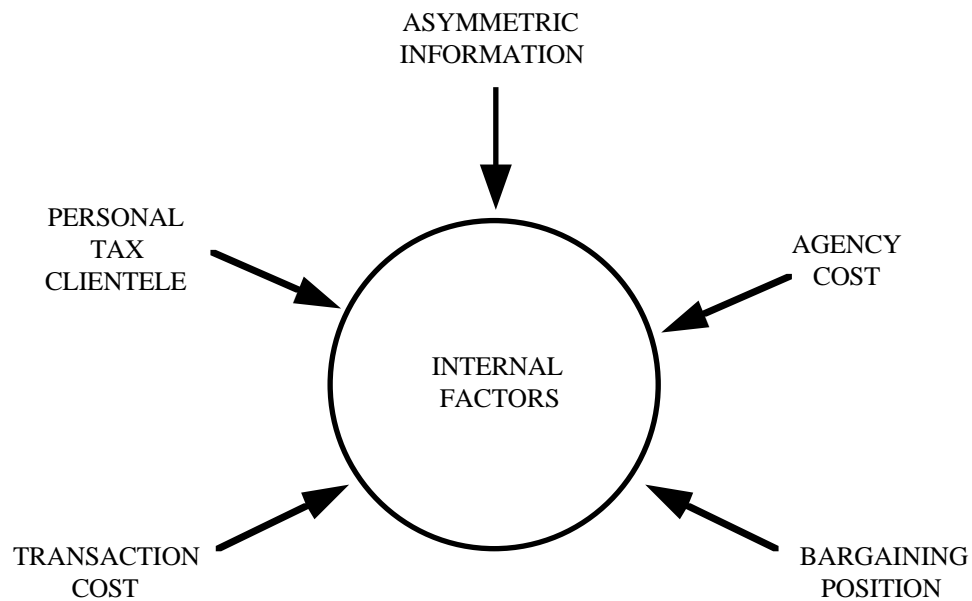
All previously mentioned factors could be described as external, because they arise with the dividend payment. But they are not the same for all investor populations and internal situations of all companies. Now it is time to present and analyze the internal factors, those that determine the impact that each external factor has on the value of the company through dividend policy.

2. Firms' distinctive internal capabilities

In order to identify a company's internal factors, we first have to understand the characteristics of these factors. If external factors are related to the characteristics of the goals

that are served by dividends, internal factors are related to the internal situations of the company. Whereas in the previous section we sought to answer the question of what kind of goals could be served by dividends, we shall now try to find companies in situations in which these goals could be served the best. A graphic illustration of the factors driving dividend policy is presented in Figure 2.

Figure 2. Factors driving dividend policy



The value-maximizing dividend policy could be defined as the specific dividend payment that fits best with the global characteristics of dividends and the internal situation of the company. The company's specific resources may fit the above given dividend characteristics better or worse. This approach could in some way be called a resource-based view of dividend policy. Organizations (companies) have certain internal resources that are relevant to dividend policy and that determine the relevance of each of the outside external factors. If they are properly used, these resources give rise to competitive advantage in creating value for investors.

Figure 1 offers an anticipation about the result of the trade-off between the benefits and costs of paying dividends. The location of the optimum payout depends on the shape of the curves. This, in turn, depends on the sensitivity of external factors to various internal elements of the company. By analyzing the influence exerted by specific company-internal factors on external factors we can deduce the shape of the curves, as well as their relative importance in establishing the optimal dividend policy. The next section briefly reviews how the internal factors affect the dividend policy function. It also explains why cost-benefit trade-off results are not always at the extremes of the pictured payout, why dividends are paid at all, and why not all profit is paid out in the form of dividends.

Why is it that a certain company is able to communicate its value better than another? What enabled it to maximize its value more effectively? What are the communication elements?

The most intuitive response to these questions is that companies are not all the same. Some companies have internal characteristics that others do not have and consequently are able to develop dividend policy in ways that their competitors with other internal characteristic cannot imitate.

We will therefore have to seek the relevant differences among the characteristics of companies, or in the way these characteristics fit with the external factors that are the objective of dividend policy.

Traditionally, the dominant model used to analyze a company's dividend policy has been based on analyzing external factors. Identifying the internal factors to be found and the dividend policy to be developed is the subject of the following section. This section offers a framework for identifying internal factors and finding coherence between the analysis of the external factors and the appraisal of the company's internal characteristics.

Internal factors can be found by analyzing each of the external factors and finding the internal characteristics of companies that make each external factor more or less relevant than the rest. This is what we shall do first. Later, in the next section, the matrix of the most distinctive internal and external factors will be presented.

Internal factors that make the asymmetric information factor relevant

Let us start by analyzing the elements inside the firm that cause asymmetric information.

Logic implies that the degree of asymmetric information in the firm depends on organizational issues, specifically those related to its *ownership* structure. It seems that asymmetric information is minimal, or even does not exist, if the managers of the company are at the same time the owners of the company's stock (*management holdings*). In this case, insiders and outsiders are the same people. The informational benefit of dividends is therefore at the minimum. Similarly, the asymmetric information is low when ownership is concentrated (*ownership concentration*). The cost of receiving information about invested capital is more than proportionally smaller as concentration grows. First of all, there is direct access to the information, which reduces the transaction cost related to the possession of information. Besides, the information received is more reliable, which increases its benefits. Also, the costs are borne by the firm itself, since the expenses of the functioning board of directors is borne by the firm. Therefore, the costs are tax deductible from the point of view of corporate as well as personal tax. Of course, there will still be the cost of asymmetric information between the board and managers, who will still play the information game with investors.

Although in closely held companies there is no asymmetric information between insiders and investors, there may be considerable asymmetry between owners and the rest of the investment community. The cost of this asymmetric information would be expressed very strongly if this company were to try to sell new equity to outside investors.

In segments where firms are closely held, repurchase by tender offer could give more valuable information about the true value of the company to outside investors than information-signaling through dividend payments. Dividends are neutral from the point of view of ownership changes in insider holdings because they are paid on a pro-rata basis. Tender offers with liberal or no restrictions on the possibility of tendering shares to the

company should be valued more highly by outside investors. What is important for outside investors is the sort of true information about the value of the company that insiders have.

How, in the case of closely held companies, does the market perceive the value of the firm? It assumes that because insiders know the value, they will sell shares when the companies are overvalued and buy when they are undervalued. The reasoning behind this assumption is that owners will benefit from such action and are unlikely to punish themselves by sending false signals. If they announce a premium that exceeds the degree of actual stock undervaluation, the difference represents a gain that benefits outsiders at the expense of insiders. For this reason, in order to strengthen the signaling potential of the offer, insiders need to precommit themselves to refrain from tendering. They usually do so and often make this commitment known in the offering circular. In order to verify the commitment, Vermaelen (1981, p.160) checked the *Official Summary* for the extent of insider participation. In the 18 cases out of 131 where shares were tendered by insiders, the amount was less than 1% of the target fraction.

It would seem that, from a signaling point of view, the dividend payout in this situation should be low and that premium tender offers with liberal restrictions should be proposed instead. By buying back its own shares, the firm would allow shareholders to save personal taxes.

Empirical evidence –and a similar interpretation– of abnormal increases in the share price after a tender offer by small, closely held firms is to be found in Vermaelen (1981). Comment and Jarrell (1991) present the results of a comparison of three forms of common stock repurchases. They show that dutch-auction self-tender offers and open-market share repurchases are weaker signals of stock undervaluation than fixed-price self-tender offers. Another supporting result can be found in the Lakonishok and Vermaelen (1990) paper as well. These authors find a negative average return during a 40-month period before fixed-price self-tender offers of 35% in the quintile of the smallest firms, as compared to a positive return of 10% for the quintile of large firms, suggesting that smaller firms use buyback as a signal of undervaluation while larger firms have other motives for buying back their stock.

Vermaelen (1981, p.161) found that 70% of the repurchasing firms he examined had equity market values of less than \$80 million; in his sample, the average insiders' holding fraction was 17.5%.

In addition to *ownership structure*, the *sector characteristics* could also be an influential factor. When the company is *regulated*, then the regulating body takes the cost of collecting information. As a result, the cost of asymmetric information decreases. We would expect that the value of information related to the asymmetric information would be lower in *regulated* industries than in others. This hypothesis draws empirical support from studies investigating the announcement effect in new equity issues. As we mentioned earlier, one of the costs associated with the issue of new equity is a fall in share prices. As theoretical studies show, this fall is related to the new information sent out to the market about the company's prospects.

However, the results for equity issues by utilities differ from the findings for industrials. Asquith and Mullins (1986) find an average announcement day excess return for industrial issues of -2.7%, as against -0.9% for utility issues. Both were significant, having *t*-statistics of -14.8 and -7.8, respectively. Additionally, while larger industrial equity issues were associated with larger announcement day price reductions, in the case of utility equity issues there was no such relationship between announcement day market reaction and issue size. Similarly, Masulis and Korwar (1986) find the average

announcement period return of industrial companies to be -3.25% , while for public utilities it is only -0.68% . These results are also strongly significant, at the 1% level (they have t -statistics of -11.3 and -24.2 , respectively). Also, Smith (1986) presents results⁷ according to which the average abnormal common stock announcement period returns of industrial companies are -3.14% , while for public utilities it is only -0.75% . The abnormal preferred stock return, although not statistically significantly different from zero, is -0.19% for industrial companies and $+0.08\%$ for public utilities.

The evidence seems to indicate that the information conveyed by stock offering announcements is generally much lower for utilities than for industrial companies.

The smaller price decline for utility issues is consistent with the theory that in *regulated* industries investors are better informed and learn less from new issues of capital than in non-regulated industries.

Agency cost internal factors

Some organizational factors such as *ownership concentration*, *management holdings* and *price regulation* relate to agency cost in much the same way as they relate to asymmetric information.

As was explained in the previous chapter, agency costs arise when equity is sold to outside investors. Since the managers of firms maximize their own utility, when the firm is not wholly owned by managers, a conflict between shareholders and managers arises. When managers are owners (*management holdings internal factor*), the conflict is minimal. Similarly, the asymmetric information factor is minimal in this case. A contributing reason is that under such circumstances it is easier to build contracts. Of course, an additional reason is that investors bear the full cost of monitoring and bonding, while they reap gains only in proportion to their holding, as Jensen and Meckling (1976) and Rozeff (1982) pointed out.

The marginal costs of monitoring fall when minority stakes become larger and larger (*ownership concentration internal factor*). Demsetz and Lehn (1985) argue that the extent to which the market for corporate control disciplines management is closely related to the distribution of voting rights across shareholders and the proportion of outstanding shares held by the management group. Besides, greater concentration of stockholders improves the effectiveness and lowers the agency cost.

Masulis and Korwar's (1986) study of the relationship between common stock price adjustments of underwritten common stock offerings and the level of *management holdings* empirically supports the existence of this factor. Both their event study and the cross-sectional regressions find stock price changes proportional to the changes in management shareholdings. The impact of decreases in management's fractional shareholdings on firm value has been found to be negative. Specifically, the announcement effect of share offerings involving decreases in management shareholdings are found to be significantly more negative than those of offerings that do involve stock sales on the part of management. In the cross-sectional analysis of the relationship between stock announcement returns and management shareholdings in the firm, the parameter estimate of management shareholdings was negative and statistically significant as well.

Additional empirical evidence relating to the sensitivity of agency costs towards the internal factors of *management holdings* and *ownership concentration* can be found in

Rozeff's (1982) study. As already mentioned in the previous chapter, Rozeff uses two *organizational* variables: percentage of common stock held by insiders and natural logarithm of number of common stockholders as proxies for the agency relationship. Table 2.1 shows how two of them are statistically significant and their signs are consistent with Rozeff's theoretical prediction. Similarly, Smith and Watts (1992) use industry-level data and find that larger firms –where we would expect stock holdings to be more diffuse– have a higher dividend yield and higher levels of executive compensation, which is consistent with the agency cost factor.

Nowadays shares are widely held. Any one shareholder can capture only a small fraction of the total gain from spending funds in order to cover agency cost. Therefore, investors would be better off if there were an intermediary acting as a monitor for the collective interest of shareholders. This monitoring function is performed by outside directors on the board, regulatory bodies, and financial institutions.

Benston (1985), Vancil (1987), Weisbach (1987), and Byrd and Hickman (1992) suggest that *outside directors* (internal factor) play an important role in monitoring management decisions that have been put to the board of directors for approval. However, information asymmetry between the board and the management regarding future cash flow and the personal interests of outside directors impose limits on the board's monitoring role.

When the industry is *regulated*, then the regulatory body bears most of the monitoring costs. Demsetz and Lehn (1985) argue that as government regulation intensifies, the stockholder-borne costs of obtaining the same level of monitoring of management actions falls, which reduces manager-stockholder agency costs. The empirical evidence supporting these arguments is the same as in the previous section. Observations made by Smith and Watts (1992) are also supportive. They found that regulated firms have lower executive compensation and make less use of stock-options and bonus plans. This again is compatible with our identification of the *legal* factor as an internal one.

Another kind of intermediary could be found if the firm were forced to be constantly in the market for new capital. By paying dividends, the managers are obliged to tap the capital market more frequently to obtain funds for investment projects. When firms raise new capital, their performance is carefully reviewed by an investment banker or some kind of indenture trustees, who monitor managers on investors' behalf. The same thing happens when the firm issues new debt. During this process, stockholders observe the terms on which new funds are raised. Equity and debt providers receive new information about the intended uses of the funds, and thus shareholders gain new information about the firm's financial situation and the quality of managers' intentions.

This suggests that the agency cost external factor depends on the *sector characteristics*: *FCF level* of the company and its *variability*. Firms with higher cash flow variability will need external financing more often and will therefore tend to have lower agency costs and consequently a lower dividend payout ratio.

As Smith and Watts (1983) suggest, managers have incentives to over-retain cash, in order to increase the amount of discretionary funds available to them inside the firm. This is in conflict with the interests of shareholders, who would prefer to invest these funds outside the firm if the set of opportunities available to the firm does not offer the best possible returns.

Conflicts of interest between investors and managers are especially severe when the organization is generating a *large free cash flow*. Mature industries are a good example. In

this stage, the role of dividends is especially important. They reduce the resources under managers' control, limiting managers' power and making it more likely that they will be monitored by the capital markets. Promising to pay out present and future cash flow by increasing dividends leaves managers without control over the use of that free cash flow.

As we mentioned in the previous chapter, Asquith and Mullins (1983) report a strong information effect of initiation of dividend payments, which is consistent with this internal factor as well. In the curve of a firm's life, the role of dividends as a reducer of agency costs increases as the firm becomes mature and cash-rich.

When a firm is in the market for new capital, the monitoring problem is reduced. When common stock needs to be issued anyway, the importance of dividend payments could be expected to decrease. This hypothesis is supported by Kalay and Shimrat (1986), who study the dividend behavior of firms making seasoned offerings of common stock. They found that, on average, firms tend to decrease their dividends over the two years preceding the stock offering, as well as in the year of the offering. They also found that the dividend payout of industrial firms was relatively smaller in the two years prior to their stock offering, as well in the offering year.

If managers want to raise new capital at the cheapest price to fund new investments, they have a motivation to reduce agency costs. Managers who need to receive money consistently are more likely to act in shareholders' interests than managers who are able to obtain these funds internally or through debt. This is supported by Masulis and Korwar's (1986) finding that, on average, the negative stock price reaction to equity issues is smaller for public utilities than for industrials. However, to a certain extent this could also be explained by the higher frequency of utility stock offerings.

The types of firm that are most likely candidates for paying dividends in order to discipline managers would be firms whose cash flow exceeds their growth opportunities, that is, firms with positive free cash flow. If firms are likely to go to the capital market anyway, as is the case with rapidly growing organizations with large and highly profitable investment projects but with negative free cash flow, dividends do not serve to decrease agency costs. Thus, Easterbrook (1984, p.250) argues that in these cases we should observe lower dividend payments. Thus, the agency-related problems between managers and stockholders will result in a negative relationship between dividends and growth opportunities.

This is consistent with the observation that fast-growing firms pay fewer dividends or have a low dividend payout. They start to pay dividends when their growth slows down. The fact that fast-growing firms do not pay dividends, or have low dividend payouts, was observed by Smith and Watts (1992). Using industry-level data for the period 1965-1985, they found that measures of the firm's investment opportunity set (such as the availability of growth options and firm size) are related to its dividend policy. In particular, they documented that firms with more growth options (i.e., greater access to positive net present value projects) have lower dividend yields, which is also consistent with Rozeff (1982) and Easterbrook (1984).

In fact, Rozeff (1982) uses growth variables as proxies for the agency factor in his regression model. His parameters are statistically significant and their signs are consistent with the theoretical prediction.

A general conclusion from the analysis of this last part is that the *sector characteristic* internal factors, which keep firms in the capital market for verification, imply savings in agency costs.

Bargaining internal factors

The most important factor for resource redistribution is the *legal* position of the company vis-à-vis government or local authority, that is, whether it is *regulated* or *not*. If its prices are regulated, then there is the possibility of increasing its leverage in relation to the authority by disposing of the firm's resources in order to force price increases. At the same time, there is a chance that the return on any resources not disposed of would be lost for investors. Hence, we should expect strictly regulated firms to pay higher dividends.

This line of reasoning is supported by analyzing the strategy of British utilities, which after privatization are expanding their activity abroad, and comparing it with that of the unregulated sectors. As *The Economist*⁸ reports, «[f]rustrated by tight regulation and slow profit growth at home, Britain's privatized utilities are turning with relish to foreign markets. They hope their unregulated entrepreneurship will reap huge rewards.» «In the last year or so, [...] even companies in intrinsically stay-at-home businesses such as water supply, electricity generation and distribution, and airport management have made big moves into foreign markets.» «Privatized firms are looking abroad because they reckon they cannot give shareholders good growth in earnings from their regulated businesses at home.» In order to save resources they are even investing in unrelated sectors; for example, an electricity distributor moving into security alarms and water companies investing in hotels. This policy is strongly criticized by Dieter Helm of Oxford Economic Research Associates and John Kay of the London Business School.

There are some striking cases of investors' reactions to dividend omission in utilities. The best known is that of Consolidated Edison's announcement that it would not pay any dividend in the second quarter of 1974. It was the first time since the company's foundation in 1881 that it had failed to make a regular dividend payment. The Wall Street reaction was striking: the price of Con Edison's shares fell by 32% in a turnover that placed it at the top of the New York Stock Exchange's most active list for the day.

Brealey and Myers (1991, p.376) tells the story of General Public Utilities based on a Carol Loomis article «A Case for Dropping Dividends» in *Fortune* (June 15, 1968, pp. 181 ff.): «In 1968 its management decided to reduce its cash dividend to avoid a stock issue. Despite the company's assurances, it encountered considerable opposition. Individual shareholders advised the president to see a psychiatrist, institutional holders threatened to sell their stock, the share prices fell nearly 10 percent, and eventually GPU capitulated.»

Brealey and Myers (1991, p.922) also quote the strongly worded response from Sandblute, senior vice-president of Minnesota Light and Power Company, to Joel Stern's article on the editorial page of *The Wall Street Journal*, arguing for low dividends and citing statistical tests in support of his position. The response was: «While Mr. Stern is gambling from pinnacle to pinnacle in the upper realms of the theoretical, those of us in financial management are down below slogging through the foothills of reality.»⁹

All of them are examples from the *regulated* sector. Even in his famous interviews, Lintner (1956, p.103) found «a general reluctance to make reductions in the dividend rate, especially in "regulars"».

Empirical support for this phenomenon is found in the survey by Baker, Farrelly and Edelman (1985), who investigate differences in managers' attitudes towards dividend policy across three industry groups. Their study shows that the responses differ significantly at the 0.05 level between manufacturing, the wholesale/retail and the utility group. Later, the test

between the manufacturing and the wholesale/retail industry revealed no significant differences. Hence, the difference is assumed to occur because of utilities' different attitude to dividend policy. The authors link the difference to the regulatory status of utilities.

It seems that a dividend cut carries some message about future returns. On the other hand, we found in our previous study that capital increases in utilities were met with a weak response on the part of share prices. It was found that the price response is significantly lower than in manufacturing industry. This is explained by the fact that the information asymmetry between investors and insiders in the utilities is lower than in the rest of industry.

If the asymmetric information is lower, why is there such a strong reaction to dividend cuts and such a weak reaction to capital increases? Investors seem to be very unhappy with the loss of the dividend part of their return. Why? The answer has to do with the bargaining factor and investors' behavioral preference for dividends in the utility sector, as analyzed in the previous chapter. If this preference were for all dividends, we would not find such a clear-cut difference in reactions between utilities and industry. But if in utilities there is an investor clientele that is interested in the dividends part of the return, utilities will be worth more to these investors than to others simply because of their high dividend payout, as equation (3.4) shows.

However, the fact that something is worth more to somebody does not necessarily mean that its market value is higher, especially in such liquid securities as utilities. If the required return for a traded security is lower for some than for others, then in an efficient market there will be investors who will sell this security short and make a profit doing arbitrage.

Thus, a strong reaction from investors to dividend cuts must be related to the loss in the bargaining factor for investors vis-à-vis regulators. Investors in utilities see their utility investment as they would an investment in the bond market. They focus on the dividend part of the return and pay less attention to the capital gain part. This is related to the *legal* position of the company, which is a *regulated* one. Investors in utilities have limited power of control in the face of the regulatory body. Paradoxically, there is a quasi agency cost between the investors and the regulators, and the dividend payment reduces it.

If dividends are not paid, this shows that some part of the return could be lost, and there is no guarantee that it will not be lost for good. Paying dividends puts managers in a better position in relation to regulators. Since profits are all paid out, new investments are almost entirely debt financed, which increases the financial leverage of the firm, and this in turn makes it look more «in need of help». This provides management with an argument to force regulators to accept higher prices to cover the expenses and at the same time give a fair return to investors.

Empirical as well theoretical support for this point is to be found in Smith and Watts (1992) and Smith (1986). Smith and Watts (1992, p.273) see a possibility of raising the allowed rates of return by increasing the dividend payment, because some regulatory authorities still set the required returns by using a form of the dividend-growth model. Smith (1986, p.10) explains that «by paying high dividends, the regulated firm subjects both its regulatory body as well as itself to capital market discipline more frequently. Stockholders are less likely to receive lower-than-normal levels of compensation due to lower allowed product prices when the regulatory authority is more frequently and effectively monitored by capital markets. Therefore, high dividends are a method of assuring a regulated firm's stockholders that they will receive a normal rate of return on the invested capital.»

Another factor is the *earnings sensitivity* to rising wages. Labor-intensive industries can use a dividend as a way of monitoring wage increases. Therefore, we would expect such industries to have low dividend payouts and to use other methods to give a fair return to investors.

Personal tax internal factors

It seems that *ownership structure* is the most important one. Factors such as *ownership concentration* and *management holdings* in the company could explain the payment of dividends. The case *SCM Corporation (A)* supports this argument. The company has a dividend policy adapted to the preferences of a family group that holds «many of the 300.000 shares of common stocks»¹⁰. A high level of concentration and large insider investments stimulate low dividend payments in order to save on tax payments. This is because:

- a) the tax bracket of owners can easily be communicated in the case of close ownership and seems to be high when investors are owners of a large part of the company;
- b) it is possible to avoid large tax payments while transferring wealth to investors through other channels:
 - giving social benefits (cars, traveling comfort, hotels, etc.) to nominal executives, avoiding personal and corporate taxes;
 - awarding higher salaries to the same individuals (avoiding corporate tax).

The opposite applies in cases where ownership is widely spread. It is much more difficult to find the exact preference of investors for dividends and establishing the optimal payout is much more controversial. Additionally, the possibility of giving benefits in the form of wages and social benefits is unavailable and in any event is linked with rising agency costs.

Hence, only closed ownership offers the chance to raise the value of the company at the expense of the tax authority and by saving on transaction costs. If managers are owners, the transfer of wealth is easier to arrange.

Transaction cost internal factors

These costs are objective and external, but they vary depending on the internal status of the company. In other words, it seems that there are internal factors that influence the level of transaction costs. One of them is related to the total amount of raised equity capital. For a large equity issue, marginal transaction costs are lower than for smaller issues. Table 1 presents the flotation costs in relation to the issue size.

Table 1. Costs of flotation as a percentage of proceeds for registered issues of common stock, 1971-1975

Size of issue (\$millions)	Underwritten cash offers			Underwritten rights issues			Rights
	Underwriters' Compensation	Other Expenses	Total Cost	Underwriters' Compensation	Other Expenses	Total Cost	Total Cost
	As percentage of proceeds						
Under 0.50	-	-	-	-	-	-	8.99
0.50 - 0.99	6.96	6.78	13.74	3.43	4.80	8.24	4.59
1.00 - 1.99	10.40	4.89	15.29	6.36	4.15	10.51	4.90
2.00 - 4.99	6.59	2.87	9.47	5.20	2.85	8.06	2.85
5.00 - 9.99	5.50	1.53	7.03	3.92	2.18	6.10	1.39
10.00 - 19.99	4.84	0.71	5.55	4.14	1.21	5.35	0.72
20.00 - 49.99	4.30	0.37	4.67	3.84	0.90	4.74	0.52
50.00 - 99.99	3.97	0.21	4.18	3.96	0.74	4.70	0.21
100.0 - 500.0	<u>3.81</u>	<u>0.14</u>	<u>3.95</u>	<u>3.50</u>	<u>0.50</u>	<u>4.00</u>	<u>0.13</u>
Average	5.02	1.15	6.17	4.32	1.73	6.05	2.45

Source: Smith (1977, p.349).

This factor will work in favor of *large firms* that issue large amounts of capital and fast-growing companies with a continuous need for money as a result of their expansion. To bear an additional financial requirement in order to be able to pay dividends will cost such firms marginally less than it will companies with positive free cash flow and only periodical needs to ensure stability of dividend payment. Here, the marginal transaction cost seems to be high.

Similarly *large firms* need multiplicative amounts of money and the marginal transaction costs associated with raising equity are much more favorable for them than for small companies. On the other hand, small, closely held firms could easily save on transaction costs by avoiding public offering, which entails the costly process of registering the issue with the SEC.

Summary

From the above analysis we have found that the internal factors are few in number. The most influential ones are those to do with the company *ownership structure* and *sector characteristics*. In the *ownership structure*, the factors that affect external elements are related to the *ownership concentration* and *management holding*. The most important *sector characteristics* are the *FCF* and the *legal* factor.

3. Matrix construction

The analysis of external factors identifies the value elements of dividend policy. The internal analysis, on the other hand, allows the company to identify its strengths and weaknesses in all of these elements.

Once we have the external and internal factors, we can construct the matrix of their combination. Since there is little relation between the chosen internal factors and the

transaction cost external factor, the matrix has been limited to display only the first four external factors. Table 2 presents the payoff levels of payouts of the various combinations of external and internal factors. From this matrix we see that the value-maximizing dividend payout, which is presented at the end of the rows, is different from the payout that would be optimal for some of the external factors considered in isolation. This is because there is some other external factor pointing in a different payout direction that dominates it.

Note also that as a result of having four different internal factors, the different dominating payouts may be in conflict for certain combinations of those internal statuses.

Knowing the partial factor payoffs and the relevance of specific factors within a given company, it is possible to make predictions about the importance of conflictive factors, which could help to establish dividend policy. Additionally, in many internal cases, all internal factors give the same proposed payout, which simplifies the conclusions.

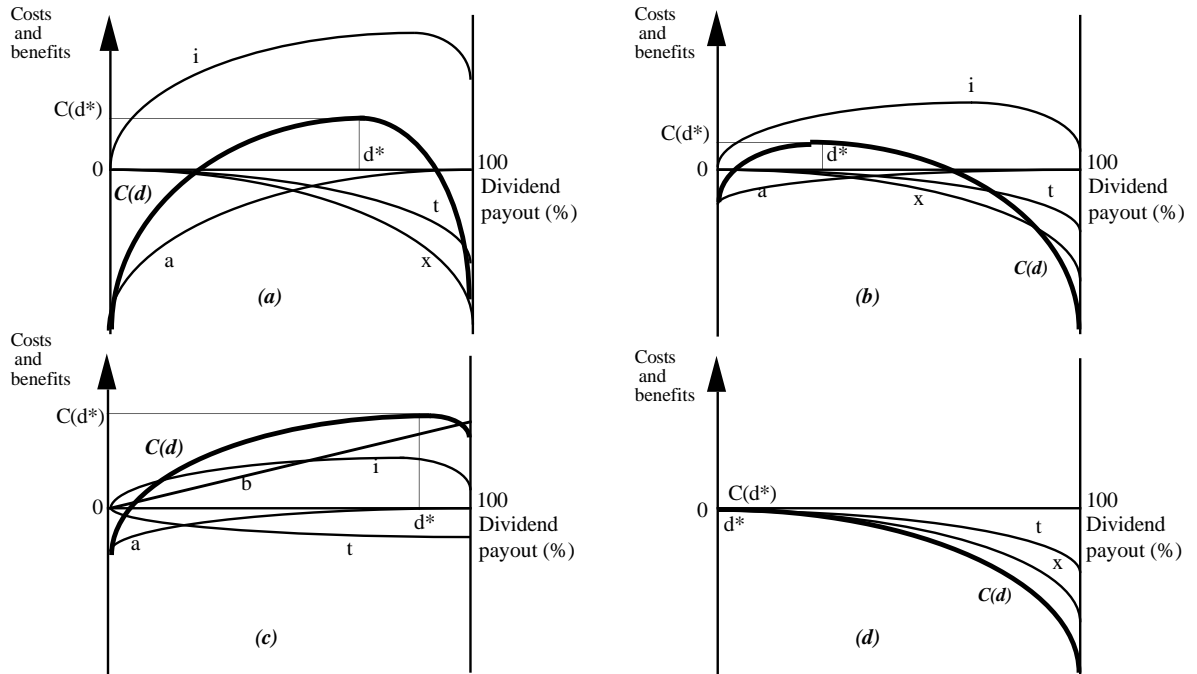
Accordingly, we may find that there is some trade-off between the factors and the results. This does not depend on the specific external factor of dividend payment, but on the trade-off between the factors in the concrete situation of a particular company.

Table 2. Matrix factors payout domination

Factors	Sector characteristics				Ownership structure				Payout dominated
	FCF		legal		concentration		management holding		
	large	variable	regulated	not regulated	high	low	large	small	
Personal tax	low		high	low	low		low		low
Asymmetric information	high	low	low		low	high	low	high	high
Agency cost	high	low	low		low	high	low		high
Bargaining position	high		high						high
Payout dominated	high	low	high		low	high	low	high	

The change in the optimality of dividend payout with different sector characteristics is shown graphically in Figure 3, where variables are the same as in Figure 2.

Figure 3. Dividend policy based on different internal structures



Let us stop for a moment and look at these four cases of finding the optimum dividend policy with different internal structures. Graph (a) represents a *non-regulated* company with *small ownership concentration*, but *large FCF*. As we see, the most important factors are asymmetric information and agency cost –they push the payment rightward to a high payout structure.

Graph (b) represents the case of a company with *variable cash flow*. The fact that this company is forced to go to the capital markets for cash more often, which is characteristic of this kind of company, shifts the optimum toward a low dividend payout.

Graph (c) represent a *regulated company* where asymmetric information, agency cost and transaction costs are much lower, where the tax preference may be for a high dividend payment, but where dividends are paid for bargaining reasons. These characteristics add up to a high dividend payout in order to maximize value.

Graph (d) represents the case of an unregulated, *closely held* firm in the *hands of managers*. There is neither asymmetric information nor agency costs, or else they are negligible. The most important factors are personal taxes and transaction costs, which imply that the most beneficial dividend policy is to minimize cash outflow in the form of dividend payments.

The combination of internal and external factors is transformed into the value chains of the organization. The strategic decisions that are made in this respect largely determine the value of the company.

The task of the General Manager and board of directors, according to this model, is to use the strengths of the company internal factors that respond optimally to the existing

opportunities in the value maximization process, neutralizing the threats and avoiding the company's weaknesses.

Although the importance of dividend policy has been widely studied in the past, the emphasis has been placed mainly on developing external factors. It has been found that the differences in dividend policy among firms within the same industry are significantly lower than the differences between industries. Therefore, this model considers the most important decisions to be those involved in choosing the dividend policy that is most appropriate to the industry and segment in which the firm operates.

Internal structure versus dividend policy trade off

We shall now study an organization's possibilities for value maximization, which in the last analysis is the long-term goal of any business organization, to the extent that actions aimed at achieving the best fit between internal factors and dividend policy maximize value.

Looking more closely at the value maximization process involving dividend policy, we could find some trade-off between internal structure and dividend policy, where the value of this process could be communicated by dividends. Although the external-environmental factors are «objective», i.e. impossible to change, it is possible to modify the internal factors. Before, we tried to maximize the value of the company when the internal factors were given. Now, we shall approach the value maximization process in a more dynamic way. Assuming that internal factors are variable as well, we shall try to raise the value of the company by changing them.

This process could be continued, modifying internal factors and seeking a better fit with external factors and the dividend policy, until we obtain the optimal value of the firm. This continuous process could be written in a functional form as:

$$(9) \quad \max V(I,d)$$

where I is a type of internal company structure and d is a form of realized dividend policy.

It could be that optimal dividends are unable to maximize the value of the company from the point of view of external factors, and even the optimal capital structure is unable to do so. In this situation, if the cost of changing the internal factors is lower than the costs of restructuring financially, then the internal structure needs to be modified in order to maximize the value of the company. At this point the internal factors become as much of a variable to decide upon as dividend policy.

Not all internal and external factors are equally relevant to all companies and even for an individual company their importance can vary over time.

We find evidence of this in the changes that dividend policy undergoes throughout the life of a firm. At the beginning, when the owners are also managers, the firm has no agency costs and there is no asymmetric information, and the tax reason and transaction costs are much more important. This is why we do not see dividends being paid at this early stage. Later, when there is a need for external capital as a result of a period of rapid growth and the limited wealth of the entrepreneurs makes holding the same fraction of share ownership for monitoring purposes more costly, communication with outside investors becomes important

and so we see the appearance of dividend payments as a way of reducing the agency cost and information asymmetries associated with the smaller ownership share held by insiders. The final stage in the life of the firm is interesting, too. When the mature business has a lot of cash, the problem of agency costs makes the cash payment of dividends very necessary and we see high dividend payments.

Mature industries are characterized by the decreasing value of information. On the other hand, paying such large dividends is very costly, so perhaps a change in the internal structure would make it possible to increase the value of the company, while bringing dividends back down again. Hence, it is hardly surprising that this sort of company should reduce information asymmetries and agency costs by changing sector characteristics, investing their cash flow in other activities (as in the case of the British utilities mentioned earlier), or by changing their ownership structure by making the company private, or through Management Buy-Outs. These actions make it possible to shift the optimal dividend policy back to low payout.

This process could be reached by analyzing part of the matrix presented in Table 2. We are now in a position to be able to find the natural fit of dividend policy clienteles for:

HIGH PAYOUT

Large FCF-regulated industries-non concentrated ownership-small management holdings

LOW PAYOUT

- 1) Variable FCF-unregulated industries-concentrated ownership-small management holdings
- 2) Large FCF-unregulated industries-non concentrated ownership-large management holdings

This process is presented step by step in Tables 3 and 4.

Table 3. Payout - management holding matrix

		Management holding	
		large	small
Payout	high		x
	low	x	x

According to this perspective, a firm's ability to maximize depends not only on its having an optimal business strategy and a good implementation of that strategy, but also on its ability to communicate its value-maximizing attitude through the payment of dividends. For the firm in pursuit of excellence, producing and marketing goods and services, on the one hand, and communicating about it to investors, on the other, are two sides of the same coin. Thus, the company needs to combine business performance with an ability to communicate successfully.

In essence, dividend policy is defined by a bundle of unique internal factors and their interrelationships. The task of general management is to adjust and renew these factors and relationships as time goes by and changes erode their relative importance.

Thus, this approach differs not only with regard to a firm's fundamental dividend policy objective (which is to maximize firm value, rather than simply being the best way to give investors a return on their investment), but also with regard to the primary means available in dividend policy whereby companies can achieve this objective. □

-
- 1 For the sake of simplicity it is assumed that the firm's capital structure is at its optimum, although in fact, as we shall see later, dividend policy and capital structure are related, in that most of the factors affecting them are the same.
 - 2 Spance (1974).
 - 3 Ambarish, John and Williams (1987, p.339).
 - 4 *La Vanguardia* 3 August 1993; *Financial Times* 4 August 1993.
 - 5 For example Asquith and Mullins (1986), Masulis and Korwar (1986), Mikkelson and Partch (1986) and Brealey, Myers (1991, p.349).
 - 6 Asquith and Mullins (1986, p.72-73).
 - 7 Based on Asquith and Mullins (1986), Kolodny and Suhler (1985), Linn and Pinegar (1985), Masulis and Korwar (1986), Mikkelson and Partch (1986).
 - 8 *The Economist* (October 23, 1993, p.47-48).
 - 9 *Wall Street Journal* (August 20, 1979, p.16).
 - 10 SCM Corporation (A) (1969, p.1).

References

- Aharony, Joseph and A. Dotan. 1985. The association between changes in dividends and subsequent earnings. Working paper. Tel Aviv University, Tel Aviv.
- Aharony, Joseph and Itzhak Swary. 1980. Quarterly dividends, earnings announcements, and stockholder returns. *Journal of Finance* 35, 1-12.
- Amihud, Yakov and Haim Mendelson. 1986. Asset pricing and bid-ask spread. *Journal of Financial Economics* 17, 223-249.
- Akerlof, G. 1970. The market for lemons: qualitative uncertainty and the market mechanism. *Quarterly Journal of Economics* 84, 488-500.
- Allen, Franklin. 1989. Dividends. Working paper. The Wharton School, University of Pennsylvania.
- Ambarish, Ramasastry, Kose John and Joseph Williams. 1987. Efficient signalling with dividends and investments. *Journal of Finance* 42, 321-343.
- Asquith, Paul and W.S. Krasker. 1985. Changes in dividend policy, and stock trading volume. Working paper. Harvard Business School. Cambridge, MA.
- Asquith, Paul and David W. Mullins, Jr. 1986. Equity issues and offering dilution. *Journal of Financial Economics* 15, 61-89.
- Asquith, Paul and David W. Mullins, Jr. 1986. Signaling with dividends, stock repurchases, and equity issues. *Financial Management* 15, 27-44.
- Asquith, Paul and David W. Mullins, Jr. 1983. The impact of initiating dividend payments on shareholders' wealth. *Journal of Business* 56, 77-96.
- Assael, Henry and John Keon. 1982. Nonsampling vs. sampling errors in survey research. *Journal of Marketing* 46, 114-123.
- Auerbach, Alan. 1981. Stockholders' tax rates and firm attributes. Working paper. NBER.
- Bailey, M. 1969. Capital gains and income taxation. *The taxation of income from capital*. Harberger and Bailey (eds.). Brooking Institution. Washington.
- Bajaj, Mukesh. 1991. Dividend omissions and forecasts of future earnings: some positive evidence on the information content of dividends. Unpublished working paper. University of Southern California.
- Baker, Kent H., Gail E. Farrelly and Richard B. Edelman. 1985. A survey of management views on dividend policy. *Financial Management* 14, 78-84.
- Barclay, Michael J. and Clifford W. Smith, Jr. 1988. Corporate payout policy: cash dividends versus open market repurchases. *Journal of Financial Economics* 12, 187-209.
- Ben-Horim, Moshe, Shalom Hochman and Oded Palmon. 1987. The impact of the 1986 Tax Reform Act on corporate financial policy. *Financial Management* 16, 29-35.
- Benston, G. 1985. The self-serving management hypothesis: some evidence. *Journal of Accounting and Economics* 7, 67-84.
- Bhattacharya, S. 1979. Imperfect information, dividend policy, and the 'Bird in the hand' fallacy. *Bell Journal of Economics* 10, 259-270.
- Bhattacharya, S. 1980. Nondissipative signalling structures and dividend policy. *Quarterly Journal of Economics* 95, 1-24.
- Black, Fischer. 1976. The dividend puzzle. *Journal of Portfolio Management* Winter, 5-8.
- Black, Fischer and Myron Scholes. 1974. The effects of dividend yield and dividend policy on common stock prices and returns. *Journal of Financial Economics* 1, 1-22.
- Blume, M., J. Crockett and I. Friend. 1974. Stockownership in the United States: characteristics and trends. *Survey of Current Business* 54, 16-40.
- Booth, L.D. and D.J. Johnston. 1984. The ex-dividend day behavior of Canadian stock prices: tax changes and clientele effects. *Journal of Finance* 39, 457-476.
- Brealey, Richard A. and Steward C. Myers. 1991. *Principles of Corporate Finance*. McGraw-Hill. New York.
- Brennan, M.J. 1970. Taxes, market valuation, and corporate financial policy. *National Tax Journal* 23, 417-427.
- Brennan, M.J. and A. Thakor. 1990. Shareholder preferences and dividend policy. *Journal of Finance* 45, 993-1018.
- Brickley, J.A. 1983. Shareholder wealth, information signalling, and the specially designated dividend: an empirical study. *Journal of Financial Economics* 12, 187-209.
- Brown, Lawrence D., Dosoung Choi and Kwon-Jung Kim. 1991. The information content of dividends: a test of signal mitigation. Unpublished working paper. SUNY Buffalo.
- Brown, Lawrence D. and Michael S. Rozeff. 1978. The superiority of analyst forecasts as measures of expectations: evidence from earnings. *Journal of Finance* 33, 1-16.
- Byrd, John W. and Kent A. Hickman. 1992. Do outside directors monitor managers? Evidence from tender offer bids. *Journal of Financial Economics* 32, 195-221.

- Campbell, J. and W. Beranek. 1955. Stock price behavior on ex-dividend dates. *Journal of Finance* 10, 425-429.
- Charest, Guy. 1978. Dividend information, stock returns and market efficiency-II. *Journal of Financial Economics* 6, 297-330.
- Comment, Robert and Gregg A. Jarrell. 1991. The relative signalling power of dutch-auction and fixed-price self-tender offers and open-market share repurchases. *Journal of Finance* 46, 1243-1271.
- Copeland Thomas E. and J. Fred Weston. 1992. *Financial theory and corporate policy*. Addison-Wesley Publishing Company. Reading, Massachusetts.
- Dann, L.Y. 1981. Common stock repurchases: an empirical analysis of the returns to bondholders and stockholders. *Journal of Financial Economics* 9, 113-138.
- DeAngelo, Harry and Linda DeAngelo. 1990. Dividend policy and financial distress: An empirical investigation of troubled NYSE firms. *Journal of Finance* 45, 1415-1431.
- DeAngelo, Harry, Linda DeAngelo and Douglas J. Skinner. 1992. Dividends and losses. *Journal of Finance* 47, 1837-1863.
- DeAngelo, Harry and Ronald W. Masulis. 1980. Leverage and dividend irrelevancy under corporate and personal taxation. *Journal of Finance* 35, 453-467.
- Demsetz, Harold and Kenneth Lehn. 1985. The structure of corporate ownership: causes and consequences. *Journal of Political Economy* 93, 1155-1177.
- Donaldson, G. 1984. *Managing Corporate Wealth: The Operation of a Comprehensive Financial Goals System*. Praeger. New York.
- Durand, D. and A. M. May. 1960. The ex-dividend behavior of American Telephone and Telegraph stocks. *Journal of Finance* 15, 19-31.
- Eades, Kenneth M. 1982. On dividends as a signal of firm value. *Journal of Financial and Quantitative Analysis* 17, 471-500.
- Eades, Kenneth M., Patrick J. Hess and E. Han Kim. 1984. On interpreting security returns during the ex-dividend period. *Journal of Financial Economics* 13, 3-34.
- Easley, David and Maureen O'Hara. 1987. Price, trade size, and information in securities markets. *Journal of Financial Economics* 19, 69-90.
- Easterbrook, Frank H. 1984. Two agency-cost explanations of dividends. *Journal of Financial Research* 2, 249-259.
- Elton, Edwin J. and Martin J. Gruber. 1970. Marginal stockholder tax rates and the clientele effect. *Review of Economics and Statistics* 52, 68-74.
- Elton, Edwin J., Martin J. Gruber and Joel Rentzler. 1984. The ex-dividend day behavior of stock prices; a re-examination of the clientele effect: a comment. *Journal of Finance* 39, 551-556.
- Fama, Eugene F. 1969. Adjustment of stock prices to new information. *International Economic Review* 10, 1-21.
- Fama, Eugene F. 1976. *Foundations of finance*. Basic. New York.
- Fama, Eugene F. and Harvey Babiak. 1968. Dividend policy: an empirical analysis. *American Statistical Association Journal* 63, 1132-1161.
- Fama, Eugene F. and MacBeth, James D. 1973. Risk, return, and equilibrium: empirical tests. *Journal of Political Economy* 81, 607-636.
- Fama, Eugene F., R. Roll and Michael C. Jensen. 1969. The adjustment of stock prices to new information. *International Economic Review*, 1-21.
- Fama, Eugene F. and Michael C. Jensen. 1983. Agency problems and residual claims. *Journal of Law and Economics* 26, 327-349.
- Farrar, Donald E. and Lee L. Selwyn. 1967. Taxes, corporate financial policies and returns to investors. *National Tax Journal* 20, 444-454.
- Feenberg, Daniel. 1981. Does the investment interest limitation explain the existence of dividends? *Journal of Financial Economics* 9, 265-269.
- Feldstein, Martin and Jerry Green. Why do companies pay dividends. *American Economic Review* 17-30.
- Ferreira, Lourdes D. 1989. Linkages between executive compensation provisions and the dividend decision. Working paper. School of Accounting, University of Southern California. Los Angeles.
- Fried D. and D. Givoly. 1982. Financial analysts' forecasts of earnings: a better surrogate for earnings expectations. *Journal of Accounting and Economics* 4, 85-107.
- Friend, Irwin and Marshall Puckett. 1964. Dividend and stock prices. *American Economic Review* 44, 656-682.
- Galai, Dan and Ronald Masulis. 1976. The option pricing model and the risk factor of stocks. *Journal of Financial Economics* 3, 53-82.
- Glosten, Lawrence R. and Poul R. Milgrom. 1985. Bid, ask, and transaction prices in a specialist market with heterogeneously informed traders. *Journal of Financial Economics* 14, 71-100.
- Gonedes, Nicholas J. 1978. Corporate signaling, external accounting, and capital market equilibrium: evidence on dividends, income, and extraordinary items. *Journal of Accounting Research* 16, 26-79.
- Gordon, M.J. 1959. Dividends, earnings, and stock prices. *Review of Economics and Statistics* 41, 99-105.

- Gordon, Roger H. and David F. Bradford. 1980. Taxation and the stock market valuation of capital gains and dividends. Theory and empirical results. *Journal of Public Economics* 14, 109-136.
- Graham, B. and D.L. Dodd. 1951. *Security Analysis*. McGraw-Hill. New York.
- Green, Jerry. 1980. Taxation and the ex-dividend day behavior of common stock prices. Working paper. NBER.
- Green, Paul E., Donald S. Tull and Gerald Albaum. 1988. *Research for marketing decisions*. Prentice-Hall, Englewood Cliffs. New York.
- Hakansson, Nils H. To pay or not to pay dividend. 1982. *Journal of Finance* 37, 415-428.
- Hakansson, Nils H., J. Gregory Kukel and James A. Ohlson. 1982. Sufficient and necessary conditions for information to have social value in pure exchange. *Journal of Finance* 37, 1169-1181.
- Handjinicolaou, George. 1982. An empirical analysis of the effect of dividend announcements on security prices: Informational effects or wealth transfers? Ph.D. dissertation. New York University. New York.
- Handjinicolaou, George and Avner Kalay. 1984. Wealth redistributions or changes in firm value. An analysis of returns to bondholders and stockholders around dividend announcements. *Journal of Financial Economics* 13, 35-63.
- Harris, Milton and Artur Raviv. 1991. The Theory of Capital Structure. *Journal of Finance* 46, 297-355.
- Hartmann-Wendels, Thomas. 1987. Dividend policy under asymmetric information. *Agency Theory, Information, and Incentives*, ed. by G. Bamberg and K. Spremann, 1989. Springer-Verlag. Berlin, Heidelberg.
- Haugen, Robert A. and Lemma W. Senbet. 1986. Corporate finance and taxes: a review. *Financial Management* 18, 5-21.
- Healy, Paul M. and Krishna G. Palepu. 1986. Corporate financial decisions and future earnings performance: the case of initiating dividends. Working paper. Massachusetts Institute of Technology. Cambridge, MA.
- Healy, Paul M. and Krishna G. Palepu. 1988. Earnings information conveyed by dividend initiations and omissions. *Journal of Financial Economics* 21, 149-175.
- Heath, David C. and Robert A. Jarrow. 1988. Ex-dividend stock price behavior and arbitrage opportunities. *Journal of Business* 61, 95-108.
- Hempel, George H. and Simonson, Donald G. 1991. *Bank financial management: strategies and techniques for a changing industry*. John Wiley & Sons. New York.
- Hess, Patrick J. 1981. Dividend yields, and stock returns: a test for tax effects. Unpublished manuscript. Columbus, Ohio State University.
- Hess, Patrick J. 1982. The ex-dividend day behavior of stock returns: further evidence on tax effects. *Journal of Finance* 37, 445-456.
- Hirshleifer, Jack. 1971. The private and social value of information and the reward to inventive activity. *American Economic Review* 61, 561-574.
- Jaffe, Jeffrey. 1974. Special information and insider trading. *Journal of Business* 47, 410-428.
- Jensen, Michael C. 1986. Agency costs of free cash flow, corporate finance, and takeovers. *American Economic Review* 76, 323-329.
- Jensen, Michael C. and William H. Meckling. 1976. Theory of the firm: managerial behavior, agency costs, and capital structure. *Journal of Financial Economics* 3, 305-360.
- John, Kose and Joseph Williams. 1985. Dividends, dilution and taxes: a signaling equilibrium. *Journal of Finance* 40, 1053-1070.
- Kahneman, D. and A. Tversky. 1979. Prospect theory: an analysis of decision under risk. *Econometrica* 47, 263-291.
- Kahneman, D. and A. Tversky. 1982. The psychology of preferences. *Scientific American* 246, 167-173.
- Kalay, Avner. 1980. Signaling, information content, and the reluctance to cut dividends. *Journal of Financial and Quantitative Analysis* 15, 855-869.
- Kalay, Avner. 1982a. The ex-dividend day behavior of stock prices: a re-examination of the clientele effect. *Journal of Finance* 37, 1059-1070.
- Kalay, Avner. 1982b. Stockholder-bondholder conflict and dividend constraints. *Journal of Financial Economics* 10, 211-233.
- Kalay, Avner. 1984. The ex-dividend day behavior of stock prices; a re-examination of the clientele effect: a reply. *Journal of Finance* 39, 557-561.
- Kalay, Avner and Adam Shimrat. 1986. On the payment of equity financed dividends. Working paper. New York University.
- Kane, Alex, Young Ki Lee and Alan Marcus. 1984. Earnings and dividend announcements: is there a corroboration effect? *Journal of Finance* 39, 1091-1099.
- Kaplan, R. S. and R. Roll. 1972. Investor evaluation of accounting information: some empirical evidence. *Journal of Business* 45, 225-257.
- Khoury, Nabil T. and Keith V. Smith. 1977. Dividend policy and capital gains tax in Canada. *Journal of Business Administration* 8, 19-37.
- Kolodny, Richard and Diane Rizzuto Suhler. 1985. Changes in capital structure, new equity issues, and scale effects. *Journal of Financial Research* 8, 127-136.

- Kumar, P. 1988. Shareholder-manager conflict and the information content of dividends. *Review of Financial Studies* 1, 111-136.
- Kwan, Clarence C.Y. 1981. Efficient market tests of the informational content of dividend announcements: critique and extension. *Journal of Financial and Quantitative Analysis* 16, 193-206.
- Lakonishok, Josef and Theo Vermaelen. 1983. Tax reform and ex-dividend day behavior. *Journal of Finance* 37, 1157-1179.
- Lakonishok, Josef and Theo Vermaelen. 1986. Tax-induced trading around ex-dividend days. *Journal of Financial Economics* 16, 287-319.
- Lakonishok, Josef and Theo Vermaelen. 1990. Anomalous price behavior around repurchase tender offers. *Journal of Finance* 45, 455-477.
- Laub, M.P. 1972. The adjustment of stock prices to announcements of unanticipated changes in quarterly earnings. *Journal of Accounting Research* 15.
- Lease, R., W. Lewellen and G. Schlarbaum. 1976. Market segmentation: evidence on the individual investor. *Financial Analysts Journal* 32, 53-60.
- Leftwich, Richard and Mark E. Zmijewski. 1991. Contemporaneous announcements of dividends and earnings. Unpublished working paper. University of Chicago.
- Lehman, Donald R. 1989. *Market research and analysis*. IRWIN. Homewood, Boston.
- Leland, H., and D.H. Pyle. 1977. Informational asymmetries, financial structure, and financial intermediation. *Journal of Finance* 32, 371-388.
- Lewellen, Wilbur G., Kenneth L. Stanley, Ronald C. Lease and Gary G. Schlarbaum. 1978. Some direct evidence on the dividend clientele phenomenon. *Journal of Finance* 33, 1385-1399.
- Levy, Haim and Marshall Sarnat. 1988. *Principles of Financial Management*. Prentice Hall. New York.
- Linn, Scott and J. Michael Pinegar. 1985. The effect of issuing preferred stock on common stockholder wealth. Unpublished manuscript. University of Iowa, Iowa City, IL.
- Lintner, J. 1956. The distribution of incomes of corporations among dividends, retained earnings, and taxes. *American Economic Review, Paper and Proceedings* 46, 97-113.
- Litzenberger, Robert H. and Krishna Ramaswamy. 1979. The effect of personal taxes and dividends on capital asset prices: theory and empirical evidence. *Journal of Financial Economics* 7, 163-195.
- Litzenberger, Robert H. and Krishna Ramaswamy. 1980. Dividends, short selling restrictions, tax-induced investor clienteles and market equilibrium. *Journal of Finance* 35, 469-485.
- Litzenberger, Robert H. and Krishna Ramaswamy. 1982. The effect of dividends on common stock prices tax effects or information effects? *Journal of Finance* 37, 429-443.
- Long, John B., Jr. 1977. Efficient portfolio choice with different taxation of dividends and capital gains. *Journal of Financial Economics* 5, 25-53.
- Long, John B., Jr. 1978. The market valuation of cash dividends. A case to consider. *Journal of Financial Economics* 6, 235-264.
- Lys, T. and S. Sivaramkrishnan. 1986. Earnings expectations and capital restructuring: the case of equity for debt swaps. Working paper. Northwestern University.
- Mao, James C.T. 1969. *Quantitative Analysis of Financial Decisions*. Macmillan. Toronto.
- Mantripragada, K.G. and H. Bishara. 1974. The dividend policies of Canadian corporations: an empirical study. Unpublished manuscript. University of Saskatchewan.
- Marsh Terry A. and Robert C. Merton. 1986. Dividend variability and bounds tests for the rationality of stock market prices. *American Economic Review* 76, 483-498.
- Masulis, Ronald W. 1988. *The Debt/Equity Choice*. Ballinger Publishing Company. Cambridge, Massachusetts.
- Masulis, Ronald W. and Ashok N. Korwar. 1986. Seasoned equity offerings. An empirical investigation. *Journal of Financial Economics* 15, 91-118.
- McCabe, George M. 1979. The empirical relationship between investment and financing: a new look. *Journal of Financial and Quantitative Analysis* 14, 119-135.
- Merton, Robert C. 1989. Discussion. *Are the Distinctions between Debt and Equity Disappearing?* Kopcke and Rosengren (eds.). Proceedings of a Conference. Melvin Village, New Hampshire.
- Michael, Roni. 1991. Ex-dividend day stock price behavior: the case of The 1986 Tax Reform Act. *Journal of Finance* 46, 845-859.
- Michel, Allen. 1979. Industry influence on dividend policy. *Financial Management* 8, 22-26.
- Mikkelson, Wayne H. and M. Mergan Partch. 1986. Valuation effects of security offerings and the issuance process. *Journal of Financial Economics* 15, 31-60.
- Miller, Merton H. 1977. Debt and taxes. *Journal of Finance* May, 261-275.
- Miller, Merton H. 1987. The informational content of dividends. *Macroeconomic Essays in Honor of Franco Modigliani*. Dossons and Dornbusch (eds.).
- Miller, Merton H. and Modigliani, F. 1961. Dividend policy, growth, and the valuation of shares. *Journal of Business* 34, 235-64.
- Miller, Merton H. and Kevin Rock. 1985. Dividend policy under asymmetric information. *Journal of Finance* 40, 1031-1051.

- Miller, Merton H. and Merton S. Scholes. 1978. Dividend and taxes. *Journal of Political Economy* 6, 333-364.
- Miller, Merton H. and Merton S. Scholes. 1982. Dividend and taxes: some empirical evidence. *Journal of Political Economy* 90, 1118-1141.
- Modigliani, Franco. 1982. Debt, dividend policy, taxes, inflation and market valuation. *Journal of Finance* 37, 255-273.
- Modigliani, Franco and Merton H. Miller. 1959. The cost of capital, corporation finance and the theory of investment: a reply. *American Economic Review* 49, 655-669.
- Morgan, I.G. 1980. Dividends and stock price behavior in Canada. *Journal of Business Administration* 18, 91-106.
- Morgan, I.G. 1982. Dividends and capital asset prices. *Journal of Finance* 37, 1071-1086.
- Myers, Stewart C. 1993. Still searching for optimal capital structure. Unpublished working paper.
- Ofer, Aharon R. and Ashok Natarajan. 1987. Convertible call policies: an empirical analysis of an information signalling hypothesis. *Journal of Financial Economics* 19, 91-108.
- Ofer, Aharon R. and Daniel R. Siegel. 1987. Corporate financial policy, information, and market expectations: an empirical investigation of dividends. *Journal of Finance* 44, 889-911.
- Ofer, Aharon R. and Anjan V. Thakor. 1987. A theory of stock price responses to alternative corporate cash disbursement methods: Stock repurchases and dividends. *Journal of Finance* 42, 365-394.
- Penman, S. 1983. The perceived content of earnings forecasts and dividends. *Journal of Finance* 38, 1181-1199.
- Peterson, P.P., D.R. Peterson and J.S. Ang. 1985. Direct evidence on the marginal rate of taxation on dividend income. *Journal of Financial Economics* 14, 267-282.
- Pettit, Richardson R. 1972. Dividend announcements, security performance, and capital market efficiency. *Journal of Finance* 27, 993-1007.
- Pettit, Richardson R. 1977. Taxes, transactions costs and the clientele effect of dividends. *Journal of Financial Economics* 5, 419-436.
- Poterba, James M. 1987. Tax evasion and capital gains taxation. *American Economic Review* 77, 234-239.
- Poterba, James M. and L.H. Summers. 1984. New evidence that taxes affect the valuation of dividends. *Journal of Finance* 39, 1397-1415.
- Pregel, Gert. 1990. Can US corporations increase their stock price by increasing their dividends? Unpublished working paper.
- Protopapadakis, Aris. 1983. Some indirect evidence on effective capital gains tax rates. *Journal of Business* 56, 127-138.
- Richardson, Gordon Stephan E. Sefcik and Rex Thompson. 1986. A test of dividend irrelevance using volume reactions to a change in dividend policy. *Journal of Financial Economics* 17, 313-333.
- Rosenberg, Barr and Vinay V. Marathe. 1979. Test of capital asset pricing hypothesis. *Research in Finance* 1, 115-223.
- Ross, Stephen A. 1977. The determination of financial structure: the incentive-signaling approach. *Bell Journal of Economics* 7, 23-40.
- Rosenberg, Barr and Vinay Marathe. 1979. Tests of capital asset pricing hypotheses. *Research in Finance* 1, 115-223.
- Rozeff, Michael S. 1982. Growth, beta and agency costs as determinants of dividend payout ratios. *Journal of Financial Research* 2, 249-259.
- Riley, John G. 1979. Informational equilibrium. *Econometrica* 47, 331-359.
- SCM Corporation (A). 1969. Case 9-213-116 EA-F 324. Harvard Business School.
- Senbet, Lemma W. 1980. Discussion: Signaling, Information content, and the reluctance to cut dividends. *Journal of Financial and Quantitative Analysis* 15, 871-873.
- Seyhun, Nejat H. 1986. Insiders' profits, cost of trading, and market efficiency. *Journal of Financial Economics* 16, 189-212.
- Shaw, Wayne H. 1991. An examination of ex-dividend day stock price movements: the case of nontaxable master limited partnership distributions. *Journal of Finance* 46, 755-771.
- Shefrin, Hersh M. and Meir Statman. 1984. Explaining investor preference for cash dividends. *Journal of Financial Economics* 13, 253-282.
- Shiller, Robert J. 1981. Do stock prices move too much to be justified by subsequent changes in dividends? *American Economic Review* 71, 421-436.
- Shiller, Robert J. 1986. The Marsh-Merton model of managers' smoothing of dividends. *American Economic Review* 76, 499-503.
- Smith, Adam. 1776. *An Inquiry Into the Nature and Causes of the Wealth of Nations*, ed. by Edwin Cannan, M.A., LL.D., 1925, 2 vol. Methuen & Co. Ltd. London.
- Smith, Clifford W. Jr. 1977. Alternative methods for raising capital: Rights versus underwritten offerings. *Journal of Financial Economics* 5, 273-307.
- Smith, Clifford W. Jr. 1986. Investment banking and the capital acquisition process. *Journal of Financial Economics* 15, 3-29.
- Smith, Clifford W. Jr. and Jerold B. Warner. 1979. On financial contracting: An analysis of bond covenants. *Journal of Financial Economics* 7, 117-161.

- Smith, Clifford W. Jr. and Ross L. Watts. 1983. The structure of executive compensation contracts and the control of management. Working paper. University of Rochester.
- Smith, Clifford W. Jr. and Ross L. Watts. 1992. The investment opportunity set and corporate financing, dividend, and compensation policies. *Journal of Financial Economics* 32, 263-292.
- Solomon, Ezra. 1963. *The Theory of Financial Management*. Columbia University Press. New York.
- Spence, A.M. 1974. Competitive and optimal response to signals: an analysis of efficiency and distribution. *Journal of Economic Theory* 8, 296-332.
- Sterk, William E. and Pieter A. Vandenberg. 1990. The market valuation of cash dividends and the tax differential theory of dividend policy: a case revisited. *Financial Review* 25, 441-515.
- Thaler, R. and Hershey Shefrin. 1981. An economic theory of self-control. *Journal of Political Economy* 89,392-410.
- Treynor, J.L. 1981. The financial objective in the widely held corporation. *Financial Analysts Journal* ,68-71.
- Treynor, J.L. 1971. The only game in town. *Financial Analysts Journal* 27, 12-14.
- Vancil, R. 1987. CEO succession: advice for directors. *Harvard Business Review* 65.
- Van Horne, James C. 1968. *Financial Management and Policy*. Prentice-Hall, Inc. New York.
- Vermaelen, Theo. 1981. Common stock repurchases and market signaling: an empirical study. *Journal of Financial Economics* 9, 139-183.
- Watts, Ross. 1973. The information content of dividends. *Journal of Business* 46, 191-211.
- Weisbach, M. 1987. Outside directors and CEO turnover. Working paper. Massachusetts Institute of Technology, Department of Economics. Cambridge, MA.
- Weston, Fred J. and Eugene F. Brigham. 1969. *Managerial Finance*. 3d ed. Hold, Rinehart & Winston. New York.
- Williams, Joseph. 1988. Efficient signalling with dividends, investment, and stock repurchases. *Journal of Finance* 43, 737-747.
- Woolridge, Randall J. 1982. The information content of dividend changes. *Journal of Financial Research* 5, 237-247.
- Woolridge, Randall J. 1983. Dividend changes and security prices. *Journal of Finance* 38, 1607-1615.
- Zimmerman, J. 1979. The costs and benefits of cost allocations. *The Accounting Review* 54, 504-521.

IESE

DOCUMENTOS DE INVESTIGACION - RESEARCH PAPERS

No.	TITULO	AUTOR
D/ 242	Formación, entrenamiento y desarrollo de capacidades y habilidades directivas en las empresas españolas en los primeros noventa. Marzo 1993, 48 Págs.	Pin J.R.
D/ 243	Initial public offerings (IPOs): The Spanish experience. March 1993, 20 Pages	Rahnema A. Fernández P. Martínez Abascal
D/ 244	Outsourcing in Spain: An empirical study of top management's perspective. March 1993, 18 Pages	Valor J. Andreu R. Fonstad D.
D/ 245	La credibilidad de los códigos éticos. Abril 1993, 17 Págs.	Argandoña A.
D/ 246	Occasional ethical consultancy. April 1993, 13 Pages	Argandoña A.
D/ 247	La competencia en el mercado español de depósitos bancarios. Abril 1993, 28 Págs.	Gual J.
D/ 248	Business, law and regulation: Ethical issues June 1993, 32 Pages	Argandoña A.
D/ 249	Corporations and the «social contract»: A reply to Prof. Thomas Donaldson. June 1993, 15 Pages	Melé D. Sison A.
D/ 250	La competitividad sectorial de la industria española. Junio 1993, 36 Págs.	Gual J. Hemández A.
D/ 251	¿Aprovecha sus activos estratégicos? Junio 1993, 22 Págs.	García Pont C. Enrione A.

IESE

DOCUMENTOS DE INVESTIGACION - RESEARCH PAPERS

No.	TITULO	AUTOR
D/ 251 BIS	Are you making the most of your strategic assets? June 1993, 17 Pages	García Pont C. EnrioneA.
D/ 252	¿Se puede mejorar el sistema monetario europeo? Septiembre 1993, 16 Págs.	Argandoña A.
D/ 253	La política monetaria española: Lecciones para el futuro. Septiembre 1993, 14 Págs.	Argandoña A.
D/ 254	Managing internationally: The international dimensions of the managerial task (Abridged version) September 1993, 12 Pages	Roure J. Alvarez J.L. García Pont C. Nuevo J.L.
D/ 255	The organizational tension between static and dynamic efficiency. October 1993, 32 Pages	Ghemawat P. Ricart J.E.
D/ 256	Factores importantes en la internacionalización de la Empresa Familiar. Noviembre 1993, 21 Págs.	Gallo M.A. García Pont C.
D/ 256 BIS	Important factors in the family business internationalization. November 1993, 24 Pages	Gallo M.A. García Pont C.
D/ 257	Comparing the motivation of Spanish computer personnel with that of computer personnel in Finland and the United States. November 1993, 17 Pages	Couger J.D. O'Callaghan R.
D/ 258	Managing internationally: The international dimensions of the managerial task. November 1993, 33 Pages	Roure J. Alvarez J.L. García Pont C. Nuevo J.L.
D/ 259	The determinants of dividend policy. November 1993, 43 Pages	Mech C.