INSTITUTO SUPERIOR DE CIÊNCIAS DO TRABALHO E DA EMPRESA
DEPARTMENT OF FINANCE AND ACCOUNTING

HOW PROFITABILITY AND DEBT INFLUENCE DIVIDENDS' PAYOUT POLICY IN THE U.K., FRANCE AND PORTUGAL

A Dissertation presented in partial fulfillment of the Requirements for the Degree of Master in Accountancy

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February, 2008

Abstract

The goal of this thesis is to investigate how profitability and debt influence the dividends' payout policy of companies of three European countries: Portugal, France and the U.K. Using work of La Porta et al. (2000) as a starting point, this thesis not only validates the "outcome model" described by La Porta et al. (2000) but also finds two factors that affect dividends' payout level: debt and activity type.

By comparing companies' dividend payout policy in the three countries, this thesis confirms that the U.K., a common law country, has the highest dividends level and that dividend payout policy is a consequence of effective investor protection by law, as claimed by La Porta et al. (2000). This thesis also subscribes the latter's idea that in common law countries, fast growth firms pay lower dividends than slow growth firms, meaning that protected shareholders are willing to wait for their dividends when investment opportunities are good. Poorly protected investors seem to take whatever dividends they can get, regardless of investment opportunities.

Testing the factors that might affect dividend payout level indicates that there is a positive relation between debt level and dividend policy, and that companies' activity type influence dividends. The former, however, raises some controversy as it contradicts some of the findings of previous studies.

Keywords: dividends, debt, activity, investors' protection

JEL Classifications: G32 – Financing Policy; Financial Risk and Risk Management; Capital and Ownership Structure;
G35 - Payout Policy;

Resumo

O objectivo desta dissertação é investigar como é que a rentabilidade e o endividamento influenciam a política de distribuição de dividendos em três países europeus: Portugal, França e o Reino Unido. Utilizando o estudo de La Porta et al. (2000) como ponto de partida, esta dissertação não só confirma o "modelo de resultado" descrito por La Porta et al. (2000) mas também encontra dois factores que afectam o nível dos dividendos: o endividamento e o tipo de actividade.

Comparando a política de dividendos nos três países, esta dissertação conclui que o Reino Unido, um país de direito anglo-saxónico, tem o nível de dividendos mais elevado e que a política de dividendos é consequência da protecção aos investidores pela lei, como reclamado por La Porta et al. (2000). Esta dissertação também confirma a ideia destes últimos que em países de lei tipo anglo-saxónica, empresas de crescimento rápido pagam menos dividendos que as empresas de crescimento lento, querendo isto dizer que accionistas mais protegidos estão dispostos a esperar pelos dividendos quando as oportunidades de crescimento são boas. Accionistas mal protegidos recebem apenas os dividendos que conseguem extrair da empresa, independentemente das oportunidades de investimento.

Testando os factores que possam influenciar o nível de dividendos pago, verifica-se existir uma relação positiva entre o nível de endividamento e a política de dividendos, e que o tipo de actividade exercida pelas empresas influência os dividendos. A primeira, contudo, gera alguma controvérsia pois contradiz alguns resultados encontrados em estudos anteriores.

Palavras-chave: dividendos, endividamento, actividade, protecção de investidores

Classificações JEL: G32 – Financing Policy; Financial Risk and Risk Management; Capital and Ownership Structure;
G35 - Payout Policy;

Sumário Executivo

O objectivo desta dissertação é investigar como é que a rentabilidade e o endividamento influenciam a política de distribuição de dividendos em três países europeus: Portugal, França e o Reino Unido. Utilizando o estudo de La Porta et al. (2000) como ponto de partida, esta dissertação adiciona duas variáveis ao modelo definido por estes, nomeadamente, o endividamento e a rentabilidade, avaliando assim a sua influência nas políticas de distribuição de dividendos. Tem também por objectivo clarificar se os impostos sobre dividendos afectam ou não o nível de dividendos pago pelas empresas destes países.

Os resultados obtidos confirmam que o país de direito tipo anglo-saxónico – o Reino Unido – paga dividendos mais elevados que os países do tipo de direito civil.. Conclui-se que a política de dividendos é consequência da efectiva protecção aos investidores pela lei, como reclamado por La Porta et al. (2000). Esta dissertação também confirma a ideia destes últimos que, em países de lei tipo anglo-saxónica, empresas de crescimento rápido pagam menos dividendos que as empresas de crescimento lento, querendo isto dizer que accionistas mais protegidos estão dispostos a esperar pelos dividendos quando as oportunidades de crescimento são boas. Quando o nível de protecção dos accionistas é menor estes recebem apenas os dividendos que conseguem extrair das empresas independentemente das oportunidades de investimento das mesmas.

Dos factores testados que podem influenciar o nível de dividendos, conclui-se existir uma relação positiva entre o nível de endividamento e o nível de dividendos e que o nível de dividendos varia com o tipo de actividade da empresa. Os testes empíricos não permitiram tirar conclusões definitivas acerca da relação entre medidas de rentabilidade e política de dividendos, bem como acerca da influência do nível de impostos sobre a política de dividendos.

A influência do endividamento sobre o nível de dividendos é a contribuição mais significativa desta dissertação face à investigação de La Porta et al. (2000). Uma possível explicação para o assunto pode ser aquela descrita por Shleifer e Vishny (1997), segundo a qual os gestores precisam de construir uma reputação para satisfazer as necessidades de financiamento, pagando assim dividendos mais elevados e aumentando o endividamento.

Contudo, a questão do endividamento gera alguma controvérsia pois contradiz as ideias de alguns investigadores que analisaram o tema.

É notório que, apesar de ser no Reino Unido que se pagam dividendos mais elevados, é em Portugal que existe o maior nível de endividamento. Em relação às ideias de investigadores, Miller e Modigliani (1961) ou Aivazian, Booth e Clearly (2006) defendem precisamente o oposto, isto é, que o endividamento diminui os dividendos pagos.

Em relação ao tipo de actividade exercida pelas empresas, conclui-se que as empresas de Agricultura e Indústrias Extractivas pagam os menores dividendos, as de Serviços os mais altos, enquanto as de Comércio e Indústria pagam um nível intermédio. Uma questão de interesse seria saber se o nível de dividendos depende apenas do nível dos ganhos das empresas ou se há, por outro lado, um factor de tradição.

Acknowledgments

I wish to thank my girlfriend and future wife, Sonia, my mother, Maria Helena, my father, Luciano, and my superior, Abel Nunes, for the outstanding morale support they have provided me to finish this thesis.

I also would like to thank my former superior, Helena Ladeira, and the company she represents, Bacardi-Martini Portugal, for the schedule flexibility they have provided me in order to attend classes.

Last, but not the least, I would like to thank my supervisor in this thesis, Professor Helena Isidro, for her superior orientation in this work.

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1. Introduction

Dividends are definitely one of the most controversial subjects amongst accounting and finance research. For more than half a century this subject has been the goal of several studies and it still continues to puzzle investigators.

The goal of this work is to investigate how profitability and debt influence the dividend payout policy of companies of three European countries (The United Kingdom, France and Portugal). Using La Porta et al. (2000) as a starting point, this thesis aims to introduce two additional variables to La Porta et al.'s (2000) model: debt and profit measures, and assess of their influence on the dividends' payout policy of firms. It is also a goal to clarify whether taxes on dividends account or not for the dividends' payout decision.

This paper has not the ambition of La Porta et al. (2000) of using a sample of thirty three countries. Only three countries are used - the United Kingdom, France and Portugal- for the period comprehended between 2000 and 2004. Each country has a specific role in this investigation: the United Kingdom is considered a common law type of country - as described in La Porta et al. (1998) - and is characterized by having a legal system that provides high protection to minority shareholders. Additionally, it is the greatest European country in terms of the amount of securities traded; France is commonly classified as a civil law country with lower protection to minority shareholders, being the second country in Europe in securities market according to 'The Economist Intelligence Unit's Country Report' on France; and last, but not the least, Portugal, because though belonging to the same classification group as France, has the highest tax advantage from all countries used in La Porta et al.'s (2000) paper. This characteristic will allow to testing more clearly the impact of tax advantages on dividend policies.

2. Theoretical Issues

2.1 Dividends

Dividends are one of the key elements of the theory of the firm as designed by Jensen and Meckling (1976). The focus of the model explored in this theory is the contract of an agency relationship between a principal (the external owner of the firm)

and an agent (the owner-manager; or entrepreneur). The theory demonstrates that the lower the equity owned by the manager, the higher the incentive he has to appropriate a larger amount of the corporation's resources in the form of perquisites and the lower is the incentive he has to create value to the company's shareholders. That is not an absolute truth as the concept of "entrenchment" is added by investigators as Demsetz (1983) or Fama and Jensen (1983). According to this concept, managers may hold an equity fraction that secures them in their positions by preventing other shareholders to dismiss them or by disabling any possible hostile takeovers.

Dividends are seen as a mean for lowering the possibilities managers have to waste resources in personal benefits or in non value added projects (Jensen, 1986). Dividends also control for equity agency problems by facilitating primary capital market monitoring of the firm's activities and performance (Easterbrook, 1984). Paying dividends increases the possibilities firms have of selling equity which, as a consequence, will cause the management to be investigated by investment banks, securities exchanges and capital suppliers. Managers use dividend policy as a weapon to deal their permanence in the leadership of the corporation: they pay dividends when the company's performance is below expectations, in order to bring some satisfaction to angry shareholders, and are more reluctant to do so in good times (Fudenberg and Tirole, 1995). But dividends are also a way for managers to building a reputation and more easily meet financing needs in the future (Shleifer and Vishny, 1997).

Miller and Modigliani (1961) advance the dividends irrelevance proposition according to which in perfect capital markets populated by rational investors, a firm's value is solely a function of the firm's investment opportunities and is independent of payout policy. One assumption of this theory is that trading is frictionless so that investors can invest or liquidate their investment in a firm without incurring any direct or indirect costs of trading and without changing the price of the underlying security. In markets with no trading friction, investors with liquidity needs can create homemade dividends at no costs by selling an appropriate amount of their holdings in the firm. As a result, investors should be indifferent between receiving a dollar of dividends and selling a dollar's worth of their investment.

However, trading friction is a constant throughout financial markets. Investors have to pay trading commissions and either have to provide a price concession for an immediate execution or they have to wait until they have optimal execution of their trades. Stocks that pay cash dividends allow investors to satisfy their liquidity needs

with less or no trading thus enabling them to avoid trading friction. When trading friction exists in financial markets, an immediate implication of Miller and Modigliani (1961) is that other things equal, firms with less liquid shares are more inclined to pay dividends relative to firms with more liquid shares – the so called "liquidity hypothesis of dividends". Based in this idea, Banerjee, Gatchev and Spindt (2007) find a strong empirical relation between dividend policy of the firm and the liquidity of its common stock. They demonstrate that there is a declining propensity of firms from NYSE and AMEX to pay dividends in the later years, explained by the significant changes in the liquidity of US security markets. A period of fewer dividend payers is characterized by lower trading costs and increased market activity. They also present evidence that their results are more relevant for firms that have the ability to pay cash dividends to their shareholders.

Furthermore, Banerjee, Gatchev and Spindt (2007) find that firms with less liquid stocks are more likely to initiate or continue dividends payment – and vice versa. In addition, they express the idea that improvements in stock market liquidity in recent years account for most of the declining propensity of firms to initiate dividends. Finally, they find that cash dividends and stock market liquidity are substitutes from the investor's point of view. Firms that initiate dividends payments reduce the sensitivity of their values to aggregate liquidity, presumably because they lower investor exposure to liquidity risk. Therefore, it is possible that dividend policy has an effect on firm value because of market imperfection.

The consequences of asymmetric information and the concept of signalling have been discussed by Bhattacharya (1979), Miller and Rock (1985), John and Williams (1985), Allen, Bernardo, and Welch (2000), and Grullon, Michaely, and Swaminathan (2002), among others. The underlying idea is that if managers are better informed about the value of the company, dividends can be used to communicate that information to the market, despite the costs of paying the dividends. On the other hand, dividends can be viewed as negative news, whereas the companies that pay could be the ones that have no profitable projects in which to invest.

The consequences of transaction costs as well as various indirect factors on dividend policy have been researched from different perspectives by Shefrin and Statman (1984) and Marsh and Merton (1986) among many others. The basic argument is that dividend distribution may be optimal if dividend payments reduce transaction costs or provide other benefits to company shareholders.

Legal protection to investors seems to be a crucial element affecting corporate governance mechanisms and, as a consequence, dividend payout policy. Shleifer and Vishny (1997) split the world in terms of legal protection and equity ownership concentration. They clearly identify three groups: the first consisting on the United States and the United Kingdom, with a high degree of protection to investors and a low concentrated ownership; the second, consisting on continental Europe and Japan, where there is less reliance on elaborate legal protection, and more reliance on large investors and banks; and then the rest of the world, where ownership is typically heavily concentrated in families, with a few large outsider investors and banks. Legal protection is the lowest of the three groups. The model firm characterized by Berle and Means (1932), a widely held one, seems to be, after all, common only in the United States.

Outside the United States, especially in countries with poor shareholder protection, there is a trend for companies to have controlling shareholders, namely, a family which is, many times, the founder of the firm or his descendants (La Porta et al. (1999)). Levine and Zervos (1998) and Rajan and Zingales (1995) stress that good investor protection contributes to efficient resource allocation and to economic growth more generally.

Regulation is the object of study of some investigators. Booth, Cornett and Tehranian (2002) and Kole and Lehn (1997) find that regulation is likely to affect agency costs. Because regulators already provide a certain degree of monitoring, managers of regulated firms should be less able to reap private benefits at the expense of shareholders. This potential reduction in agency costs may have implications for the association between dividend payouts and shareholder rights. Accordingly, when it is explicitly distinguished between regulated and unregulated firms, regulation does have an impact.

A similar approach is followed by La Porta et al. (2000). The criteria is the origin of the Company law that regulates a country – if from Anglo Saxon tradition – the so called common law countries - or other origins (being the most relevant the Romanic origin) – the civil law countries. The goal of La Porta et al.'s (2000) paper is to test if dividend payout policy is the outcome of effective legal protection of shareholders, which enables minority shareholders to extract dividend payments from corporate insiders or if dividends are a substitute for effective legal protection, which enables firms in unprotective legal environment to establish reputations for good treatment of investors through dividends policies. The results of La Porta et al.'s (2000)

study show that firms operating in countries with better protection of minority shareholders pay higher dividends. This suggests the first hypothesis, i.e., dividend payout policy is a consequence of effective investor protection. Another finding of La Porta et al. (2000) is that in common law countries, fast growth firms pay lower dividends than slow growth firms, meaning that protected shareholders are willing to wait for their dividends when investment opportunities are good. Poorly protected investors seem to take whatever dividends they can get, regardless of investment opportunities.

Jiraporn and Ning (2006), based on a sample of the US legal system, demonstrate that dividend payouts are inversely related to the strength of shareholders' rights. Firms where shareholders rights are weak pay out higher dividends, confirming La Porta et al.'s (2000) substitution hypothesis, which posits that firms where shareholders rights are weaker try to establish a good reputation for not taking advantage of shareholders by paying out more as dividends. Hence, dividends compensate for the weak shareholders' rights. Further analysis also reveals that regulation does influence the association between dividends and shareholders' rights.

These empirical results are dissimilar to La Porta et al. (2000), as in their study no support is found for the substitution hypothesis. The authors conjecture that the dissimilarity of their results perhaps lies in the fact that the external capital markets in the US are highly developed and, thus, provide better monitoring. Therefore, the need to establish a favorable reputation in order to raise capital on attractive terms is stronger here than elsewhere in the world. As a result, the substitution hypothesis is supported when one looks at the variation across firms but within the US legal system as opposed to La Porta et al. (2000), who examine dividend policies across disparate legal systems.

2.2 Tax on Dividends

Modern literature on payout policy starts from the valuation model of Miller and Modigliani (1961). They divide investors into "tax clienteles" that are taxed differently. One of their key results is that dividend policy does not have any impact on the company's value. The model assumes a perfect capital market and non existence of taxes. In addition, other idealizations are made. Subsequent research focuses on the impact of taxes on payout policy.

Farrar and Selwin (1967) focus their research on the tax impacts on dividends compared to share repurchase. They assume in their model that investors maximize their aftertax income, finding that the share repurchase should be used to distribute earnings and no dividends should be paid.

Miller and Scholes (1978) show that in perfect capital markets taxes could be avoided as a result of using certain dynamic trading strategies. Stiglitz (1983) suggests several additional dynamic tax avoidance schemes. Kalay (1982) and Michaely and Vila (1995) have discussed dynamic trading strategies around the ex-dividend day, showing that investors can change their trading patterns near this day to capture or avoid the upcoming dividend. If dividends are taxed more heavily than capital gains and investors are not able to use any dynamic trading strategies to avoid such higher taxation then minimizing dividends is optimal. Constantinides (1984) introduces the "tax timing option" concept, demonstrating that investors should be willing to pay for the option to delay capital gains realization.

With respect to the 2003 United State's cutting of dividend taxes, Falaschetti and Orlando (2006) warn for the potential increase of governance costs associated to this decision, despite obvious benefits related to the increase of investment and the decrease of the exposure to financial distress.

The disadvantages of dividend taxes are related to taxing earnings twice, first by taxing companies' earnings and second by taxing distributed dividends. This double taxation mechanism makes equity a relatively costly mechanism for funding investment. This cost "artificially" reduces an economy's supply of loanable funds and thus increases equilibrium interest rates. Therefore, companies may have to give up interesting investment projects.

Additionally, by raising relative costs of equity finance, dividend taxes encourage firms to twist their capital structure towards debt, potentially magnifying the effects of economic shocks.

On the other hand, however, biasing the tax code for debt capital comes from encouraging firms to accept relatively high levels of monitored finance. Capital suppliers face an important free rider problem when attempting to produce evaluation and monitoring services. Banks and other private lenders, however, face a relatively small problem because they largely internalize the benefits that their governance services produce while capital suppliers do not enjoy this comparative advantage. Debt

financing can benefit an economy by encouraging private capital structures to mitigate public information asymmetries.

Other advantage for debt contracts concerns the fact that these force managers to disburse "free cash flows", and, therefore, limits their discretion in the use of these cash flows.

Dividends tax cut might also reduce non financial stakeholders (e.g. employees, suppliers) incentive to make "specific investments". Specific investments confer disproportionate benefits onto the firm in which they are made – i.e., they are difficult to market externally. Once stakeholders sink resources into such investments, then residual claimants, such as financiers, are tempted to expropriate associated returns. Debt capital, on the other hand, can shelter stakeholders from this exposure. By limiting themselves to fixed payments from residual earnings, debt holders pose relatively little threat to expropriating proceeds that are necessary for motivating specific investments.

With respect to cutting dividends tax, there is the possibility that costs that firms face when attempting to inform capital markets about their financial integrity might increase. Information that emerges from dividend distribution increases with the rate of double taxation. Common knowledge of a dividends tax reduces the potential for markets participant to interpret associated payments as anything but a signal of quality.

2.3 Debt and Dividends

Miller and Modigliani (1961) introduced the residual theory of dividends, based on the firm's sources and uses of funds. The following outcomes are expected, according to this theory: firms with higher profits should pay higher dividends; firms with higher investments rates should pay lower dividends; firms with higher future growth opportunities should build up cash for the future investments and consequently make lower dividends payments; and firms facing higher debt constraints will have less financial flexibility and thus pay lower dividends. While these four fundamental factors can be expected to influence the dividend decision, they indicate very little about how the firm's dividend payments are implemented as a dividend policy. Lintner (1956) was the first to address this problem and created a model whose main factor is dividend smoothing, viewed as a solution to both agency and signaling problems.

For Easterbrook (1984), dividends are for equity what interest is to debt: pay out by the managers supported by the control rights of the financiers.

Schleifer and Vishny (1997) deem two moments in time regarding debt literature: before and after Grossman-Hart (1986).

In the first, Towsend (1978) and Gale and Hellwig (1985) consider models in which the borrower can run away with the profits of the firm. However, if the lender is not repaid, he has the right to investigate the books of the firm and grab his cash before the borrower can steal it. Gale and Hellwig (1985) show that the optimal contract that minimizes investigation costs is the debt contract. Grossman and Hart (1982) and Jensen (1986) model the role of debt in committing the payout of free cash flows to investors. For Grossman and Hart (1982) default enables creditors to deprive the manager of the benefits of control. Myers and Majluf (1984) demonstrate that external finance is costly due to the fact that management has superior information. They argue that this adverse selection problem is minimized by the issuance of the "safest" security, i.e., the security with the least sensitive pricing to the manager's private information. Highly rated debt with a fairly certain payoff stream is issued before equity, since equity is difficult to price without knowing the precise value of the firm's assets in place and future growth opportunities. Debt is particularly easy to value when the firms' assets are abundant, so that investors need to concern only with the value of such assets and not with the valuation of the entire firm, as equity investors would need to.

In the second, the trend from recent investigations deems debt as a mechanism for solving agency problems. The defining feature of debt is the ability of creditors to exercise control should the borrower default on payments. There is, in such situation, transfer of some control rights from the borrower to the lender – that is to say that the incomplete contracts framework is used.

Aghion and Bolton (1992) use the incomplete contract theory to characterize debt as an instrument whose holders take control of the firm in a bad state of the world. It is shown in their investigation that if managerial benefits of control are higher in good states of the world, then it may be efficient for managers to have control of assets in good states, and for creditors to have in bad states. Their model does not incorporate the idea that control reverts to the creditors in case of default as opposed to some general bad states. Bolton and Scharfstein (1990) present a model in which, upon default, creditors have enough power to exclude the firm from the capital market, and, therefore, stop future financing altogether.

Hart and Moore (1994) see debt as a contract that gives the creditor the right to repossess the firm's assets in case of default. Fear of such liquidation keeps money flowing from the debtors to the creditors. Hart and Moore's models of debt show exactly how the schedule of debt repayments depends on what creditors can realize once they gain control.

Other studies prefer to point out the costs and benefits of the debt contract. The benefit consists on the reduction of the agency costs by preventing managers of misusing available cash. The cost is related with the fact that, in order to face debt and related charges, there is no cash to invest in good projects. Stulz (1990), Diamond (1991), Harris and Raviv (1990) and Hart and Moore (1995) are the main supporters of these ideas. Lang, Ofek and Stulz (1996) show that leverage limits investment by firms with poor growth opportunities. Williamson (1988) and Shleifer and Vishny (1992) support the idea that liquidations might be very costly when alternative use of the assets is limited. Dewatripont and Tirole (1994) determine the optimal amount of debt in a model where the tough negotiation posture of debt holders after failure in repayments deters managerial misuse of funds.

Debt is seen by existing literature as more secure than equity, as rights of the creditors are clearer and stronger than those of shareholders. To creditors is promised a return on their financial investment, unlike equity owners. Additionally, creditors have the right to claim for specific assets of the firm – unlike equity holders. Creditors have a final date for which the firm is liquidated and the proceeds are liquidated. Young firms, and firms with intangible assets, may need to be equity financed simply because their assets have little or no liquidation value. If they are financed by debt, their managers give full control to the bank from the start. This may be problematic when the firm's value consists primarily of future growth opportunities, but the bank's debt claim and unwillingness to take equity give it little interest in the upside and a distorted incentive to liquidate (Diamond (1991), Hart and Moore (1995), Dewatripont and Tirole (1994)). Rather than give away control to the bank, such firms often have a highly concentrated ownership by the entrepreneur and a venture capitalist. This might open doors to some dispersed outside equity ownership as long as minority rights are well enough protected. It is observed that equity financing is primarily for young, growing firms, as well for firms in rapidly growing economies, whereas mature economies and mature firms typically use bank finance when they rely on external funds at all (Mayer 1990). Titman and Wessels (1988) and Rajan and Zingales (1995) show for the United Sates and

several OECD economies respectively that debt finance is most common for firms with tangible assets.

La Porta et al. (1997) find that countries with successful equity markets also have successful debt markets, consistent with La Porta et al. (1999) that countries with more bank finance have greater incidence of widely held firms in contrast to the "bank centered" financial system hypothesis.

According to Kanatas and Qi (2004), the payment of the debt obligation enables lenders to update their expectations concerning the firm's future cash flows while a default is indicative of possible deterioration in the firm's condition and the need for further inspection. However, it is accepted by the authors that dividend payments can serve similar functions. The payment of the promised dividends provides information to investors of the firm's future cash flows, and an unexpected cut in dividends may alert investors of a possible deterioration in the firms' profitability and trigger inspection. While it is possible that such an unexpected reduction in a firm's dividend may enhance the value of a lender's claim – i.e. a wealth transfer between lenders and shareholders – the evidence suggests that such a dividend reduction is more generally viewed as implying that the firm's anticipated profitability has declined. For instance, Handjinicolaou and Kalay (1984) find that an unexpected announcement of a dividend cut is associated with a reduction in the firm's bond value, while Grullon et al. (2002) document a deterioration of the firm's credit rating subsequent to an unexpected reduction in dividends. Thus with the recognition by capital market investors that a firm's cut may signify a possibly impaired condition, it is plausible to think of the firm's creditors as wishing to further inspect the reasons for the dividend cut and the extent of any impairment, and to look for any noncompliance with the provisions of their debt covenants. In this way, dividends can serve an informational role similar to that of debt. The basic point is that adding a dividend policy to that of debt provides more information to lenders, reduces the cost of debt and increases firm value. Kanatas and Qi (2004) also demonstrate that the twin moral hazard problems of the manager and the lender can be addressed with a coordinated policy of debt and dividends. Both debt and dividends provide information to the lender, and such a coordinated policy helps lenders contain the manager's incentive conflict at a lower cost than with debt alone. As with debt payments, dividends help generate information for lenders that can be used to make assessments of the firm's future cash flows. Failure to pay dividends provides additional information that may be used to determine if further inspection of the firm is

needed to ascertain possible debt covenant violations. The evidence in the literature of a reduction of bond values and, subsequently of credit ratings, upon announcements of dividend cut is indicative of lender concern and suggestive of possible lender inspection. However, unlike the significant power lenders have after a default on debt payment, it is much more difficult for lenders to gain control following an unexpected dividend reduction that is associated with firm deterioration. Therefore, while dividends are informative, lender holdup is less likely after a dividend cut as compared to a default on debt. The lower expected cost of lender moral hazard from dividends compared to debt enables the design of an integrated policy of debt and dividends.

Aivazian, Booth and Cleary (2006) document the existence of a strong interaction between debt and dividend policy. The same fundamental factors that affect the dividend decision also affect the debt decision. It is shown, however, that the critical factor is not the amount of debt but its type. Firms that access public debt markets are larger firms with more tangible assets and lower market/ book value ratios and tend to pay dividends. The bond rating aggregates this information into a single variable which empirically serves to differentiate dividend policy. Lintner style dividends smoothing seems primarily a solution to agency and signaling problems only for larger firms with bond ratings. It is these types of firms that have to deal with dispersed public bond market investors. In contrast, firms without bond ratings borrow from the private bank market, and have little reason to use dividend policy to solve agency and information problems. Hence, these firms follow a residual dividend policy. Aivazian, Booth and Cleary (2006) find very strong evidence that firms with bond ratings smooth their dividends and pay out less from current earnings than firms that are not rated. Rated firms smooth their dividends whereas non rated firms do not, following instead a residual dividend policy. In addition, they confirm that the probability of a firm paying a dividend increases with the firm's profitability and decreases with the firm's debt level and the existence of high future growth opportunities

2.4 Earnings, Cash Flows and Dividends

Lintner (1956) found that the basic determinants of dividend changes are: net income and prior year dividends. Firms attempt to maintain a steady stream of dividends and firms tend to make a periodic partial adjustment to a target payout ratio

rather than dramatically changing their payout when a change in earnings occurs. In the short run, dividends are smoothed to avoid frequent changes.

Miller and Modigliani (1961), on the other hand, stated that dividend policy has no effect on either the price of a firm's stock or its cost of capital. The value of the firm is determined by its basic earnings power and its risk class and not on how earnings are split between dividends and retained earnings. Miller and Modigliani proved that their propositions holds in theory only under certain assumptions: (a) there are no personal or corporate taxes; (b) there is no stock flotation or transaction costs; (c) investors are indifferent between dividends and capital gains; (d) the firm's capital investment policy is independent of its dividend policy; (e) investors and managers have the same set of information regarding future investment opportunities. Dividend changes depend on management's expectations of future earnings. Dividend reductions convey information that future earnings prospects are poor.

More recent studies have focused on the impact of losses on dividend changes (De Angelo and De Angelo, 1990; De Angelo et al. 1992) as well as on the effect of cash flow on the dividend policy (Simons, 1994; Charitou and Vafeas, 1998). De Angelo and De Angelo document a high incidence of dividend reductions by firms with persistent losses, but provide no similar evidence for firms with transitory losses. De Angelo et al. conclude that an annual loss is a necessary condition for dividend reductions in firms with established earnings and dividend records. So far as the impact of cash flows on dividend policy is concerned, no research to date has established an association between cash flow and dividends changes. Nevertheless, a positive association is hypothesized for two reasons: (a) cash flows are a more direct liquidity measure than earnings (Charitou and Vafeas, 1998) and (b) managers may manipulate earnings to maximize bonuses, meet debt covenants or fend off political pressure. For these reasons, then, cash flow is expected to be a more reliable indicator of firm performance than earnings (Healy, 1985). Finally, the simultaneous effect on dividend policy of cash flows and losses has not yet been considered.

Dividends seem an important way for companies to communicate with market participants. Investors cannot always trust managers to provide unbiased information about their companies' prospects, but dividend signals are relatively reliable because they require cash payments and cash cannot be easily manipulated. Tests of the significance of dividend changes showed that capital markets react favorably to 'good news' announcements (dividend increases) and adversely to 'bad news' announcements

(dividend decreases), supporting the view that dividend changes have information content (Michaely et al., 1995).

Although earnings are considered the dominant measure of performance in the market place, the existence of information asymmetries between management and the suppliers of capital has led to the demand for other measures of performance, especially cash flows. Earnings can be criticized because (a) management has some discretion over recognition of certain accruals, which discretion can be used to convey private information or manipulate earnings; and (b) earnings do not fully capture the firms' liquidity position. These limitations make accrual earnings a less reliable determinant of dividend policy. Lawson (1996) contends that dividend policies based on accrual earnings are with *ex ante* shareholder value creation model, that is, to maximize firm value organizations should invest in projects with positive net present values while simultaneously considering firm liquidity (cash flows). Dividend policies based on accrual earnings can result in: (a) deterioration of firms' liquidity and solvency, (b) dividend payments that cannot be internally financed, (c) external borrowing to partially finance dividends, and (d) increased financing costs leading to a transfer of shareholder wealth to lenders. This occurs whenever funds must be raised through debt, and ultimately increases the firm's risk. Proponents of the cash flow reporting also argue that cash flows are not affected by arbitrary allocations and cannot be easily manipulated by management (Lee, 1981). Since dividends must be paid in cash, firms reporting insufficient cash may be forced to reduce dividends. Thus, it is expected that firms will reduce dividends in years of insufficient liquidity. Further, research indicates that: (a) higher dividend payout ratios correspond to larger cash flows, and (b) firms that persistently generate more operating cash flow than earnings are likely to have higher dividend payout ratios (Ingram and Lee, 1997).

On the other hand, cash flows are an insufficient and noisy measure of performance in so far as they are influenced by timing and matching problems (Dechow, 1994). Thus, due to their inherent limitations, neither cash flow nor earnings can be used in isolation to explain dividend policy choices. Furthermore, there is evidence suggesting that dividend reduction is the result of a deterioration in both the profitability and liquidity of a firm (Jensen and Johnson, 1995).

Miller and Modigliani (1961) showed that management's superior assessment of the firm's prospects could be inferred from dividend changes, with dividend increases (reductions) signaling good (bad) news about future earnings. De Angelo et al. (1992)

have also argued that dividends and current earnings are likely substitutes for forecasting future earnings and that information content of dividends will vary depending on the characteristics of current earnings. Dividends are expected to have low (high) explanatory power in random (non random) samples because current earnings are expected to be more (less) reliable. Existing evidence on the information content of dividends is consistent with the above arguments. Watts (1973) and Benartzi et al. (1997) observed a weak association between unexpected earnings and dividend changes for randomly selected firms. Using nonrandom samples, De Angelo et al. (1992) and Healy and Palepu (1988) indicate that dividend reductions have incremental information content in predicting future earnings, given current earnings. Cash flows are also expected to be statistically significant in forecasting future earnings in nonrandom samples because loss firms generally experience earnings reversion after the initial loss, suggesting current earnings will be less useful in forecasting future earnings than in normal circumstances where earnings follow a random walk (De Angelo et al., 1992). Aivazian, Booth and Cleary (2006) confirm that the probability of a firm paying a dividend increases with the firm's profitability.

3. La Porta et al.'s (2000) Model

La Porta et al. (2000) test two agency models of dividends. In the "outcome model", the hypothesis to be tested is that dividends are paid because minority shareholders pressure corporate insiders to disgorge cash. In the "substitute model", the hypothesis is that insiders interested in issuing equity in the future pay dividends to establish a reputation for decent treatment of minority shareholders.

A cross section of more than 4,000 firms from 33 countries around the world is used. The reason behind such quantity and diversity is the assumption, as per previous work (see La Porta et al. (1998)) that corporate governance can be split in two blocks: the first, whose companies belong to common law countries, and the second, with the remaining companies, but whose majority belongs mostly to civil law countries. Additionally, the common law block provides greater legal protection than the civil law block.

The beginning sample is based on March 1996 edition of the WorldScope database, which presents information on the largest listed firms in 46 countries. The

universe of 13,698 firms is reduced to a sample of 4,103 firms of 33 countries after filtering for observations that don't fit the model's purpose. So, financial firms, firms listed in stock exchanges of former socialist countries, state owned firms and other alike observations are excluded from the universe.

The descriptive statistics concerning the final sample show that about one quarter (1,135) of the firms in the sample are from civil law countries and the remaining three quarters (2,968) are from common law countries. More than half of the firms in the sample come from the United States and the United Kingdom. Additionally, it comes as no surprise that, on average, common law countries have stronger shareholder protection than do civil law countries. The z-statistic on the difference in the median civil law and common law shareholder protection is 3.97.

Descriptive statistics also reveal that the median of country median dividend-to-earnings ratios is about 30%, confirming that a substantial share of earnings is paid out as dividends; for the three dividend measures - dividends to cash flow ratio, dividends to earnings ratio and dividends to sales ratio -, common law countries have higher payouts than civil law countries, and for two out of three the difference is statistically significant at the 5% level.

The investigation results are presented in three steps. The first step consists on presenting some basic statistics from the sample with respect to the "outcome" and "substitute" models. The most important characteristic of this first step is that all the countries have identical weight independently of how many companies are listed in those markets. So, medians of country medians of dividend payout ratios are computed, and a distinction is made between firms growing rapidly and firms growing slowly. A restriction is set: only countries where there are at least five firms with sales growth above the world median sales growth of 4.1% and five firms with sales growth below the world median are considered. Therefore, countries with very few firms are eliminated.

The first analysis made on this new sample is to determine whether firms in civil and common law countries have different payout policies. So, the median of country medians for three dividend payout ratios – dividends to cash flow ratio, dividends to earnings ratio and dividends to sales ratio - for the civil and common law families is computed in a separate way. Additionally, it is separately computed the median payout ratios for firms with above and with below the world median sales growth rate. The results show that, for all three ratios, common law countries have a higher dividend

payout ratio than civil law countries. This fact supports strongly the "outcome" agency model of dividends, according to which better shareholder protection leads to higher dividend payouts: the fact that dividend payouts are so different in environments with different shareholder protection suggests that agency considerations are fundamental for the explanation of dividend payout policy. Also, for two out of the three measures of dividends payout, the difference between the common law and the civil law payouts is statistically significant (as evidenced by the z-statistic for difference in medians).
Other conclusion drawn from the analysis is that, in common law countries, payout ratios are higher for slowly growing firms than for fast growing firms, once again confirming the "outcome" agency model.

La Porta et al. (2000) continue with a similar analysis except that, this time, countries are sorted by the low shareholder protection dummy. The results are similar to the previous analysis. Synthesizing these results: for all measures of dividend payouts, countries with better shareholder protection have higher dividend payout ratios than countries with worse protection; for all measures of dividend payouts, high growth firms have lower dividend payouts than low growth firms in the countries with good shareholder protection; and finally, on all measures of dividend payouts, within countries with low shareholder protection, high growth firms have higher dividend payouts than low growth firms, though these differences are not statistically significant however. The results are, therefore, consistent with the "outcome" agency model.

The second step consists on analyzing the results of the regressions across 4,103 firms in thirty three countries. The model used is the following:

$$DIV_{i,t} = \alpha + \beta_1 .Civilaw_{i,t} + \beta_2 .Lowprotection_{i,t} + \beta_3 .GSdecile_{i,t} + \beta_4 .GSdecile\_Civilaw_{i,t} + \\ + \beta_5 .GSdecile\_Lowprotection_{i,t} + \beta_6 .Txadv_{i,t} + \mu_{i,t}$$

$$i = firm\ i \quad t = time\ 1...T_i \qquad (1)$$

Where:

Table 1: La Porta et al. (2000) variables' description

Variable	Description
DIV	Dividends from company i in period t, expressed in three different measures: div_cfo: dividends as a percentage of cash flow in fiscal 1994. Dividends are defined as total cash dividends paid to common and preferred shareholders. Cash flow is measured as total funds from operations net of non-cash items from discontinued operations; div_ear: dividends as a percentage of earnings in fiscal year 1994. Dividends are defined as total cash dividends paid to common and preferred shareholders. Earnings are measured after taxes and interest but before extraordinary items; div_sal: dividends as a percentage of sales in fiscal year 1994. Dividends are defined as total cash dividends paid to common and preferred shareholders. Sales are net sales. Source: WorldScope database.
Civilaw	Equals one if the Company Law or Commercial Code of the country originates in Roman Law and zero otherwise. Source La Porta et al. (1998).

Lowprotection	Equals one if the index of antidirectors rights is smaller or equal to three (the sample median) and zero otherwise. The index of antidirectors right is formed by adding one when: (1) the country allows shareholders to mail the proxy vote; (2) shareholders are not required to deposit their shares prior to the General Shareholder's Meeting; (3) cumulative voting or proportional representation of minorities on the board of directors is allowed; (4) an oppressed minorities mechanism is in place; (5) the minimum percentage of share capital that entitles a shareholder to call for an Extraordinary Shareholder's meeting is less than or equal to 10% (the sample median); (6) or when shareholders have preemptive rights that can only be waved by a shareholders meeting. The range for the index is from zero to six. Source La Porta et al. (1998).
GSdecile	Rank decile for firms' sales growth. Firms are ranked by legal origin into 10 equal-size groups. Ranges from 1 to 10 in ascending order of sales growth. Sales growth corresponds to the average annual percentage growth in real (net) sales over the period 1989-1994. Before computing sales growth, we translate net sales in U.S. dollars into real terms by using U.S. GNP deflator. Source: Worldscope database and International Financial Statistics (1996).
GSdecile_Civilaw	The product of GSdecile by Civilaw.
GSdecile_Lowprotection	The product of GSdecile by Lowprotection.
Txadv	The ratio of the value, to an outside investor, of US$1 distributed as dividend income to the value of US$1 received in the form of capital gains when kept inside the firm as retained earnings.

For each payout variable, one regression is presented that distinguishes between common and civil law countries; one regression that distinguishes between high and low shareholder protection countries; and one that includes both the origin and the protection dummies.

The results show that: a) using civil law dummy: the civil law dummy enters with a negative and significant coefficient at the 1 percent level for all measures of dividend payouts, meaning that common law countries have a higher dividend payout. The GSdecile coefficient is negative and also significant at 1 percent level, meaning that for common law countries, higher growth firms pay lower dividends. The coefficient on the interaction between GSdecile and the civil law dummy is highly statistically significant and of the same magnitude of the GSdecile in all three regressions. As a consequence, there is no relationship between sales growth and dividends payout in civil law countries; b) using the low shareholder protection dummy: the coefficient for the dummy is negative and significant at the 1% level using all measures of payout. The coefficient on GSdecile is negative and significant implying that in countries with good shareholder protection faster growing firms pay lower dividends. The coefficient on the interaction between GSdecile and the low shareholder protection dummy is positive and of about the same magnitude. As a consequence, the relationship between growth and payouts does not hold in countries with poor shareholder protection; c) when both civil law and poor shareholder protection dummies are included in the regression, the former remains significant in two out of three cases, while the latter does not. However, to this result shouldn't be given much relevance as the two variables are correlated. The other results do not suffer many changes; d) the tax variable is only statistically significant the dividends-to-sales ratio regressions. Therefore, it is too risky to draw any conclusions from this variable.

La Porta et al. (2000) also use another model based in industry adjusted data. The model is the following, with the industry adjustments (denoted IA):

$$DIV_{i,t} = \alpha + \beta_1 .Civilaw_{i,t} + \beta_2 .Lowprotection_{i,t} + \beta_3 IA\_GSdecile_{i,t} + \beta_4 .IA\_GSdecile\_Civilaw_{i,t} + \\ + \beta_5 .IA\_GSdecile\_Lowprotection_{i,t} + \beta_6 .Txadv_{i,t} + \mu_{i,t}$$

$$i = firm\ i; \qquad t = time\ 1...T_i \qquad (2)$$

Where:

As per the variables defined above.

As per the following table:

Table 2: La Porta et al. (2000) variables' description – industry adjusted

Variable	Description
DIV	Dividends from company i in period t, expressed in three different measures: IA_dividend-to-cash-flow: Industry-adjusted dividend to cash flow ratio for a firm. To calculate IA_dividend-to-cashflow, we first find for each industry in each country the median of the dividend-to-cash-flow ratio (C_D/CF). Then for each industry in the sample we define the world median as the median of C_D/CF across countries. Finally, we calculate IA_dividend-to-cashflow as the difference between the firm's dividend-to-cash-flow and the world median dividend-to-cash-flow for the firm's industry. We rely on a firm's primary SIC to define the following broad industries: (1) agriculture; (2) mining; (3) construction; (4) light manufacturing; (5) heavy manufacturing; (6) communications and transportation; and (7) services. Source: WorldScope database. IA_dividend-to-earnings: Industry-adjusted dividend-to-earnings ratio for a firm. To calculate IA_dividend-to-earnings, we first find for each industry in each country the median of the dividend-to-earnings ratio (C_D/E). Then for each industry in the sample we define the world median as the median of C_D/E across countries. Finally, we calculate IA_dividend-to-earnings as the difference between the firm's dividend-to-earnings and the world median dividends-to-earnings for the firm's industry. We rely on a firm's primary SIC to define the following

	seven broad industries: (1) agriculture; (2) mining; (3) construction; (4) light manufacturing; (5) heavy manufacturing; (6) communications and transportation; and (7) services. Source: WorldScope database. IA_dividend-to-sales: Industry-adjusted dividend-to-sales ratio for a firm. To calculate IA_dividend-to-sales, we first find for each industry in each country the median of the dividend-to-sales ratio (C_D/S). Then for each industry in the sample we define the world median as the median of C_D/S across countries. Finally, we calculate IA_dividend-to-sales as the difference between the firm's dividend-to-sales and the world median dividends-to-sales for the firm's industry. We rely on a firm's primary SIC to define the following seven broad industries: (1) agriculture; (2) mining; (3) construction; (4) light manufacturing; (5) heavy manufacturing; (6) communications and transportation; and (7) services. Source: WorldScope database.
IA_GSdecile	Rank decile for industry adjusted growth. It ranges from 1 to 10. Industry adjusted growth corresponds to the average annual industry adjusted growth in (net) sales over period 1989-1994. To calculate industry adjusted growth, we first find for each industry in each country the median of the industry adjusted growth (C_GS). Then for each industry in the sample we define the world median as the median as the median of C_GS across countries. Finally, we calculate industry adjusted growth as the difference between the firm's sales growths and the world median sales growths for the firm's industry. We rely on a firm's primary SIC to define the following seven broad industries: (1) agriculture; (2) mining; (3) construction; (4) light manufacturing; (5) heavy manufacturing; (6) communications and transportation;

	and (7) services. Source: WorldScope database.
IA_GSdecile_Civilaw	The product of IA_GSdecile by Civilaw.
IA_GSdecile_Lowprotection	The product of IA_GSdecile by Lowprotection.

The industry adjustment does not change the conclusions drawn in the first model. Common law and good shareholder protection countries pay higher dividends and companies growing faster pay lower dividends.

Finally, in the third step, La Porta et al. (2000) execute some robustness checks that strengthen the previous findings. First, they plot the dividend payouts against sales growth. The results show that, for the big majority of the eleven common law countries, there is a negative relation between the variables, while for the twenty civil law countries, about 50% present a positive relationship and the other 50% a negative relationship. These results hold the theory that firms with growing businesses in common law countries pay lower dividends, but not in civil law countries.

Second, another concern from the investigators is that they might have selected a particular point in time during which certain events might have biased the data used in their work. So, to clear any remaining doubts, the regressions were reestimated using dividend variables from 1992, 1993 and 1994, and looked at three year rather than five past sales growth rates. None of the results shook the previous findings.

Third, a concern from the investigators had to do with measuring investment opportunities by measuring the past growth rate in sales. To address this concern, the results were reestimated using growth rates of assets, fixed assets, cash flow, and earnings, as well as industry Q, as measures of investment opportunities. The results confirmed the previous findings.

The conclusion drawn from this investigation is that the agency approach is key to understand dividend policies around the world. The evidence collected along the investigation supports the "outcome" agency model of dividends. In countries with better protection of minority shareholders dividends are higher, and fast growth firms pay lower dividends than slow growth firms. Poorly protected shareholders, on the other hand, collect the dividends they are able independently of investment opportunities. No conclusions can be drawn from the influence of taxes in dividend policy.

4. A Model of the Association Between Dividend Policy and Profitability and Debt

Using the model from La Porta et al. (2000) as the basis for the model to be used in this investigation, two regressions are used. In the first, two additional variables are added to the model: Debt and ROE (return on equity); in the second, instead of ROE, a profitability measure based on cash flow is used - Cfo.

The Lowprotection variable from La Porta et al. 's (2000) paper was not included as for France, U.K. and Portugal, Lowprotection exactly equals to Civilaw variable.

Synthesizing, the two regressions will be as follows:

Model 1:

$$DIV_{i,t} = \alpha + \beta_1 . Civilaw_{i,t} + \beta_2 . GSdecile_{i,t} + \beta_3 . GSdecile\_Civilaw_{i,t} + \beta_4 . Txadv_{i,t} + \beta_5 ROE_{i,t} + \\ + \beta_6 . Debt_{i,t} + \mu_{i,t}$$

$$i = firm\ i; \qquad t = time\ 1...T_i \qquad (3)$$

Where:

Table 3: Regression 3 (model 1) variables' description

Variable	Description
DIV	As defined above. The same as in La Porta et al. (2000).
Civilaw	As defined above and in La Porta et al. (2000).
GSdecile	Growth sales decile. Concerns the rank from 1 to 10 of sales for all the companies in the country. For each country, companies are ranked 1,2,3..,10 depending on the size of sales. Each group has the same quantity of observations. Sales refers to the moving average of sales/GDP per capita of the last 5 years for each company. Sales are scaled by GDP per capita, in Euros, at the end of the year. Sales for year t is the moving average of sales/GDP per capita of the last 5 years. For example, Sales for 2000 is the average Sales/GDP per capita ratio of 1999, 1998, 1997, 1996 and 1995. The GNP per capita was obtained from World Bank Statistics.
GSdecile_Civilaw	Concerns the product of GSdecile by Civilaw.
Txadv	As defined above and in La Porta et al. (2000).
ROE	Ratio of net income to book value.
Debt	Ratio of non current liabilities to total assets.

Model 2:

$$DIV_{i,t} = \alpha + \beta_1 . Civilaw_{i,t} + \beta_2 . GSdecile_{i,t} + \beta_3 GSdecile\_Civilaw_{i,t} + \beta_4 . Txadv_{i,t} + \beta_5 . Cfo_{i,t} + \\ + \beta_6 . Debt_{i,t} + \mu_{i,t}$$

$$n = 1...n; \qquad t = 1...T_i \qquad (4)$$

Where:

Table 4: Regression 4 (model 2) new variables' description

Variable	Description
Cfo	Ratio of cash flow to assets.

Remaining variables as described above.

Two additional models are also included in the analysis, based on the activity developed by each company. The aim is to check if Activity, a variable representing the industry group to which a company belongs, increments explanative power on the models. The new models used are the following:

Model 3:

$$DIV_{i,t} = \alpha + \beta_1 .Civilaw_{i,t} + \beta_2 .GSdecile_{i,t} + \beta_3 .GSdecile\_Civilaw + \beta_4 .Txadv_{i,t} + \beta_5 .ROE_{i,t} +$$

$$+ \beta_6 .Debt_{i,t} + \beta_7 .Activity_{i,t} + \mu_{i,t}$$

$$n = 1...n; \qquad t = 1...T_i \qquad (5)$$

Model 4:

$$DIV_{i,t} = \alpha + \beta_1 .Civilaw_{i,t} + \beta_2 .GSdecile_{i,t} + \beta_3 .GSdecile\_Civilaw + \beta_4 .Txadv_{i,t} + \beta_5 .Cfo_{i,t} +$$

$$+ \beta_6 .Debt_{i,t} + \beta_7 .Activity_{i,t} + \mu_{i,t}$$

$$n = 1...n; \qquad t = 1...T_i \qquad (6)$$

Where:

Table 5: Regressions 5 and 6 (models 3 and 4) new variables' description

Variable	Description
Activity	Based on the industry sector, each company is classified in Worldscope database (Sic Code), the companies are grouped in three activity categories, assuming the values: (1) for Agriculture and Extractive Industry, (2) for Trade and Industry and (3) for Services.

Remaining variables as described above.

5. Description of Countries Used in the Model

The UK is considered as an 'outsider system' country by Bouy (2005), characterized by widely dispersed share ownership and high turnover. Protection of minority shareholders is high when compared to other countries, especially those included in the 'insider system' where Portugal and France are included.

In the UK, the absence of concentration ownership may discourage active corporate governance. Regulation in this system provides adequate shareholder protection and allows investors to assume the risk-reward trade-off with an equal access to information. In theory, shareholders have the power to select members of the board and to vote upon key issues facing the company, but in practice this limited by the fragmentation of ownership.

The UK is characterized by a market based system and a "disclosured-centered" system. On the one hand, there have been two traditional channels of financial intermediation. Thereby, finance tends to be short term and banks tend to develop arm's length relationships. Independent investment banking and specialized securities market have been, therefore, developed. In this respect, the stock market plays an important role. Thus, equities represent a high share of financial assets and a large part of the GDP. In the end of 1997, the total capitalization of domestic listed companies represented an amount 1,879,043 million EURs. 2,465 companies were listed, representing 193.7% of GDP.

Shares ownership in the UK is characterized by the domination of institutional investors. Institutional investors represented, at the end of 1993, in excess of 59% the dominant shareholder in British companies with pension funds and insurers alone accounting for 51.5% of the total. This trend can be attributed to the tax incentives extended by the government to collective schemes, the growth of mutual funds and the tendency for companies to issue shares directly to institutional investors.

The UK system is also "disclosure-based". The corporate governance framework favors the use of public capital markets. Capital markets influence the behavior of key parties. Firstly, minority investors are afforded a high degree of protection in securities law. Secondly, the monitoring of management is based in the discipline of capital markets. This assumes liquid stock market and an adequate disclosure of information. An effective corporate governance framework can limit the scope for managerial discretion. Thus, the market for corporate control can represent a more effective disciplinary device than either the board of directors or the monitoring by institutional investors. When managers fail to maximize the firm's value, they expose it to the threat of a takeover and the removal of inefficient management. The threat of a take-over may be an effective disciplining mechanism. The intensity of mergers and acquisitions can be justified by rent seeking behavior, empire building and tax minimization. To prove it, in the period between 1990 and 1995, the average share of cross-border mergers within European Union and takeovers measured by the number of occurrences as % of EU total, was of 17.5% British companies being targeted by other companies from other EU countries and 26.5% were the purchasers of other companies.

France and Portugal are included in the group of the so called 'insider' systems, as described by Bouy (2005), characterized by concentrated ownership or voting power and several inter-firm relationships and corporate holdings. The dominant features of these countries are banks, holding companies and familial control. In France, families represented, at the end of 1993, 34% of the dominant shareholder within French companies.

There are close relationships with banks, cross-shareholdings and pyramidal structures of corporate holdings. Shareholders can extend their control at relatively low cost by resorting to cross-holdings, pyramiding, proxy votes and dual-class shares, etc.

In these countries, cash flow rights and control rights are aligned. This gives majority shareholders the incentive and the power to monitor management. When ownership is dispersed and voting power is concentrated, controlling block holders have

an incentive to engage in active monitoring. In the end of 1997, in Portugal, the total capitalization of domestic listed companies represented an amount 35,431 million EURs split by 148 listed companies and representing 48.8% of GDP. In France, at the end of 1997, the total capitalization of domestic listed companies represented an amount 613,429 million EURs. 683 companies were listed, representing 48.8% of GDP.

In fact, with concentrated ownership, the majority shareholders and block holders obtains a significant fraction from the benefits from monitoring. Hence, the main problem in insider systems is the conflict between controlling shareholders (or block holders) and outside minority shareholders. In other words, the conflict is between "strong voting block holders, weak minority owners" or "weak managers, weak minority owners, strong majority owners".

Long term relations with banks and financial institutions, which can affect the performance of the corporate sector because the available financing to firms affects the cost capital, can also characterize insider corporate governance systems, where Portugal and France are included. In insider systems, debt equity ratios are typically higher due to the long term relationships with banks which perform monitoring and screening functions. This can lower the overall cost of capital faced by firms. The bank based systems reduce asymmetric information and enable banks to supply more external finance to firms at lower cost. This increases monitoring and investment and ensures that firms are run more efficiently. Since small and illiquid public capital markets characterize insider systems, the dominant pattern for small firms is debt financing. However, banks face an asymmetric risk when assessing small firms and new start-ups.

La Porta et al. (1997) discuss a set of key legal rules protecting shareholders and creditors as well as legal enforcement efficiency and accounting standards. Classifying countries by legal origin, they document that common law countries– where the U.K. is included – have the strongest protection of outside investors (both shareholders and creditors) whereas the Civil French law (where Portugal and France belong) has the weakest protection. La Porta et al. (2000) argue that the legal approach is more appealing to understand corporate governance and the usual distinction between bank centered and market centered financial systems. La Porta et al. (2000) show that large differences among countries in ownership concentration in publicly traded firms, breadth and depth of financial capital markets, dividend policies and access of firms to external finance, are explained by how well investors (shareholders and creditors) are protected by law from expropriation by the managers and controlling shareholder. In

addition, civil law countries (where Portugal and France are included) are more interventionist than common law countries (where the UK is included). La Porta et al. (1997) also found evidence of higher valuation of firms in countries with better protection of minority shareholders – in our case, the U.K. – and a weaker evidence of the benefits of higher cash flow ownership by controlling shareholders for corporate valuation.

6. Sample and Data

The sample was extracted from WorldScope database in March 2007 concerning listed British, French and Portuguese companies for the period between 2000 and 2004 – except for sales whose data had to be collected further in the past from 1995 to 2004. All active and inactive companies were selected. All accounting variables, if expressed in a different currency, were converted to Euro using the year end EUR/USD rate obtained from WorldScope. For years prior to 1998 the exchange rate at 31.12.1998 was applied. Financial companies were excluded because, due to their nature, concepts such as interests are hardly applicable to this study.

The beginning sample comprehends 6,101 observations. 1% of top and down observations for div_cfo, div_ear, div_sal, Cfo, Debt and ROE are then excluded from the beginning sample. The final sample consists of 5,232 firm-year observations.

7. Descriptive Statistics

Table 6 summarizes the data by presenting the number of observations there are for each country as well the mean, median and standard deviation for variables used in the model. With respect to dividends, by looking at means and medians, the U.K. is, by far, the one that distributes the higher level of dividends regardless of the scale (cash flow, earnings or sales) therefore confirming the idea that a common law country distributes a higher percentage of dividends as compared to civil law countries. Therefore, the theory supported by Shleifer and Vishny (1997) and La Porta et al. (2000) that legal protection to investors affects dividend payout policy is confirmed by

this study. Consequently, there is no evidence that dividend payouts are inversely related to the strength of shareholders rights as proposed by Jiraporn and Ning (2006).

Table 6 also highlights the fact that the U.K. has a greater influence in the sample and results, as 74% of the observations are from this country. The mean and median sales growth (GSdecile) are very similar in the three countries – not confirming Levine and Zervos (1998) or Rajan and Zingales (1995), who stress that good investor protection contributes to efficient resource allocation and to economic growth more generally.

Regarding profitability, measured either by Cfo or by ROE, both France and Portugal are ahead of the UK. This means that return on funds invested is higher in France, followed by Portugal and finally by the U.K..

Regarding the level of debt, Portugal is the country whose companies have the highest average debt ratio, followed by France and the U.K. Portugal's payment of dividends is, however, the lowest of the three countries studied, supporting Miller and Modigliani (1961) who show that firms facing higher debt constrains will have less financial flexibility thus paying lower dividends. On the other hand, table 6 shows little evidence that supports Aivazian, Booth and Clearly's (2006) conclusions that the probability of a firm paying a dividend increases with firm's profitability.

Table 6: Descriptive statistics by country and for the pooled sample

			Variables						
		N	div_cfo	div_ear	div_sal	GSdecile	Debt	ROE	Cfo
France		1,151							
	Mean		0.17	0.38	0.03	5.73	0.13	0.11	0.08
	Median		0.14	0.29	0.01	6.00	0.10	0.11	0.08
	Std dev.		0.97	0.74	0.09	2.79	0.13	0.19	0.07
U.K.		3,886							
	Mean		0.46	0.54	0.17	5.63	0.13	0.08	0.06
	Median		0.30	0.46	0.04	6.00	0.08	0.08	0.06
	Std dev.		1.49	0.95	0.26	2.84	0.15	0.25	0.08
Portugal		195							
	Mean		0.14	0.36	0.04	5.53	0.19	0.10	0.06
	Median		0.11	0.33	0.01	6.00	0.18	0.10	0.05
	Std dev.		0.65	0.67	0.08	2.87	0.14	0.18	0.07
All		5,232							
	Mean		0.38	0.50	0.13	5.65	0.13	0.09	0.07
	Median		0.24	0.41	0.03	6.00	0.09	0.09	0.06
	Std dev.		1.38	0.90	0.23	2.83	0.14	0.24	0.08

Table 6: the table reports descriptive statistics for the variables used in the model, split by country and for the overall sample. N refers to the number of valid observations; div_cfo refers to dividends to cash flow ratio, measuring dividends as a percentage of cash flow; div_ear refers to the dividends to earnings ratio; div_sal measures the weight of dividends in total sales; GSdecile refers to the sales growth rate decile. For each country, companies are ranked 1,2,3..,10 depending on the size of sales growth. Each group has the same quantity of observations; Debt referring to the ratio of non current liabilities to total assets; ROE is the ratio of net income to book value; Cfo is the ratio of cash flow to assets.

Analysis on an industry level is presented in table 7 below. The Services sector has the highest mean and median in terms of dividend distribution. It is also the more representative sector in the sample (63% of the total number of observations). The Services sector shows the lowest growth in sales, the lowest ROE and the lowest cash

flow to assets. It is the Agriculture and Extractive Industries that shows the highest scores regarding profitability.

Regarding Debt, the three segments seem to be at the same level.

Table 7: Descriptive statistics by activity

			Variables						
		N	div_cfo	Div_ear	div_sal	GSdecile	Debt	ROE	Cfo
Agricul-ture and Extracti-ve Industry		110							
	Mean		0.23	0.38	0.06	6.12	0.12	0.13	0.10
	Median		0.17	0.32	0.03	6.00	0.09	0.12	0.09
	Std dev.		0.48	0.82	0.12	2.70	0.11	0.09	0.08
Trade and Industry		1,823							
	Mean		0.26	0.38	0.03	6.63	0.13	0.11	0.08
	Median		0.21	0.32	0.02	7.00	0.10	0.12	0.08
	Std dev.		0.90	0.87	0.04	2.41	0.13	0.12	0.08
Services		3,299							
	Mean		0.46	0.57	0.19	5.09	0.14	0.08	0.06
	Median		0.28	0.48	0.04	5.00	0.08	0.07	0.04
	Std dev.		1.59	0.91	0.27	2.90	0.16	0.25	0.08

Table 7: the table reports descriptive statistics for the variables used in the model, split in three groups based in SIC code origin. The groups are: (1) Agriculture and Extractive Industry, (2) Trade and Industry, and (3) Services. N refers to the number of valid observations; div_cfo refers to dividends to cash flow ratio, measuring dividends as a percentage of cash flow; div_ear refers to the dividends to earnings ratio; div_sal measures the weight of dividends in total sales; GSdecile refers to the sales growth rate decile. For each country, companies are ranked 1,2,3..,10 depending on the size of sales growth. Each group has the same quantity of observations; Debt referring to the ratio of non current liabilities to total assets; ROE is the ratio of net income to book value; Cfo is the ratio of cash flow to assets.

8. Regressions' Results

The results from the two models described in regressions 3 and 4 (models 1 and 2), are presented below.

As mentioned previously, the models are similar to those used by La Porta et al. (2000) but two additional measures are added: a debt measure and a profitability measure. While in regression 3 (model 1) profitability is measured using the ROE indicator, in regression 4 (model 2) profitability is measured using the ratio cash flow to assets (variable Cfo).

8.1 The Association Between Dividend Policy, Debt and Profitability Measured as ROE

Tables 8, 9 and 10 report results of application of regression 3 (model 1) described in section 4 when the dependent variable (DIV) is defined as dividends to cash flow (div_cfo), dividends to earnings (div_ear) and dividends to sales (div_sal), respectively. The model with the stronger explanatory power is the dividends to sales, with a R^2 of 33%. Nevertheless, the results across the three dividend definitions are similar. The civil law indicator (Civilaw), the sales growth variable (GSdecile) and the interaction between civil law and sales growth (GSdecile_Civilaw) are all statistically and economically significant. The profitability variable ROE is also statistically significant at 5% level for dividends scaled by earnings (table 9) and sales (table 10) and at 10% level in the case of dividends scaled by cash flows (table 8). Debt, on the other hand, is statistically significant at 1% level for dividends to cash flow and dividends to sales, but significant at 10% level, only, for dividends to earnings.

Tax advantage (Txadv) does not seem to impact the dividend policy decision of sample firms. This variable is not significant across all the three dividend definitions.

Concerning the algebraic signs of the coefficients, expressed in tables 8, 9 and 10, both the constant, the GSdecile_Civilaw and Debt coefficients are always positive. On the other hand, Civilaw, Txadv and GSdecile have negative coefficients. ROE shows both positive and negative coefficients.

These results demonstrate that dividend payout varies in the opposite way to Civillaw dummy and to sales growth level (GSdecile), meaning that dividends tend to be higher in common law countries and that they increase when growth opportunities are smaller.

In addition, dividend payout follows the same way as GSdecile_Civilaw and Debt. As a consequence, dividends tend to be higher in civil law countries whose companies are growing fast. Debt seems to favor dividend payout.

In addition, a comparison to La Porta et al.'s (2000) results shows that coefficients from regression 3 (model 1), from significant variables, have the same algebraic sign as those of La Porta et al. (2000) - when civil law and low protection dummies are equal to one.

These conclusions meet those of La Porta et al.'s (2000) paper in its "outcome" model, according to which common law countries pay higher dividends versus their civil law counterparts, and that companies growing faster in common law countries tend to pay lower dividends than those with limited possibilities of growth.

Another conclusion drawn from tables 8, 9 and 10 is that dividend payout has a positive relation to companies' debt level. This idea, however, raises a considerable number of contradictions versus what has been written before: a) the descriptive statistics section refers to Portugal as having the highest debt level. However Portugal has not the highest payout ratios; b) Miller and Modigliani (1961) argue that firms facing higher debt constraints have less financial flexibility and thus pay lower dividends. The finding described in this thesis doesn't meet their arguments; c) Aivazian, Booth and Clearly (2006) state that the probability of a firm paying a dividend increases with the firm's profitability and decreases with the firm's debt level and existence of high future growth opportunities. Once again, these arguments do not fit the findings from the current thesis.

To what about tax advantage (Txadv) and return on equity (ROE) is concerned, very little might be said about: while the first fails to be significant, the latter shows both positive and negative coefficients in the three dividend scales.

Table 8: Results of regression 3 (model 1) when dependent variable is div_cfo

	Constant	Civilaw	Txadv	GSdecile	GSdecile_Civilaw	Debt	ROE
Coefficient	0.87	-0.67	-0.15	-0.06	0.06	0.38	0.14
T-value	3.30	-6.31	-0.46	-7.97	4.01	2.88	1.70
P-value	0.001	<0.001	0.642	<0.001	<0.001	0.004	0.089
N	5,232						
R^2	0.022						

Table 8: the first line reports the figures assumed by coefficients for regression 3 (model 1) when the dependent variable is dividends to cash flows ratio; the second and third lines show the T and P values for each independent variable used in the regression; N refers to the number of valid observations; R^2 shows the explaining power of the regression; Civilaw is a dummy variable equaling zero if the origin of the Company Law or Commercial Code is English common law, and one if based on Roman Law; Txadv is the ratio of the value, to an outside investor, of US $1 distributed as dividend income to the value of US $1 received in the form of capital gains when kept inside the firm as retained earnings; GSdecile refers to the sales growth rate decile. For each country, companies are ranked 1,2,3..,10 depending on the size of sales growth. Each group has the same quantity of observations; GSdecile_Civilaw refers to the product of GSdecile by Civilaw; debt referring to the ratio of non current liabilities to total assets; ROE is the ratio of net income to book value.

Table 9: Results of regression 3 (model 1) when dependent variable is div_ear

	Constant	Civilaw	Txadv	GSdecile	GSdecile_Civilaw	Debt	ROE
Coefficient	0.78	-0.42	-0.07	-0.04	0.04	0.15	0.32
T-value	4.55	-6.03	-0.32	-8.08	4.16	1.76	6.17
P-value	<0.001	<0.001	0.748	<0.001	<0.001	0.079	<0.001
N	5,232						
R^2	0.025						

Table 9: the first line reports the figures assumed by coefficients for regression 3 (model 1) when dependent variable assumes dividends to earnings ratio; the second and third lines show the T and P values for each independent variable used in the regression; N refers to the number of valid observations; R^2 shows the explaining power of the regression; Civilaw is a dummy variable equaling zero if the origin of the Company Law or Commercial Code is English common law, and one if based on Roman Law; Txadv is the ratio of the value, to an outside investor, of US $1 distributed as dividend income to the value of US $1 received in the form of capital gains when kept inside the firm as retained earnings; GSdecile refers to the sales growth rate decile. For each country, companies are ranked 1,2,3..,10 depending on the size of sales growth. Each group has the same quantity of observations; GSdecile_Civilaw refers to the product of GSdecile by Civilaw; Debt referring to the ratio of non current liabilities to total assets; ROE is the ratio of net income to book value.

Table 10: Results of regression 3 (model 1) when dependent variable is div_sal.

	Constant	Civilaw	Txadv	GSdecile	GSdecile_civilaw	Debt	ROE
Coefficient	0.44	-0.38	-0.01	-0.05	0.04	0.06	-0.02
T-value	11.99	-25.31	-0.13	-45.09	20.08	3.30	-2.09
P-value	<0.001	<0.001	0.897	<0.001	<0.001	0.001	0.036
N	5,232						
R^2	0.327						

Table 10: the first line reports the figures assumed by coefficients for regression 3 (mode 1) when dependent variable assumes dividends to sales ratio; the second and third lines show the T and P values for each independent variable used in the regression; N refers to the number of valid observations; R^2 shows the explaining power of the regression; Civilaw is a dummy variable equaling zero if the origin of the Company Law or Commercial Code is English common law, and one if based on Roman Law; Txadv is the ratio of the value, to an outside investor, of US $1 distributed as dividend income to the value of US $1 received in the form of capital gains when kept inside the firm as retained earnings; GSdecile refers to the sales growth rate decile. For each country, companies are ranked 1,2,3..,10 depending on the size of sales growth. Each group has the same quantity of observations; GSdecile_Civilaw refers to the product of GSdecile by Civilaw; Debt referring to the ratio of non current liabilities to total assets; ROE is the ratio of net income to book value.

8.2 The Association Between Dividend Policy, Debt and Profitability Measured as Cash Flows to Assets

Tables 11, 12 and 13 express the coefficients obtained from regression 4 (model 2).

Once again, dividend to sales regression has the highest explanatory power – explaining about 34%.

The constant and the coefficients for Civilaw, GSdecile and GSdecile_Civilaw are significant at 1% level for the three measures used to express dividend payout.

As in regression 3 (model 1), the tax advantage variable continues to show no significance for the three measures of significance. Debt is not significant in the dividends to earnings model. Coefficient for Cfo variable is significant for the dividend to sales measure, only.

Regarding algebraic signs from the coefficients, findings for regression 4 (model 2) are similar to those of regression 3 (model 1). The constant and coefficients for variables GSdecile_Civilaw and Debt are positive in the three measures of dividends. Civilaw, Txadv and GSdecile show negative coefficients for all three dividend scales. Cfo coefficient assumes both positive and negative figures.

Coefficients from regression 4 (model 2) regarding significant variables, have the same algebraic sign as those of La Porta et al. (2000) when civil law and low protection dummies are equal to one.

Similar to regression 3 (model 1), the conclusions drawn from coefficient analysis are that dividends tend to be higher in common law countries. Additionally, within this legal origin of countries, dividends increase when growth opportunities are smaller. Another finding is that dividend payout follows the same way as GSdecile_Civilaw. As a consequence, dividends tend to be higher in civil law countries whose companies are growing fast. Dividends also tend to be higher the higher is the companies' debt level.

Regression 4 (model 2), using independent variable Cfo, has not brought any added value versus the usage of ROE variable in regression 3 (model 1).

Table 11: Results of regression 4 (model 2) when dependent variable is div_cfo.

	Constant	Civilaw	Txadv	GSdecile	GSdecile_Civilaw	Debt	Cfo
Coefficient	0.85	-0.68	-0.12	-0.06	0.06	0.39	0.41
T-value	3.21	-6.35	-0.39	-8.06	4.09	2.95	1.63
P-value	0.001	<0.001	0.697	<0.001	<0.001	0.003	0.103
N	5,232						
R^2	0.022						

Table 11: the first line reports the figures assumed by coefficients for regression 4 (model 2) when dependent variable assumes dividends to cash flow ratio; the second and third lines show the T and P values for each independent variable used in the regression; N refers to the number of valid observations; R^2 shows the explaining power of the regression; Civilaw is a dummy variable equaling zero if the origin of the Company Law or Commercial Code is English common law, and one if based on Roman Law; Txadv is the ratio of the value, to an outside investor, of US $1 distributed as dividend income to the value of US $1 received in the form of capital gains when kept inside the firm as retained earnings; GSdecile refers to the sales growth rate decile. For each country, companies are ranked 1,2,3..,10 depending on the size of sales growth. Each group has the same quantity of observations; GSdecile_Civilaw refers to the product of GSdecile by Civilaw; Debt referring to the ratio of non current liabilities to total assets; Cfo is the ratio of cash flow to assets.

Table 12: Results of regression 4 (model 2) when dependent variable is div_ear.

	Constant	Civilaw	Txadv	GSdecile	GSdecile_Civilaw	Debt	Cfo
Coefficient	0.81	-0.40	-0.07	-0.04	0.04	0.13	0.02
T-value	4.66	-5.64	-0.33	-7.56	3.82	1.45	0.10
P-value	<0.001	<0.001	0.743	<0.001	<0.001	0.147	0.924
N	5,232						
R^2	0.018						

Table 12: the first line reports the figures assumed by coefficients for regression 4 (model 2) when dependent variable assumes dividends to earnings ratio; the second and third lines show the T and P values for each independent variable used in the regression; N refers to the number of valid observations; R^2 shows the explaining power of the regression; Civilaw is a dummy variable equaling zero if the origin of the Company Law or Commercial Code is English common law, and one if based on Roman Law; Txadv is the ratio of the value, to an outside investor, of US $1 distributed as dividend income to the value of US $1 received in the form of capital gains when kept inside the firm as retained earnings; GSdecile refers to the sales growth rate decile. For each country, companies are ranked 1,2,3..,10 depending on the size of sales growth. Each group has the same quantity of observations; GSdecile_Civilaw refers to the product of GSdecile by Civilaw; Debt referring to the ratio of non current liabilities to total assets; Cfo is the ratio of cash flow to assets.

Table 13: Results of regression 4 (model 2) when dependent variable is div_sal.

	Constant	Civilaw	Txadv	GSdecile	GSdecile_Civilaw	Debt	Cfo
Coefficient	0.47	-0.36	-0.03	-0.05	0.04	0.04	-0.37
T-value	12.83	-24.56	-0.64	-41.76	19.11	2.35	-10.78
P-value	<0.001	<0.001	0.522	<0.001	<0.001	0.019	<0.001
N	5,232						
R^2	0.341						

Table 13: the first line reports the figures assumed by coefficients for regression 4 (model 2) when dependent variable assumes dividends to sales ratio; the second and third lines show the T and P values for each independent variable used in the regression; N refers to the number of valid observations; R^2 shows the explaining power of the regression; Civilaw is a dummy variable equaling zero if the origin of the Company Law or Commercial Code is English common law, and one if based on Roman Law; Txadv is the ratio of the value, to an outside investor, of US $1 distributed as dividend income to the value of US $1 received in the form of capital gains when kept inside the firm as retained earnings; GSdecile refers to the sales growth rate decile. For each country, companies are ranked 1,2,3..,10 depending on the size of sales growth. Each group has the same quantity of observations; GSdecile_Civilaw refers to the product of GSdecile by Civilaw; Debt referring to the ratio of non current liabilities to total assets; Cfo is the ratio of cash flow to assets.

8.3 Using Regressions 5 and 6 (Models 3 and 4) - Activity Variable

In an attempt to improve explanative power, the Activity variable, as described previously, is added to regressions 3 and 4 (models 1 and 2). The regression results are as follows.

8.3.1 Results from Regression 5 (Model 3) - Activity Variable

Looking at the p-values resulting from regression 5 (model 3) in tables 14, 15 and 15, Txadv's coefficient is unanimously non significant across the three measures of dividends. Debt fails to be significant in the dividends to earning scale while ROE is non significant in the dividends to sales scale. Except from these cases, all coefficients are significant in a confidence level range between 1% and 10%. Like for regressions 3

and 4 (models 1 and 2), the div_sal scale features the highest R^2, with an explanation power of 35%.

Regarding coefficients signs, the constant, Debt, GSdecile_Civilaw and Activity present positive coefficients. Oppositely, Txadv, GSdecile, and Civilaw present negative coefficients. ROE shows both negative and positive coefficients.

A comparison between regressions 5 (model 3) and 3 (model 1), shows that, exception made to Activity variable, not present in regression 3 (model 1), there is a perfect match between models to what coefficients' algebraic signs is concerned. The new Activity variable adds additional explaining power to the original regression 3 (model 1), as a comparison of the correspondent R^2 reveals that there is an increase for each dividend measure.

As a consequence, results indicate that there is a negative relation between dividend payout and civil law dummy and to sales growth level, meaning that dividends tend to be higher in common law countries and that they increase when growth opportunities are smaller. In addition, there is a positive relation between dividend payout and GSdecile_Civilaw and Debt variables. Hence, dividends tend to be higher in civil law countries whose companies are growing fast; the debt level seems to increase the possibility of higher dividend payout. Also, there is a positive relation between dividend payout and the firms' Activity: Agriculture and Extractive Industry seem to pay the lowest dividends, Services pay the highest while Trade and Industry dividend level is between the previous two. ROE is ambiguous.

Table 14: Results of regression 5 (model 3) when dependent variable is div_cfo.

	Constant	Txadv	Debt	ROE	GSdecile	Civilaw	GSdecile_ Civilaw	Activity
Coefficient	0.63	-0.16	0.36	0.14	-0.06	-0.64	0.06	0.08
T-value	2.24	-0.50	2.70	1.80	-7.18	-6.04	3.87	2.23
P-value	0.025	0.617	0.007	0.072	<0.001	<0.001	<0.001	0.026
N	5,232							
R^2	0.023							

Table 14: the first line reports the figures assumed by coefficients for regression 5 (model 3) when dependent variable assumes dividends to cash flow ratio; the second and third lines show the T and P values for each independent variable used in the regression; N refers to the number of valid observations; R^2 shows the explaining power of the regression; Activity variable assumes figures 1, 2 or 3 depending on the activity sector each company is classified in Worldscope database (Sic Code): 1 for Agriculture and Extractive Industry, 2 for Trade and Industry and 3 for Services; Txadv is the ratio of the value, to an outside investor, of US $1 distributed as dividend income to the value of US $1 received in the form of capital gains when kept inside the firm as retained earnings; GSdecile refers to the sales growth rate decile. For each country, companies are ranked 1,2,3..,10 depending on the size of sales growth. Each group has the same quantity of observations; Debt referring to the ratio of non current liabilities to total assets; ROE is the ratio of net income to book value

Table 15: Results of regression 5 (model 3) when dependent variable is div_ear.

	Constant	Txadv	Debt	ROE	GSdecile	Civilaw	GSdecile _Civilaw	Activity
Coefficient	0.44	-0.08	0.12	0.33	-0.04	-0.38	0.39	0.12
T-value	2.4	-0.40	1.38	6.40	-6.63	-5.48	3.85	4.93
P-value	0.016	0.688	0.167	<0.001	<0.001	<0.001	<0.001	<0.001
N	5,232							
R^2	0.029							

Table 15: the first line reports the figures assumed by coefficients for regression 5 (model 3) when dependent variable assumes dividends to earnings ratio; the second and third lines show the T and P values for each independent variable used in the regression; N refers to the number of valid observations; R^2 shows the explaining power of the regression; Activity variable assumes figures 1, 2 or 3 depending on the activity sector each company is classified in Worldscope database (Sic Code): 1 for Agriculture and Extractive Industry, 2 for Trade and Industry and 3 for Services; Txadv is the ratio of the value, to an outside investor, of US $1 distributed as dividend income to the value of US $1 received in the form of capital gains when kept inside the firm as retained earnings; GSdecile refers to the sales growth rate decile. For each country, companies are ranked 1,2,3..,10 depending on the size of sales growth. Each group has the same quantity of observations; Debt referring to the ratio of non current liabilities to total assets; ROE is the ratio of net income to book value

Table 16: Results of regression 5 (model 3) when dependent variable is div_sal.

	Constant	Txadv	Debt	ROE	GSdecile	Civilaw	GSdecile_ Civilaw	Activity
Coefficient	0.23	-0.02	0.04	-0.02	-0.05	-0.36	0.04	0.08
T-value	5.87	-0.37	2.23	-1.46	-40.93	-24.11	19.53	14.75
P-value	<0.001	0.712	0.026	0.144	<0.001	<0.001	<0.001	<0.001
N	5,232							
R^2	0.354							

Table 16: the first line reports the figures assumed by coefficients for regression 5 (model 3) when dependent variable assumes dividends to sales ratio; the second and third lines show the T and P values for each independent variable used in the regression; N refers to the number of valid observations; R^2 shows the explaining power of the regression; Activity variable assumes figures 1, 2 or 3 depending on the activity sector each company is classified in Worldscope database (Sic Code): 1 for Agriculture and Extractive Industry, 2 for Trade and Industry and 3 for Services; Txadv is the ratio of the value, to an outside investor, of US $1 distributed as dividend income to the value of US $1 received in the form of capital gains when kept inside the firm as retained earnings; GSdecile refers to the sales growth rate decile. For each country, companies are ranked 1,2,3..,10 depending on the size of sales growth. Each group has the same quantity of observations; Debt referring to the ratio of non current liabilities to total assets; ROE is the ratio of net income to book value

8.3.2 Results from Regression 6 (Model 4) - Activity Variable

Exception made to Txadv, Debt and Cfo, all coefficients for regression 6 (model 4) are significant, at least, in a 10% level, as can be seen in tables 17, 18 and 19. While Txadv coefficient is not significant for the three types of dividend measure, Debt fails to be significant for dividends to earnings and dividend to sales measures. Cfo fails to be significant for dividend to earnings measure.

From the three dividends measures used, once again, the strongest in terms of explanative power is dividend to sales, in excess of 36%.

Regarding coefficient's algebraic signs, the constant, Debt, GSdecile_Civilaw and Activity show positive coefficients. On the other hand, Txadv, GSdecile and Civilaw feature negative coefficients. Cfo reveals a mixed behavior, with both positive and negative coefficients depending on the dividend scale used.

Again, as between regression 5 (model 3) and regression 3 (model 1), there is perfect alignment in terms of coefficients' algebraic signs between regression 6 (model 4) and regression 4 (model 2). Additionally, the Activity variable seems to increase explanatory power, as all R^2 from regression 6 (model 4) are higher versus regression 4 (model 2).

Conclusions drawn from coefficients observation are that dividends tend to be higher in common law countries and that, within this legal origin of countries, dividends increase when growth opportunities are smaller. Dividend payout follows the same way as GSdecile_civil and, as a consequence, dividends tend to be higher in civil law countries whose companies are growing fast. Dividends also tend to be higher the higher is the companies' debt level. Txadv brings no additional information.

Table 17: Results of regression 6 (model 4) - when dependent variable is div_cfo.

	Constant	Txadv	Debt	Cfo	GSdecile	Civilaw	GSdecile_ Civilaw	Activity
Coefficient	0.59	-0.13	0.37	0.48	-0.06	-0.65	0.06	0.09
T-value	2.08	-0.41	2.79	1.90	-7.36	-6.09	3.96	2.35
P-value	0.037	0.679	0.005	0.058	<0.001	<0.001	<0.001	0.019
N	5,232							
R^2	0.023							

Table 17: the first line reports the figures assumed by coefficients for regression 6 (model 4) when dependent variable assumes dividends to cash flow ratio; the second and third lines show the T and P values for each independent variable used in the regression; N refers to the number of valid observations; R^2 shows the explaining power of the regression; Activity variable assumes figures 1, 2 or 3 depending on the activity sector each company is classified in Worldscope database (Sic Code): 1 for Agriculture and Extractive Industry, 2 for Trade and Industry and 3 for Services; Txadv is the ratio of the value, to an outside investor, of US $1 distributed as dividend income to the value of US $1 received in the form of capital gains when kept inside the firm as retained earnings; GSdecile refers to the sales growth rate decile. For each country, companies are ranked 1,2,3..,10 depending on the size of sales growth. Each group has the same quantity of observations; Debt referring to the ratio of non current liabilities to total assets; Cfo is the ratio of cash flow to assets.

Table 18: Results of regression 6 (model 4) when dependent variable is div_ear.

	Constant	Txadv	Debt	Cfo	GSdecile	Civilaw	GSdecile_ Civilaw	Activity
Coefficient	0.48	-0.08	0.10	0.11	-0.03	-0.36	0.04	0.12
T-value	2.55	-0.38	1.14	0.64	-6.38	-5.17	3.58	4.67
P-value	0.011	0.705	0.256	0.524	<0.001	<0.001	<0.001	<0.001
N	5,232							
R^2	0.022							

Table 18: the first line reports the figures assumed by coefficients for regression 6 (model 4) when dependent variable assumes dividends to earnings ratio; the second and third lines show the T and P values for each independent variable used in the regression; N refers to the number of valid observations; R^2 shows the explaining power of the regression; Activity variable assumes figures 1, 2 or 3 depending on the activity sector each company is classified in Worldscope database (Sic Code): 1 for Agriculture and Extractive Industry, 2 for Trade and Industry and 3 for Services; Txadv is the ratio of the value, to an outside investor, of US $1 distributed as dividend income to the value of US $1 received in the form of capital gains when kept inside the firm as retained earnings; GSdecile refers to the sales growth rate decile. For each country, companies are ranked 1,2,3..,10 depending on the size of sales growth. Each group has the same quantity of observations; Debt referring to the ratio of non current liabilities to total assets; Cfo is the ratio of cash flow to assets.

Table 19: Results of regression 6 (model 4) when dependent variable is div_sal.

	Constant	Txadv	debt	Cfo	GSdecile	Civilaw	GSdecile _Civilaw	Activity
Coefficient	0.27	-0.03	0.03	-0.32	-0.04	-0.34	0.04	0.07
T-value	6.86	-0.80	1.46	-9.30	-38.48	-23.53	18.71	13.77
P-value	<0.001	0.424	0.144	<0.001	<0.001	<0.001	<0.001	<0.001
N	5,232							
R^2	0.364							

Table 19: the first line reports the figures assumed by coefficients for regression 6 (model 4) when dependent variable assumes dividends to sales ratio; the second and third lines show the T and P values for each independent variable used in the regression; N refers to the number of valid observations; R^2 shows the explaining power of the regression; Activity variable assumes figures 1, 2 or 3 depending on the activity sector each company is classified in Worldscope database (Sic Code): 1 for Agriculture and Extractive Industry, 2 for Trade and Industry and 3 for Services; Txadv is the ratio of the value, to an outside investor, of US $1 distributed as dividend income to the value of US $1 received in the form of capital gains when kept inside the firm as retained earnings; GSdecile refers to the sales growth rate decile. For each country, companies are ranked 1,2,3..,10 depending on the size of sales growth. Each group has the same quantity of observations; Debt referring to the ratio of non current liabilities to total assets; Cfo is the ratio of cash flow to assets.

9. Conclusions

The empirical analysis conducted in this study confirm the conclusions drawn by La Porta (2000): common law countries - the U.K.- pay higher dividends than civil law countries – France and Portugal; and growth opportunities are associated with the firm dividend policy.

Regarding debt influence on dividends, it is this thesis' most significant contribution to La Porta et al.'s (2000) investigation. This thesis' initial purposes were, besides testing La Porta et al.'s (2000) conclusions, to bring something new to dividends theory. And the new thing is that debt level, after all, has a considerable positive influence on the dividend payout level.

In common law countries, where the level of investor protection is typically higher and capital markets are more developed than in civil law countries, dividends tend to be a very important source of remuneration for investors.

Growth opportunities seem to be negatively related with dividend payout, which can be interpreted as the firm distributing less cash to investors when profitable investment opportunities exist within the business.

After confirming La Porta results, the model is extended to incorporate other factors that might explain the firms' dividend policy, namely debt, profitability and activity type. Regarding debt, results indicate a positive relation with dividend payments. The explanation behind this fact might be the one described by Shleifer and Vishny (1997): in order to more easily fulfil financing needs imposed by debt contracts, managers try to build a good reputation, and do so by paying extra dividends. However, this explanation contradicts Miller and Modigliani's (1961) argument that firms facing higher debt constraints have less financial flexibility and thus pay lower dividends, which is not verified. Aivazian, Booth and Clearly (2006) claim that the probability of a firm paying a dividend increases with the firm's profitability and decreases with the firm's debt level and existence of high future growth opportunities. Such ideas are not confirmed by the findings of this thesis. These apparent conflicting theories on the relation between dividends and debt asks for further investigation that is beyond the scope of this thesis, particularly: has the legal origin of companies or the protection level granted to shareholders by the legal system, a higher weight than the debt level (which would explain why the U.K. has a higher dividend payout level than Portugal despite the later showing high level of debt)? Is reputation building by managers behind the incremental payout level regarding companies with greater debt levels?

Business activity has proved to bring added value to the investigation. The main conclusion is that different activities have different payout levels. A very interesting question for later investigation is whether a different payout level depends exclusively on the earnings level of each activity or if there is also a tradition in the dividend level behind each activity.

Regarding tax advantage results remain inconclusive. None of the theories described in section 2.2 can be confirmed or denied by this investigation.

The same happens with profitability represented here by variables ROE and Cfo: results are inconclusive. The conclusions from Lintner (1956), Modiglianni and Miller

(1961) or Aivazian, Booth and Clearly (2006) cannot be confirmed. These subjects deserve further investigation.

The conclusions of this investigation are of general interest. However, three groups of entities have stronger reasons to be interested in this investigation's results: companies, when they are assessing their dividend policy; regulators when defining rules and taxes on dividends; and investors evaluating future payouts from their investments.

Companies and particularly managers are interested in understanding better the determinants of dividend policies. Managers can use the dividend policy as an instrument to enhance business performance. For example, in an expansion strategy it is important to understand that expected dividend payout vary from country to country and that the decision of where to locate a new firm has different cash dividend implications. The knowledge on dividend policy might also be used by managers to undertake more adequate and competitive dividend policies in the future versus their direct competitors, therefore attracting investors to finance their expansions needs.

For market regulators and tax authorities evaluating the factors affecting companies dividend policy is of major importance when defining regulation, particularly taxes on dividends.

Investors on the other hand, are interested in knowing that dividend payout is different across countries and that firm characteristics (such as profitability and debt) determine the remuneration of their investment. The conclusions of this study will also help potential investors in choosing between different investment opportunities.

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