UNIVERSIDAD DE SALAMANCA

FACULTAD DE ECONOMÍA Y EMPRESA

Departamento de Administración y Economía de la Empresa

The catering theory of dividends: the moderating role of firm characteristics, corporate governance factors and corporate ownership

Maria Elisabete Duarte Neves

Doctoral thesis directed by Professors:

Dr. Julio Pindado García and Dra. Chabela de la Torre

Salamanca, 2009

CERTIFICATE

UNIVERSIDAD DE SALAMANCA
Departamento de Administración y
Economía de la Empresa

FACULTAD DE ECONOMIA Y EMPRESA
Campus "Miguel de Unamuno"
37007 SALAMANCA (SPAIN)
Tel.: +34 923 294 640 Ext. 3506
Fax.: +34 923 294 715

Dr. D. Julio Pindado García y Dra. Dª Chabela de la Torre Olvera, directores de la Tesis Doctoral titulada "The catering theory of dividends: the moderating role of firm characteristics, corporate governance factors and corporate ownership" realizada por Dª Maria Elisabete Duarte Neves, autorizan su presentación y defensa en la Universidad de Salamanca.

Dr. Julio Pindado García
Universidad de Salamanca

Dra. Chabela de La Torre Olvera
Universidad de Salamanca

ACKNOWLEDGEMENTS

I owe a debt of gratitude to a number of people who helped, supported and encouraged me during my candidature for this degree.

I am very grateful to my supervisors, Professors Dr. Julio Pindado Garcia, and Chabela de la Torre who inspired and encouraged me. This thesis could not have been completed without the help, suggestions, guidance, patience and wisdom they have given to me whilst preparing this thesis.

I am also grateful for the financial support received from the European Union (PRODEP Program–Measure 5, Action 5.3) and ISCAC.

To all my friends for the care, attention, and motivation, I am extremely grateful.

I would like to express deepest gratitude to my all family, for their patience, endless support, love and caring throughout.

To my husband, António, thank you for your endless patience and for invaluable support.

Finally, to my daughter, Maria Inês, for all the time I owe to her, and I would like to dedicate my thesis to her, waiting that some day she feels proud of it.

TABLE OF CONTENTS

LIST OF TABLES

CHAPTER I

INTRODUCTION TO THE STUDY

I.1 Introduction

The objective of this introduction is to provide an overall picture of this study. The arguments presented in this section are offered to show, in the first place, the importance of the topic on which this work relies, from an economic and a social perspective, as well as to offer a global overview of the extensive research on dividends policy in which the catering theory is framed. In second place, we describe the characteristics of different institutional environments and their impact on the catering effect. The arguments pointing to ownership structure as an essential element for the dividend policy and the main lines of previous research, as well the interaction effect between catering incentives and corporate ownership are described in the third place. Finally, we present our objectives and the structure of the study.

I.2 Dividend policy and traditional theories

Over the past decades extensive financial research has been carried out regarding the importance of factors determining corporate dividend policy, and despite the vast body of research on the topic, it remains an open subject to debate. In fact, since Miller

and Modigliani (1961) with their irrelevance proposition, many scholars have tried to give alternative explanations for dividends in imperfect markets.[1]

There are many papers that investigate the important role played by a firm's characteristics in shaping its dividend decisions; one of the most remarkable is by Fama and French (2001). The question as to why companies pay out dividends has given rise to different explanations, the most relevant ones stemming from the agency theory. According to Jensen's (1986) free cash flow theory, higher free cash flow should lead to higher dividend payments in order to prevent firms from overinvesting. Hence there is a positive relationship between a firm's free cash flow and its payout ratio.[2]

Financial literature also documents the role played by debt and dividends as agency-cost control mechanisms (see Ross, 1977; Grossman and Hart, 1980; Jensen, 1986; and Harris and Raviv, 1991 for debt; Lintner, 1956; Bhattacharya, 1979; Rozeff, 1982 and Jensen, 1986 for dividends). This suggests that debt and dividend may be somehow related, although there is no consensus about the way they are related. On the one hand, the substitution hypothesis predicts a negative relationship between debt and dividends based on the minimization of agency conflicts without duplicating efforts (see Rozeff, 1982; Jensen, 1986; Crutchley and Hansen, 1989; Jensen, Solberg and Zorn, 1992; and Chen and Steiner, 1999). On the other hand, the alternative hypothesis points to the complementary use of these two mechanisms and consequently, to a positive relationship between them (see Jensen, 1989; Eckbo and Verma, 1994; and Zwiebel, 1996). According to traditional theories, earnings are a fundamental factor that impact dividends decision. Lintner (1956) points to another important explanation of dividends.

[1] In a recent study by Bhattacharya (2007), the question of why firms pay dividends has been examined using agency costs, signaling and clientele models.
[2] See, for instance, Fama and French (2001); DeAngelo, DeAngelo and Skinner (2004), and Li and Lie (2006).

He argues that firms seek to maintain the stability of dividends, and he finds that a firm's earnings are probably the key factor to account for in order to get a stable dividend pattern. Consequently, a positive relationship between a firm's earnings and its dividend payments will exist (see, in a recent research, Denis and Osobov, 2008).

The nature of a firm's assets has also been documented as a determinant of dividends (see, for instance, Allen and Michaely, 2003; Aivazian, Booth and Cleary, 2003). According to Scott (1977), firms with a high proportion of tangible assets are more leveraged, which will in turn positively or negatively affect dividend payments, depending on whether there is a substitution or a complementary relationship between debt and dividends. Size has also been traditionally considered among the determinants of dividend policy, and previous evidence seems to agree that larger firms pay higher dividends (see, for instance, Fama and French, 2001; and Denis and Osobov, 2005, 2008).

I.3 Investors' sentiments and the catering theory of dividends

Recent literature points out that the characteristics of the firms paying dividends (that is, their levels of free cash flow, leverage, earnings, tangible fixed assets and size) should not be separately analyzed from certain psychological components, in that an important part of the decision to pay dividends may be due to a firm's desire to satisfy investors' expectations. In fact, in agreement with the recent trends in the theory of financial behavior, time-varying catering incentives also appear to shed light on the "disappearance" of dividends by Fama and French (2001). One of the most recent arguments explaining the dividends decision is based on the behavioral financial literature, and according to this trend, behavioral finance investors' psychological

characteristics influence conduct in financial markets. In fact, models of behavioral finance (see, for example, Jegadeesh and Titman, 2001) explain the excess volatility and predictability of stock market prices by breaking with the complete rationality hypothesis underlying traditional finance.

Within this context, some of the most prominent explanations (see Barberis, Shleifer and Vishny, 1998; Daniel, Hirshleifer and Subrahmanyam, 1998, 2001; Hong and Stein, 1999; Zhang, 2006; Coval, Stein and Baker, 2008; Han, 2008; Kurov, 2008, among others) are based on investors' sentiments. Explanations for the tendency to pay dividends in equilibrium clientele theory were first offered by Miller and Modigliani (1961) and Black and Scholes (1974). This theory suggests that changes in dividend policies correspond with changes in investor demand for dividends. In this context, some of the most prominent explanations are based on the investors' sentiments. Thus, an important alternative explanation for the decline in the payment of dividends has its roots in the catering theory of dividends proposed by Baker and Wurgler (2004a). In accordance with this new theory, these authors provide empirical evidence that changes in the amount that companies pay on dividends can be explained by what they denominate "catering incentives"; that is, a measure of the market demand for dividend-paying stocks. The catering theory holds that firms adjust their dividend payouts largely in response to their investors' demand for dividend-paying stocks. According to the catering theory, when investors' demand for payouts increases, firms are more likely to increase payouts.

The growing interest raised by this new theory of dividends, the catering theory, in the financial literature of the last years is our main motivation for this work, trying to show that a new variable, capturing psychological factors, should be included in the

traditional models of dividends. In fact, several researchers have studied this issue, although there is not a consensus as to why some firms pay dividends and some do not and why some investors prefer dividends and some do not. However, one of the most recent arguments that cast doubt on shareholders being indifferent about receiving dividends is based on the behavioral finance literature. According to this literature, investors' psychological characteristics influence the conduct in financial markets, and investors' irrational behavior limits the effectiveness of arbitration actions.

Recent studies (see, among others, Brown and Cliff, 2004, 2005; Lai, 2004; Denis and Osobov, 2005; Fairchild and Zhang, 2005; Gemmil, 2005; Hsieh and Wang, 2006; Cohen and Yagil, 2008; Han, 2008; Hoberg and Prabhala, 2009) show the growing interest in this new theory, and they suggest that investors' sentiments can be decisive in the resolution of the dividend puzzle.

In fact, the growing interest in this new theory suggests the need to understand its implications and to integrate the investors' sentiments in explanatory models of dividends. With this need in mind, this study relies on the assumptions of the catering theory and attempts to empirically validate this strand of the literature in Eurozone member countries. In this sense, it is necessary to highlight four important contributions to the literature of dividends. First, we offer new evidence of the determinants of dividends, extending the traditional analyses by means of a new variable capturing the catering effect. Second, we investigate whether the relationship between the dividends and the investors' sentiments is conditioned by certain characteristics of the firm, such as its liquid assets, its investment opportunities and its free cash flow. Third, we analyze the moderating role of the institutional factors characterizing the different corporate governance systems around the world in the extent to which a firm caters to their

investors' sentiments. Finally, we go into one of these institutional factors, the ownership structure, in depth and learn how corporate ownership moderates catering incentives.

With these purposes in mind, we propose a new empirical approach that allows us to measure investor sentiment at the firm level. Specifically, we use the error term of a valuation model to obtain a proxy for the catering effect on dividend payments. Assuming that a firm's market value is mainly explained by its investment, financing and dividend decisions, our view is that the residual value captured by the error term of the valuation model should be a measure that serves as a proxy for the firm's investors' sentiment. This variable, measured in an original way and representing the catering effect, is then entered into a dividend model in which the payout variable, once solved for the problem of censure, is explained by traditional factors such as free cash flow, leverage, earnings, tangible fixed assets and size.

In line with our view, Fama and French (2001) find that the decline in the proportion of dividend-paying US firms is not satisfactorily explained by changes in their characteristics and, consequently, that the dividend decision is not entirely explained by the individual characteristics of the firm.

I.4 The impact of institutional factors on the catering theory of dividends

After controlling for the traditional determinants of dividends, such as the free cash flow, leverage, earnings, tangible fixed assets, and size, we go a step further and we investigate whether or not different institutional characteristics moderate the catering effect of dividends. Specifically, we argue that the extent to which firms cater to their

investors' sentiments changes according to the institutional environment in which the firm operates.

Recent analyses studying the financing patterns around the world emphasize the importance of institutional differences across countries for the dividend policy (La Porta et al., 2000a; Demirgüç-Kunt and Levine, 2001; Shleifer and Wolfenzon, 2002; Aivazian, Booth and Cleary, 2003, among others). Closely related literature has also shown that the access to external financing is shaped by the country's legal and financial environment (La Porta et al., 1997, 1998; Rajan and Zingales, 1998; Demirguc-Kunt and Maksimovic, 2002). A direct implication of these studies is that in countries with weak legal and financial systems, firms obtain less external financing and have lower payouts.

The agency theory proposes a number of corporate governance mechanisms that are designed to reduce the agency costs associated with the separation of ownership and control (see, for instance, Jensen and Meckling, 1976; and Fama and Jensen, 1983). Their purpose is to align shareholders' and managers' interests. Governance mechanisms can be split into two categories: internal and external. Internal mechanisms include, among others, the effectiveness of boards and corporate ownership. Among the external mechanisms we can highlight the legal protection of investors, the orientation and development of the financial systems and the contestability of the market for corporate control.

The legal origin influences dividends, and it is a very important question in the corporate governance research. However, evidence on the role played by investors' legal protection in determining a firm's payout ratio is somewhat mixed, and even confusing. For example, Shleifer and Wolfenzon (2002) find a positive relationship

between the degree of protection of investors and the payout ratio for Anglo-Saxon firms. In contrast, in accordance with the substitute pattern proposed by La Porta et al. (2000b), Faccio, Lang and Young (2001) find that in countries with weak legal protection the allotment of dividends is higher as a measure to limit the minority shareholders' expropriation. The development of the capital markets and the orientation of the financial systems have been used thoroughly to establish institutional differences across countries (see, for instance, Rajan and Zingales, 1995; Beck and Levine, 2002, Demirgüç-Kunt and Maksimovic, 2002; and Levine, 2002). The financial literature offers arguments that justify that dividends differ when there is an active market for corporate control or not (see, for example, Bebchuk, Cohen and Allen, 2005; or Cremers and Nair, 2005).

Regarding internal mechanisms, we also focus our investigation on the differences in the ownership concentration for the different countries, expecting dividends to be higher in firms with more ownership concentration, because this mechanism is a supervisory device of managerial discretion. We also expect higher dividends in firms with independent boards and two-tier structures, in that it is assumed that they supervise managers to a larger extent in the interests of shareholders.

Despite the lack of previous evidence, there are strong arguments that lead us to argue that investors' preference for dividend-paying stocks changes according to the above-mentioned institutional characteristics. Within this context, the focus of our analysis is the argument that when companies belong to different institutional environments and the nature of existing agency problems also differs, there will also be differences in the relationship between dividend policy and the catering effect. To learn which of these institutional variables are more likely to influence the firm's dividend

policy, we examine the payout of the following countries: United States, United Kingdom, Canada, Japan and the Eurozone countries, which represent a great variety of institutional environments. Hence we offer a study of the impact of several institutional factors on the investors' sentiment that supports the catering theory of dividends. As far as we know, our work differs from existing literature in that it tries to answer several unanswered questions about the dividends policy from the perspective of catering incentives around the world. There is no prior evidence supporting this view, and providing empirical support to this issue is thus one of the major contributions of this research.

I.5 The impact of different ownership structure on catering theory of dividends

Despite decades of researchers studying dividends, we have not completely understood the factors that influence this important decision and the way in which these factors interact. Despite dividend irrelevance proposition by Miller and Modigliani (1961), the finance literature offers theoretical and empirical insights into how managers are prone to approach the issue of dividend policy (see, for instance, Baker, Powell and Veit, 2002a, for managerial perspective on dividend policy). One of the central assumptions in Miller and Modigliani (1961) is that managers take steps in the best interests of the owners of the firm and, therefore try to maximize shareholders' wealth. Agency theory suggests that managers, who work as 'agents' for shareholders, are not necessarily motivated to work in the shareholders' best interests (Jensen and Meckling, 1976). In fact, in the context of the agency theory, the importance of the separation between ownership and control is well known (Jensen and Meckling, 1976; Grossman and Hart, 1980 and Fama and Jensen, 1983). Within this context, the discussion about

the ownership structure and its influence in the dividends policy focuses on the importance of the level of the managerial ownership and the degree of ownership concentration.

With respect to the managerial ownership, the financial literature reveals that for lower levels of managerial ownership, the ownership of shares by the manager of the firm leads to the alignment of his/her interests with those of external shareholders, usually resulting in a high dividend payout. In the other hand, for higher levels of managerial ownership, the ownership of shares by managers can lead to distortions in the operating decisions that they make (entrenchment hypothesis). Conventional literature suggests that managers dislike dividends because dividend payments reduce their ability to pursue personal perquisites, and consequently, firms are less likely to pay dividends when managers become more entrenched. Rozeff (1982) reports that dividend payout ratios are significantly negatively associated with insider ownership. In contrast, Brown, Liang and Weisbenner (2007) show that firms are more likely to increase dividends if executives own a large fraction of outstanding shares.

However, the relationship between insider ownership and dividend payouts may not be monotonic. Schooley and Barney (1994), Farinha (2003), Correia da Silva, Goergen and Renneboog (2004), and Thomsen (2005) present evidence consistent with a U-shaped relationship between managerial ownership and dividends.

In respect to ownership concentration and its effect on the dividend policy, previous studies show that corporate governance is poorer in most countries where ownership concentration is very high. In these cases, the appropriation of private benefits by controlling shareholders is easier. As shown by La Porta et al. (2000a), in

Continental Europe, where ownership structures are generally more concentrated, dividend payouts are lower and more flexible than in the Anglo-Saxon countries.

Since this institutional factor is so important, the next chapter will deepen the knowledge of the ownership structure on the catering effect of dividends.

As pointed out in the previous section, ownership concentration works as a control mechanism for agency problems between shareholders and managers. Following the agency arguments and focusing on civil law countries (Eurozone countries except Ireland), the conflict of interests is not between shareholders and managers but between controlling owners and minority shareholders, who are less protected by law.

It is worth pointing out that very little is published about ownership structure and dividend payouts across Europe. The most recent studies we find are single-country analyses and, as far as we know, there is no literature on the relation between corporate ownership and the catering incentives.

In this context, we go a step further and we investigate whether or not the ownership characteristics moderate the catering effect of dividends. Specifically, we analyze the interaction of insider ownership and ownership concentration with the catering effect of dividends, all of them considered as agency cost control mechanisms. To reach this objective, we take into account the convergence of interests and entrenchment effects in the case of insider ownership, as well as the monitoring and expropriation effects in the case of ownership concentration. We argue that the way in which investors appreciate dividend payments for firms in Eurozone member countries depends on the firm's level of managerial ownership, the level of ownership concentration by the largest shareholder, the joint effect of the first and second largest

shareholder, and the joint effect of the first and second largest shareholder, depending on whether there is contestability or collusion between them.

I.6 Objectives and Structure of the study

One of the more puzzling issues in corporate finance involves dividends. Finance researchers have advanced some principal paradigms to explain this dividend puzzle, and one of the most prominent explanations for dividends has its roots in catering theory of dividends. Our research tries to contribute to the solution of the dividend puzzle with new pieces, by showing that psychological factors influence the decision to pay; that is, that investors' sentiments explain to some extent the decision to pay in accordance with the catering theory.

The first objective of this research provides a test of the predictions of the catering theory of dividends by proposing a new approach for analyzing the effect that investors' sentiments exert on corporate dividend policy of Eurozone firms. Accordingly, a traditional dividend model is extended to incorporate an original measure of the catering effect at the firm level, proxied by the error term of a market valuation model.

Most of the finance theory on dividend policy starts with the behavior of shareholders. The empirical financial literature on this topic either studies share price reactions or surveys corporate executives for their opinions. No one has either theoretically or empirically tested the impact of different institutional factors on catering dividends. The second main objective of this work tries to fill this gap by examining how the different institutional environments impact catering effect. The basis of our argument is that when companies belong to different institutional environments and the

nature of existing agency problems also differs, there will also be differences in the relationship between dividend policy and the catering effect. In fact, we base our research on a number of external and internal disciplining mechanisms that firms may face in their efforts to reduce the underlying agency costs. We used as external mechanisms the legal origin of the country in which the firm operates, the level of protection to the minority shareholders, the orientation of the financial systems and the contestability of the market for corporate control. Additionally, we consider as internal mechanisms the ownership in hands of the three largest shareholders and the effectiveness of boards of directors. We propose an extension of our dividend model that incorporates the interaction of our measure of catering with the different institutional factors mentioned above.

The financial literature emphasizes that ownership structures influence dividend payouts. Within this context, we try to offer evidence on the way in which different corporate ownership characteristics influence the extent to which firms cater to their investors' sentiments. Despite the lack of prior evidence on the matter, the focus of our analysis is the argument that when companies present different levels of managerial ownership and ownership concentration, and the nature of existing agency problems also differs, there will also be differences in the relationship between dividend policy and the catering effect. In this study, we intend to evaluate how the ownership structure affects the tendency to adjust payouts to investors' sentiments. To achieve this aim, we establish a link between ownership structures across Eurozone countries and catering variables constructed at firm level.

After previous arguments and considerations, the present research has been carried out with the intention of clarifying the importance of certain psychological

factors for a firm's dividend policy, in that an important part of the decision to pay dividends may stem from a firm's desire to satisfy investor expectations. Then, the growing interest in this new catering theory of dividends suggests the need to understand its implications and to integrate the investors' sentiments in explanatory models of the dividends.

Therefore, we can to split this general objective into the following purposes:

1. To show empirically the validity of the catering theory as an explanation of the dividends payout in two ways: on the one hand, by analyzing the determinants of corporate dividends policy, focusing attention on a novel measure of the investors' sentiments at firm level; on the other hand, by showing the influence exerted by certain characteristics of the company (such as liquid assets, investment opportunities and free cash flow) on catering incentives.
2. To obtain evidence that supports the argument that when companies belong to different institutional environments and the nature of existing agency problems also differs, there will also be differences in the relationship between dividend policy and the catering effect. Moreover, we attempt to provide empirical findings relating investors' sentiments with the quality of corporate governance mechanisms across Eurozone countries, US, UK, Canada and Japan.
3. To contribute new evidence on the relationship between ownership patterns and investors' demand for dividend payment. Therefore, we believe that not only dividend payouts are important to understand managers' catering behavior but also the firm's ownership structure.

Overall, in this thesis, we examine whether the catering theory contributes to an explanation of dividend choices of companies across countries. The potential

contribution of our propose is showing that investors' sentiments impact dividend payout and that this impact differs depending on certain characteristics of the company, the institutional environment in which the firm operates and the characteristics of corporate ownership.

It is worth pointing out that all previous objectives are connected and that the study of the dividend decision can find in this thesis a solid base for future research, validating the inclusion of the catering variable in the explanatory models of dividends. With our objectives clearly delimited, the remainder of this work is organized as follows:

In Chapter II we offer the most important contributions of previous research to the debate on the determinants of the dividend decisions, and we propose our hypotheses concerning these traditional theories of dividends. We next discuss the key arguments of the catering theory of dividends, which leads us to our hypotheses about the effect of a firm's investor sentiment on its payout ratio. In Chapter II we also define data, variables and methodology used in our models. Additionally, we give one more step and investigate whether or not certain firm characteristics moderate the catering effect of dividends. Finally, we explain our results and conclude.

In Chapter III we first describe the main legal and institutional factors characterizing the corporate governance systems and summarize previous literature and empirical evidence on this matter, which leads us to pose our hypotheses. We next describe the data and our model of dividends and discuss the estimation method. Finally we discuss our results and our conclusions.

Chapter IV contains background to the study of ownership structure on determining dividend payout. We also document some literature relating to this matter

and catering incentives and in accordance, we propose our hypotheses. To proceed, we next describe the data and our model of dividends and discuss the estimation method. Finally we explain our results and put forward a number of conclusions.

This research culminates with an exhibition of the conclusions that will allow us to defend the thesis proposed in this work: "*Dividend policies are driven to some extent by investors' sentiments, and this catering effect is moderated by the firm's financial characteristics, corporate governance factors and corporate ownership.*"

CHAPTER II

DIVIDENDS: NEW EVIDENCE ON THE CATERING THEORY

Introduction

Corporate dividend policy has long been an issue of interest in the financial literature and, despite the vast body of research on the topic, it remains a subject open to debate. In fact, since the Miller and Modigliani (1961) irrelevance proposition, according to which dividend policies are all equivalent and there is no a particular policy that can increase shareholder wealth in perfect capital markets, many scholars have offered alternative explanations for dividends in imperfect markets. Despite the vast and mainly US-based literature on this issue,[3] there is no definitive answer as to why investors demand dividends.

One of the most recent arguments that casts doubt on shareholders being indifferent about receiving dividends is based on the behavioral finance literature. According to this literature, investors' psychological characteristics influence conduct in financial markets, and investors' irrational behavior limits the effectiveness of arbitration actions. In fact, models of behavioral finance (see, for example, Jegadeesh and Titman, 2001) explain the excess volatility and predictability of stock market prices

[3] See, for instance, Fama and French (2001); Allen and Michaley (2003); DeAngelo, DeAngelo and Skinner (2004); Koch and Sun (2004); Brav et al. (2005); DeAngelo and DeAngelo (2006, 2007); Boudoukh et al. (2007); Skinner (2008).

by breaking with the complete rationality hypothesis underlying traditional finance. Within this context, some of the most prominent explanations (see Barberis, Shleifer and Vishny, 1998; Daniel, Hirshleifer and Subrahmanyam, 1998, 2001; Hong and Stein, 1999; Zhang, 2006; Coval, Stein and Baker, 2008; Han, 2008; Kurov, 2008, among others) are based on investor sentiment. Explanations for the tendency to pay dividends in equilibrium clientele theory were first offered by Miller and Modigliani (1961), and Black and Scholes (1974). This theory suggests that changes in dividend policies correspond with changes in investor demand for dividends.

Furthermore, firms have become less likely to pay dividends beyond what could be expected given the changes in their characteristics such as size, profitability and growth opportunities. In fact, Fama and French (2001) find that the decline in the proportion of dividend-paying US firms is not satisfactorily explained by changes in their characteristics and, consequently, that the dividend decision is not entirely explained by the individual characteristics of each firm. Several authors propose alternative explanations for this decline in the propensity to pay dividends. For instance, Banerjee, Gatchev and Spindt (2007) argue that transaction cost–based clientele effects account for a significant part of the decline in the propensity to pay dividends. Amihud and Li (2006) also document the phenomenon called "disappearing dividends" by Fama and French (2001), which describes the decrease in the information content of dividends since the mid 1970s, making firms less willing to incur the costs associated with dividend signaling. DeAngelo, DeAngelo and Skinner (2004) base their explanation of the disappearing dividends phenomenon on the concentration of dividends in top payers among US firms, as well as on the decline in the frequency of special dividend payments over the last two decades. Brav et al. (2005) find that the higher flexibility of

stock repurchases led managers to favor them over dividends, a result corroborated by Skinner (2008).

Interestingly, recent non-US based evidence confirms patterns of dividend payments found in the US. For instance, Denis and Osobov (2008) examine the dividend policies of firms headquartered in the US, the UK, Canada, France, Germany and Japan, and find a declining propensity to pay dividends in all these countries. Von Eije and Megginson (2008) also find that dividend payments in European Union member countries are similar in many ways to those of American firms. In fact, the fraction of European firms paying dividends has declined in recent years, whereas total real dividends paid have increased significantly, as has occurred in US. Additionally, the propensity of European firms to pay cash dividends has declined continuously with time, as Fama and French (2001) document for US listed firms.

The most innovative and pioneering explanation for the decline in the payment of dividends has its roots in the catering theory of dividends proposed by Baker and Wurgler (2004a). These authors provide empirical evidence that changes in the amounts that firms pay in dividends can be explained by what they term "catering incentives," that is, a measure of market desire for dividend-paying stocks. The catering theory holds that firms adjust their dividend payouts largely in response to investor demand for dividend-paying stocks. The growing interest in this new theory of dividends suggests the need to better understand its implications and to integrate investor sentiment into dividend models. In fact, whether there is a catering effect on a firm's payout ratio is, as far as we know, an unresolved question, and research on investor sentiment carried out in the last decade yields mixed results in this regard.

For example, Baker and Stein (2003) find that investor sentiment measures are highly correlated with, and have predictive power for, future market returns. Lai (2004) relies on the catering theory to explain the well-documented 'analyst bias'. He suggests that analysts are heavily influenced by investors, and he builds a theory showing how analysts cater to investor beliefs. Gemmill (2005) examines split-capital, closed-end funds in the UK, and finds empirical support for the catering theory. Wang, Keswani and Taylor (2006) detect influence from market returns as well as from volatility on future values through sentiment measures. Kumar and Lee (2006) rely on the clientele model derived by Barberis, Shleifer and Wurgler (2005) to test the effect of individual investor sentiment on groups of stocks, and find that the returns of individual stocks capture the divergent sentiments of various important investor groups. Li and Lie (2006) further extend and provide support for the catering theory of dividends, and Ferris, Sen and Yui (2006) find that catering incentives have an important influence on the propensity to pay dividends in the UK.[4]

Very little research has yet been published on the catering model of dividends in Europe, and the empirical evidence found is somewhat in conflict with that of the US. For instance, Denis and Osobov (2008) find a declining propensity to pay dividends in France and Germany, which is entirely explained by firm size, profitability, growth opportunities, and the ratio of retained earnings to total equity. They conclude that this result supports the agency cost model over the catering theory model. Similarly, Von Eije and Megginson (2008) find no systematic effects from a country-specific catering variable in the 15 countries of the European Union, which suggests that catering "a priori" is not an important factor influencing European payout policies. These authors

[4] More evidence on the relevance of investor sentiment in various contexts is provided in Edmans, Garcia and Norli (2007), Tetlock (2007), Puri and Robinson (2007), and Boot, Gopalan and Thakor (2008).

conclude, however, that further research "that goes into the intricacies of measuring catering effects more deeply than we are able to do here" (Von Eije and Megginson, 2008, footnote 26) is required to learn whether the catering theory is relevant in European countries.

With this need in mind, this chapter relies on the assumptions of the catering theory, and attempts to empirically validate this strand of the literature in Eurozone member countries. In this way, this study advances the dividend literature in four directions. First, we offer new evidence on the determinants of corporate dividend policy by focusing on the catering effect associated with investor sentiment. Given the controversy surrounding this matter, it is of interest to further investigate and make clear the role of catering incentives in dividend policies. Second, we investigate how the dividend-catering relationship is moderated by particular firm characteristics, such as the level of liquid assets, investment opportunities, and free cash flow. Third, the choice of Eurozone countries as the base of our study is significant because previous research on this topic is mainly US-based and, in general, offers support to the catering theory of dividends (see references above). However, recent Eurozone evidence (Denis and Osobov, 2008; Von Eije and Megginson, 2008) is somewhat conflicting in that it suggests a lack of a catering effect in European firms' dividend policies. Our research thus investigates whether firms in the Eurozone cater to their investors' sentiments, as their US counterparts are shown to do. Additionally, studying dividend policies in Europe is interesting in itself for several reasons, as pointed out by Von Eije and Megginson (2008) in their European Union study.[5] Finally, we avoid obtaining biased

[5] They mention, for instance, the largely segmented corporate governance systems, taxation regimes and financial markets among these countries, and the fact that, despite most of them sharing a civil foundation of their laws, some of them (such as Ireland in our sample) have common law codes. Note that there is a

results in our study by solving the problem of censure of the dependent variable in our model. Note that the payout ratio is a censured variable in that some firms pay dividends, whereas others do not, a problem that is overcome by estimating a Tobit model that yields a prediction of the payout ratio.

We propose a new empirical approach that allows us to measure investor sentiment at the firm level. Specifically, we use the error term of a valuation model to obtain a proxy for the catering effect on dividend payments. Assuming that a firm's market value is mainly explained by its investment, financing and dividend decisions, our view is that the residual value captured by the error term of the valuation model should be a measure that serves as a proxy for the firm's investor sentiment. This variable representing the catering effect is then entered into a dividend model built on the main contributions from previous research.

This chapter is presented in five sections. Section II.1 introduces a theoretical framework that takes account of the existing literature and the empirical evidence on traditional explanations of dividends, as well as on the catering theory, and presents our hypotheses. Section II.2 describes the data and variables used in our analysis. In Section II.3, we present our model of dividends and discuss the estimation method. The results are discussed in Section II.4, and Section II.5 presents our conclusions.

.

difference between their study and ours, since some European Union members retain their own currencies throughout their study period while all the Eurozone member countries adopted the euro after 1999.

II.1 Theories and hypotheses

In this section, we first summarize the main contributions from previous research to the debate on the determinants of dividend payments, and we propose our hypotheses concerning these traditional theories of dividends. We next discuss the key arguments of the catering theory of dividends, which leads us to our hypothesis about the effect of a firm's investor sentiment on its payout ratio.

II.1.1 Traditional theories of dividends

According to Jensen`s (1986) free cash flow theory, if a firm has cash flow not consumed by positive net present value (NPV) projects, it is better to return the excess cash to shareholders in order to maximize their wealth and to reduce the possibility of these funds being wasted by managers in negative NPV projects. This theory thus predicts that higher free cash flow should lead to higher dividend payments in order to prevent firms from overinvesting.[6] The positive relationship between dividends and free cash flow is supported by, for instance, Chaplinsky and Niehaus (1993), and Holder, Langrehr and Hexter (1998). More recently, DeAngelo, DeAngelo and Stulz (2006) show that overinvestment processes worsen in firms that accumulate high proportions of cash and distribute low dividends. In the same vein, Miguel, Pindado and de la Torre (2005) document the role played by dividends in controlling overinvestment processes in firms with high levels of free cash flow. Consistent with Jensen's (1986) theory and subsequent empirical evidence, the following hypothesis is posed:

[6] The overinvestment hypothesis has been confirmed from different perspectives in, for instance, Lang, Ofek and Stulz (1996); Chen and Ho (1997); Lamont (1997); Chakraborty, Kazarosian and Trahan (1999), Del Brio, Perote and Pindado (2003), and Morgado and Pindado (2003).

Hypothesis 1: *There is a positive relationship between a firm's free cash flow and its payout ratio*.

The financial literature widely supports the role played by debt and dividends as agency-cost control mechanisms, as they solve the conflict of interest between owners and managers (see Grossman and Hart, 1980, and Jensen, 1986 for debt; Rozeff, 1982 and Jensen, 1986 for dividends), and they mitigate asymmetries of information between firms and potential investors (see Ross, 1977, and Harris and Raviv, 1991 for debt; Lintner, 1956, and Bhattacharya, 1979 for dividends). This literature suggests that debt and dividends may be somehow related, although the literature in general is not unanimous about the way in which they are related. On the one hand, the search for a trade-off between costs and benefits leads to a substitution hypothesis based on the minimization of agency conflict without duplicating efforts (Easterbrook, 1984; John and Senbert, 1998). In others words, this hypothesis holds that high leverage makes dividends less valuable, and vice versa.[7] On the other hand, the alternative hypothesis points to the complementary use of several mechanisms as the most effective solution to a firm's inefficiencies, because no one of them can be a satisfactory solution in itself without generating additional costs (Jensen, 1989).[8]

These two opposing arguments lead us to pose the following two alternative hypotheses about the relationship between debt and dividends:

Hypothesis 2a: *A negative relationship between a firm's leverage and its payout ratio is expected (considering debt as a substitute for dividends)*.

[7] Subsequent empirical evidence on the substitutability of debt and dividends as cash flow commitments can be found in Moh´d, Perry and Rimbey (1995, 1998), and Von Eije and Megginson (2008), who assumed that leverage may help control agency costs, thus reducing the need to distribute cash to shareholders through dividends. According to this view, leverage and cash distributions will be substitutes and a negative relationship between cash dividends and debt ratios is predicted.

[8] Consistent with this hypothesis, the results in Eckbo and Verma (1994) show a positive and significant relationship between debt and dividends and, more recently, Zwiebel (1996), and Douglas (2001) confirm that firm value is optimized only when debt and dividends are simultaneously used.

Hypothesis 2b: *A positive relationship between a firm's leverage and its payout ratio is expected (considering debt and dividends as complementary mechanisms)*.

Linter's research (1956), is one of the most relevant studies on the determinants of dividends Lintner argues that firms seek to maintain dividend stability, and he finds that a firm's earnings are probably the key factor to account for in order to follow a stable dividend pattern. Accordingly, regular dividends represent an ongoing commitment to distribute cash and, more importantly, a commitment that managers are especially loathe to break (Lintner, 1956; Brav et al., 2005). Consistent with Lintner's arguments, Benartzi, Michaely and Thaler (1997) find that changes in dividends are highly correlated with past and current changes in earnings. Along the same line of reasoning, Allen, Bernardo and Welch (2000) argue that managers need to explain the reasons for their actions to shareholders, and must base their explanations on simple and observable indicators, particularly the level of earnings. More evidence on earnings being a determinant of dividends can be found in, for instance, Nissim and Ziv (2001), Brav et al. (2005), DeAngelo, DeAngelo and Skinner (2004), Koch and Sun (2004), Denis and Osobov (2008), and Skinner (2008). Accordingly, we expect firms to adjust their payout ratios to sudden unexpected increases in earnings, and the following hypothesis is proposed:

Hypothesis 3: *The higher the earnings, the higher the payout ratio*.

Consistent with the literature (Allen and Michaely, 2003; Aivazian, Booth and Cleary, 2003), the nature of a firm's assets influences its dividend policy. Specifically, gross, regular, and non-regular dividend payments are found to be positively related to asset tangibility on the basis that greater tangibility of a firm's assets facilitates its access to public markets, and it thus increases the likelihood that the firm follows

Lintner's pattern of dividend policy. Specifically, Aivazian, Booth and Cleary (2003) show that the probability that a firm pays dividends increases with the tangibility of its assets. Additionally, as Barclay, Smith and Watts (1995) point out, the nature of a firm's assets affects both its financing decision making and its dividend policy. Firms with tangible assets can generally more easily access the long-term debt market due to the existence of collateral and the consequent ability to secure debt (Scott, 1977). One would therefore expect firms with a high proportion of tangible assets to be more leveraged, which in turn would affect dividend payments negatively if *Hypothesis 2.a* holds, or positively if *Hypothesis 2.b* is supported. Therefore, two alternative hypotheses concerning the effect of the nature of a firm's assets on its payout ratio should be posed:

Hypothesis 4a: *Firms with a high proportion of tangible fixed assets have lower payout ratios (relying on the substitution effect predicted in Hypothesis 2.a)*.

Hypothesis 4b: *Firms with a high proportion of tangible fixed assets have higher payout ratios (relying on the complementarity effect predicted in Hypothesis 2.b)*.

Finally, a firm's size has traditionally been considered among the determinants of its dividend policy, and previous evidence seems to confirm that larger firms pay higher dividends. There are several arguments justifying the positive relationship between size and payout ratio. For instance, larger firms enjoy better access to the capital markets and, consequently, are less financially constrained, which allows them to pay higher dividends (see, for instance, Holder, Langrehr and Hexter, 1998; Twite, 2001). Additionally, larger firms are usually mature firms with limited growth opportunities that are prone to paying more dividends in order to avoid overinvestment (see, for instance, Barclay, Smith and Watts, 1995). Accordingly, Fama and French

(2001) show that the largest US firms have higher payout ratios. More recently, Denis and Osobov (2008) provide evidence of the positive relationship between the likelihood of paying dividends and size. This leads to our next hypothesis:

Hypothesis 5: *The larger the firm the higher the payout ratios*.

II.1.2 The catering theory of dividends

The characteristics of firms that pay dividends (that is, their levels of free cash flow, leverage, earnings, tangible fixed assets, and size) should not be separately analyzed from certain psychological components, in that an important part of the decision to pay dividends may stem from a firm's desire to satisfy investor expectations. This psychological component of dividends is explicitly accounted for in the clientele theory. For instance, Shefrin and Statman (1984) extend the work of Thaler and Shefrin (1981), and develop the "behavioral life cycle" theory of dividends that relies on psychological reasons to explain why investors prefer dividends over capital gains. Allen and Michaely (2003) argue that the clientele effects are the very reason for the presence of dividends because, as found by Allen, Bernardo and Welch (2000), firms paying dividends attract relatively more institutional investors and perform better. Polk and Sapienza (2004), and Baker, Stein and Wurgler (2003) also rely on behavioral explanations when analyzing the clientele effect.

The fact is that theoretical and empirical dividend models are increasingly incorporating the principles of behavioral finance. Relying on behavioral arguments, Baker and Wurgler (2004a) develop a theory according to which firms cater to their

investors' preferences[9] such that they pay dividends when dividend payers trade at a premium, and do not pay dividends when dividend payers trade at a discount.[10] These authors find an answer as to why no consensus has been reached in the literature about dividends. Specifically, they argue that while the dividend decision may be very important, it is even more important to base the direction of this decision on the prevailing investor sentiment. This argument strongly supports the catering theory of dividends, a new theory according to which investors have sentiments about dividends.

Providing empirical support for this theory, Baker and Wurgler (2004b) show that changes in payout ratios can be explained in terms of what firms denominate as "catering incentives," that is, a measure of market desire for dividend-paying stocks. Specifically, they find a connection between the tendency to pay dividends and catering incentives. These authors use a market-level variable, the "dividend premium," as a proxy for the value that the market places on dividends (i.e., the premium that investors are willing to pay for dividend-paying stocks). The impact of this variable on the decision to initiate dividend payments shows that changes in a firm's dividend policy may capture changes in investors' sentiments about dividend-paying firms relative to their sentiment about nonpaying firms. Based on this finding, these authors develop a behavioral model, according to which the stock price premium carried by dividend-payers explains the decision on whether to pay dividends.[11]

[9] According to Baker and Wurgler (2004a), the catering theory and the clientele theory differ in that dividends had never been explored via investor sentiment before. Another difference is that the catering theory focuses more on the global level of dividends as the result of the demand for shares that pay dividends.

[10] Allen and Michaely (2003) provide a comprehensive survey of payout policy research in which catering arguments are implicit.

[11] See Li and Lie (2006) for additional evidence on dividend changes being dependent on the dividend premium.

Baker and Wurgler (2004b) measure relative investor sentiment about dividend-paying firms by using the difference between the logarithm of the book-value-weighted average market-to-book ratio for dividend payers, and the book-value-weighted average market-to-book ratio for non-payers. They find a positive relationship between the catering incentives, captured by the dividend premium, and the change in firms' propensity to pay dividends. Relying on this new view of dividends, we take a step forward and propose a measure of catering incentives at the firm level (see Section II.2.3 for more details about the construction of this variable). Therefore, our last hypothesis is as follows:

Hypothesis 6: *A firm's payout ratio is positively driven by catering incentives*.

II.2 Data and variables

II.2.1 Data

To test the hypotheses posed in the previous section, we use data from several Eurozone countries. We selected an international database, Worldscope, as our source of information. Additionally, international data such as the growth of capital goods prices, the rate of interest on short-term debt, and the rate of interest on long-term debt, are extracted from the Main Economic Indicators published by the Organization for Economic Cooperation and Development (OECD).

For each country, we construct an unbalanced panel of nonfinancial firms[12] whose information is available for a least six consecutive years from 1986 to 2003. This

[12] We restrict our analysis to non-financial firms because financial firms have their own specificity.

strong requirement is a necessary condition since we lose one year of data in the construction of some variables (see, for instance, Appendix C), we lose another year of data because of the estimation of the model in first differences, and four-consecutive-year data is required in order to test for second-order serial correlation, as Arellano and Bond (1991) point out. We must test for second-order serial correlation because our estimation method, the GMM is based on this assumption.

Three of the twelve Eurozone countries[13] are excluded from our analysis for various reasons. As in La Porta et al. (2000b), Luxembourg is removed from our sample because there are only a small number of firms listed on Luxembourg's stock exchange. Greece is excluded because dividends are mandatory in that country. Finally, Finland had to be excluded because no sample with the abovementioned requirements could be selected. The structure of the samples, by number of firms, and number of observations per country, is provided in Table II.1. As shown in Table II.2, the resultant unbalanced panel comprises 635 firms and 6,451 observations. Using an unbalanced panel for a long period (18 years) is the best way to correct for the survival bias caused by some firms being delisted and, consequently, dropped from the database.

[13] The Eurozone currently comprises twelve countries: Austria, Belgium, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, and Spain.

Table II.1

Structure of the samples by countries

Country	Number of companies	Percentage of companies	Number of observations	Percentage of observations
Germany	110	17.32	1,153	17.87
France	107	16.85	1,081	16.76
Netherlands	91	14.33	943	14.62
Spain	88	13.86	999	15.49
Belgium	83	13.07	907	14.06
Portugal	44	6.93	406	6.29
Ireland	42	6.61	435	6.74
Austria	38	5.98	309	4.79
Italy	32	5.04	218	3.38
Total	635	100.00	6,451	100.00

The table shows extracted data from firms for which information is available for at least five consecutive years between 1986 and 2003. After removing the first-year data, used only to construct several variables (see, for instance, Appendix C), the resultant samples comprise 110 firms (1,153 observations) for Germany, 107 firms (1,081 observations) for France, 91 firms (943 observations) for the Netherlands, 88 firms (999 observations) for Spain, 83 firms (907 observations) for Belgium, 44 firms (406 observations) for Portugal, 42 firms (435 observations) for Ireland, 38 firms (309 observations) for Austria and 32 firms (218 observations) for Italy.

Table II.2

Structure of the panel

No. of annual observations per company	Number of companies	Percentage of companies	Number of observations	Percentage of observations
18	4	0.63	72	1.12
17	6	0.94	102	1.58
16	42	6.61	672	10.42
15	35	5.51	525	8.14
14	56	8.82	784	12.15
13	47	7.40	611	9.47
12	46	7.24	552	8.56
11	49	7.72	539	8.36
10	57	8.98	570	8.84
9	54	8.50	486	7.53
8	63	9.92	504	7.81
7	47	7.40	329	5.10
6	60	9.45	360	5.58
5	69	10.87	345	5.35
Total	635	100.00	6,451	100.00

Data from firms for which information is available for at least five consecutive years between 1986 and 2003 were extracted. After removing first-year data, used only to construct several variables (see, for instance, Appendix C), the resultant unbalanced panel comprises 635 firms (6,451 observations).

Finally, Table II.3 provides summary statistics (mean, standard deviation, minimum and maximum) of the variables used in the construction of the dependent and explanatory variables in our model, which we now proceed to describe.

Table II.3

Summary Statistics

Panel A. Tobit model to solve dividends censure				
Variable	Mean	Standard deviation	Minimum	Maximum
PR_{it}	.38363	.34093	0.0000	1.0000
$(I/K)_{it}$	.05651	.08761	-1.14290	.66487
$(CF/K)_{it}$	.03952	.06031	-.72767	.40246
$(\Delta D/K)_{it}$	.01271	.10017	-1.74563	.64275
$(\Delta S/K)_{it}$	.00433	.02516	-.15017	.87898
Panel B.Value model to predict catering				
Variable	Mean	Standard deviation	Minimum	Maximum
$(V/K)_{it}$	.63668	.68147	.01405	9.2732
D_{it}	.09959	.10990	.0000	.82617
$(I/K)_{it}$	.05651	.08761	-1.14290	.66487
$(CD/K)_{it}$	.01399	.02217	0	.47295
Panel C. Catering model of dividends				
Variable	Mean	Standard deviation	Minimum	Maximum
FCF_{it}	.05140	.11449	-1.9768	1.1084
D_{it}	.09959	.10990	.0000	.82617
NI_{it}	.02834	.06211	-.78456	.52176
$TANG_{it}$	.28850	.18704	.00006	.98799
SI_{it}	12.6993	1.7785	8.4109	18.5011

The table provides summary statistics (mean, standard deviation, minimum, and maximum) of the variables used in the construction of the dependent and explanatory variables. PR_{it} denotes payout ratio, $(I/K)_{it}$ denotes investment, $(CF/K)_{it}$ is cash flow, $(\Delta D/K)_{it}$ and $(\Delta S/K)_{it}$ stand for the increment of debt and shares, respectively, $(V/K)_{it}$ is the firm's value, D_{it} represents debt ratio, $(CD/K)_{it}$ denotes common dividends, FCF_{it} is the free cash flow, NI_{it} denotes net income, $TANG_{it}$ denotes tangible fixed assets, and SI_{it} is size.

II.2.2 Dependent Variable

The dependent variable in our model is the payout ratio, which is a censured variable in that some firms pay dividends, whereas others do not. Note that if we took into account only the firms paying dividends, our results would be biased. To solve this problem, we predict the payout ratio using an explanatory model for this variable. We follow the model provided by Auerbach and Hasset (2003), which is based on the

equality of sources and uses of funds, and we obtain the following Tobit model that provides us with a prediction of the payout ratio for each period from 1986 to 2003

$$CPR_{it} = \beta_0 + \beta_1 (I/K)_{it} + \beta_2 (CF/K)_{it} + \beta_3 (\Delta B/K)_{it} + B_4 (\Delta S/K)_{it} + \mu_{it} \quad (1)$$

with $PR_{it} = CPR_{it}$ *if* $CPR_{it} > 0$

$PR_{it} = 0$ if $CPR_{it} \leq 0$,

where CPR_{it} is a latent variable observed only when it is positive, whereas we know only that it is negative in the remainder of the cases. The explanatory variables for the payout ratio are: investment (I_{it}/K_{it}), cash flow (CF_{it}/K_{it}), increment of debt ($\Delta B_{it}/K_{it}$), and increment of shares ($\Delta S_{it}/K_{it}$). All explanatory variables are scaled by the replacement value of total assets (K_{it}), calculated as explained in Appendix A.[14]

Taking into account that CPR_{it} follows a normal distribution with mean μ and variance σ_2, and letting

$$\beta_0 + \beta_1 (I/K)_{it} + \beta_2 (CF/K)_{it} + \beta_3 (\Delta B/K)_{it} + B_4 (\Delta S/K)_{it} + \mu_{it} = X'_{it}\beta \ ,$$

then the logarithmic likelihood function of our model is

$$\ln L = \sum_{PR_{it}>0} -\frac{1}{2}\left[\ln(2\pi) + \ln\sigma^2 + \frac{(PR_{it} - X'_{it}\beta)^2}{\sigma^2} \right] + \sum_{PR_{it}=0} \ln\left[1 - \Phi\left(\frac{X'_{it}\beta}{\sigma} \right) \right] ,$$

where the first term picks up the observations for which $PR_{it} > 0$ (that is, observations for which the payout ratio is observable and, consequently, the density function is known), and where the second term refers to the remainder of the observations for which the payout ratio is unobservable, and we assume that the function Φ(.) is distributed as N (0, 1).

Table II.4 provides summary statistics (mean, standard deviation, minimum and maximum) of the payout ratios obtained by the maximum likelihood estimation of the

[14] The subscript *i* refers to the firm and *t* refers to the time period.

Tobit model in (1). In addition, the estimation of a Probit model including the same set of explanatory variables allows us to check the capacity of prediction of the model in (1). As shown in the last column of Table II.4, the percentages of correct classification are similar to those reported in previous studies. Additionally, the last row of the table displays the summary statistics of the new variable, CPR_{it}, for which the problem of censure is already solved, and which will be the dependent variable in our model.

Table II.4

Summary statistics of the estimated payout ratios

Variable	Mean	Standard deviation	Minimum	Maximum	Correct classification
CPR86	.13018	.42393	-.57906	.72013	100.00
CPR87	.30365	.17033	-.37441	.53203	87.50
CPR88	.32129	.10967	.03271	.98574	83.66
CPR89	.32494	.08542	-.35601	.52085	85.31
CPR90	.38818	.07495	.05319	.68173	87.63
CPR91	.40585	.04784	.07295	.58586	84.68
CPR92	.45219	.13128	-.97013	.66520	82.51
CPR93	.40188	.25357	-4.1673	.98977	75.29
CPR94	.28988	.15638	-1.5087	.65421	77.16
CPR95	.30949	.14072	-1.3781	.72779	77.46
CPR96	.34289	.13198	-.84888	.77060	78.96
CPR97	.28807	.08769	-.47661	.46076	79.80
CPR98	.27967	.09732	-.64811	.50091	78.63
CPR99	.27442	.12663	-1.9449	.39907	77.27
CPR00	.27979	.06908	-.29269	.47720	76.36
CPR01	.38725	.15393	-1.0219	.94066	78.72
CPR02	.35177	.41456	-5.1497	.60144	78.45
CPR03	.35567	.22063	-2.2385	.89890	77.73
CPR total	.34023	.17056	-5.14974	.98977	

This table reports summary statistics of the estimated payout ratios. CPR03, for instance, is the payout ratio estimated by using a Tobit model for the year 2003 in order to solve the censure problem. Correct classification stands for the percentage of correct classification arising from a Probit model that includes the same set of explanatory variables.

II.2.3 Explanatory Variables

According to the theories discussed in Section II.1.1, the explanatory variables to be entered into our basic model are: free cash flow, leverage, earnings, tangible fixed assets, and size. To capture the potential benefits of dividends as a mechanism to reduce the conflicts of interest between owners and managers with respect to the allocation of the firm's free cash flow, our model incorporates a free cash flow index (FCF_{it}), obtained from the interaction of cash flow with the inverse of the investment opportunities.[15] We compute a firm's cash flow as $CF_{it}=NIAPD_{it}+DEP_{it}$, where $NIAPD_{it}$ denotes net income after preferred dividends, and DEP_{it} represents book depreciation expense. Investment opportunities are measured by means of Tobin's q, calculated as $q_{it}= (V_{it}+PS_{it}+MVLTD_{it}+BVSTD_{it})/K_{it}$, where V_{it} is the market value of common stock, PS_{it} is the value of the firm's outstanding preferred stock, $MVLTD_{it}$ represents the market value of the long-term debt (see Appendix B), and $BVSTD_{it}$ stands for the book value of short-term debt.

To investigate whether there is a substitution, or a complementary relationship between debt and dividends, the debt ratio also enters our model. The debt ratio is defined as $D_{it}=MVLTD_{it}/(V_{it}+PS_{it}+BVSTD_{it}+MVLTD_{it})$. We use in the numerator the long-term debt, since most arguments in financial theory are related to this type of debt (see, for instance, DeAngelo and DeAngelo, 2006).

To test Lintner's (1956) predictions about the relevance of a firm's earnings for its dividend policy, we include the firm's net income, NI_{it}, in our model, measured as $NI_{it}=(PI_{it}-ITX_{it})/K_{it}$, where PI_{it} encompasses all income before taxes, and ITX_{it}, represents all taxes levied on income.

[15] Details about the interpretation of this index can be found in Miguel and Pindado (2001).

Finally, tangible fixed assets ($TANG_{it}$) are computed as the net book value of property, plant, and equipment, scaled by the replacement value of total assets, and size (SI_{it}) is the natural logarithm of the replacement value of total assets.

In accordance with our aims, our model incorporates a variable capturing investor sentiment. Specifically, we propose the construction of a variable capturing investors' sentiments at the firm-level that acts as a proxy for this catering effect. However, it is difficult to find a variable that captures and measures investor sentiment in an objective or definitive way, since sentiment is inherently subjective.[16] Given this limitation, our measure should be regarded as a firm-level alternative to the variable originally proposed by Baker and Wurgler (2004b).

The starting point for the calculation of this new variable is the following value model

$$\left(V/K\right)_{it} = \alpha_0 + \alpha_1\left(I/K\right)_{it} + \alpha_2 D_{it} + \alpha_3\left(CDIV/K\right)_{it} + \varepsilon_{it}, \quad (2)$$

where I_{it} represents investment (calculated as described in Appendix C), and $CDIV_{it}$ common dividends. Assuming that a firm's market valuation is mainly explained by its investment, debt, and dividend decisions, the error term, ε_{it}, captures what cannot be explained by these three financial decisions and, consequently, is our proxy for the firm's investor sentiment.

This variable represents our major contribution to the strand of literature pioneered by Baker and Wurgler (2004b). Note that these authors propose a measure of the market desire for dividend-paying stocks or, in other words, a measure at market-level of the investor sentiment. Alternatively, we propose a measure of catering

[16] Baker and Wurgler (2006, p. 1655) affirm that, "There are no definitive or uncontroversial measures for investor sentiment".

incentives at the firm level. Assuming that investor sentiment cannot be objectively measured because of its strong psychological component, our proposal is intended to overcome this limitation by proxying catering incentives through a variable built upon the residue of a value model. In this way, a firm's market value is expected to be the result of its main financial decisions, as well as its investor sentiment regarding dividends.

Table II.5 provides summary statistics for the resultant catering variable for all years, obtained by cross-sectionally estimating the model in (2). The last row of the table displays the summary statistics of the resultant catering variable, CAT_{it}, which will enter our dividend model.

Table II.5

Summary statistics of the estimated catering variable

Variable	Mean	Standard deviation	Minimum	Maximum
CAT86	.0000	.00741	-.33190	.33741
CAT87	.0000	.04132	-.51434	2.7364
CAT88	.0000	.09847	-1.2738	3.9961
CAT89	.0000	.11973	-1.3468	4.4887
CAT90	.0000	.14999	-1.7954	7.5654
CAT91	.0000	.12923	-.638263	4.9983
CAT92	.0000	.10002	-.674895	3.1729
CAT93	.0000	.09917	-1.1421	2.6332
CAT94	.0000	.12363	-1.4792	4.4738
CAT95	.0000	.15705	-2.1455	7.9613
CAT96	.0000	.18841	-2.2141	5.2106
CAT97	.0000	.17873	-1.8571	5.4364
CAT98	.0000	.19392	-2.1252	6.9161
CAT99	.0000	.23339	-1.8219	8.1605
CAT00	.0000	.18831	-1.0222	7.6399
CAT01	.0000	.12530	-1.0556	4.6773
CAT02	.0000	.09525	-2.5362	3.4662
CAT03	.0000	.10524	-3.2830	3.7791
CAT total	.0000	.59634	-3.2830	8.1605

This table summarizes statistics of the resultant catering variable for all years, obtained by cross-sectionally estimating the value model in (2). The last row of the table displays the summary statistics of the resultant catering variable, CAT_{it}, which will enter our dividend model. Note that the catering variable comes from the error term of an explanatory value model, and therefore its mean is always zero.

II.3 Empirical model and estimation method

Using the dependent variable obtained as explained in Section II.2.2, and the traditional explanatory variables described in Section II.2.3, our basic model is as follows:

$$CPR_{it} = \gamma_0 + \gamma_1 FCF_{it} + \gamma_2 D_{it} + \gamma_3 NI_{it} + \gamma_4 TANG_{it} + \gamma_5 SIZE_{it} + \varepsilon_{it}, \quad (3)$$

where ε_{it} is the random disturbance.

The basic model in (3) can be easily extended to investigate the existence of the catering effect by including the variable CAT_{it}, leading to the following extended model:

$$CPR_{it} = \gamma_0 + \gamma_1 FCF_{it} + \gamma_2 D_{it} + \gamma_3 NI_{it} + \gamma_4 TANG_{it} + \gamma_5 SIZE_{it} + \gamma_6 CAT_{it} + \varepsilon_{it}, \quad (4)$$

Our models are estimated by the panel data methodology. Two issues are considered in making this choice. First, unlike cross-sectional analysis, panel data allow us to control for individual heterogeneity. This point is crucial in our study because the dividend decision is very closely related to the specificity of each firm. In fact, each firm has a different propensity to pay dividends, which could be regarded as unobserved heterogeneity. Therefore, to eliminate the risk of obtaining biased results, we control for such heterogeneity by modeling it as an individual effect, η_I, which is then eliminated by taking first differences of the variables. Consequently, the error term in our models, ε_{it}, is split into four components. First, the above mentioned individual or firm-specific effect, η_i. Second, d_t measures the time-specific effect by the corresponding time dummy variables, so that we can control for the effects of macroeconomic variables on the dividend decision. Third, since our models are estimated using data from several countries, we also include country dummy variables (c_i). Finally, v_{it} represents the random disturbance.

The second issue we address by using the panel data methodology is the endogeneity problem. The endogeneity problem is likely to arise in as far as the dependent variable (payout ratio) explains some explanatory variables. For instance, the payout ratio may explain leverage on the basis of arguments used to justify reverse causality (see Section II.1.1). In fact, Jensen, Solberg and Zorn (1992), and Moh'd, Perry and Rimbey (1998), among others, document a significant effect from dividends on debt. Additionally, there are reasons to expect size to be endogenous, since, as Ferris,

Sen and Yui (2006) point out, large dividend payers have continued to increase in size over the last 10 years. Consequently, endogeneity may be a problem in our models that must be controlled for. That is why our models have been estimated using instruments. Specifically, we use all the right-hand-side variables in the models lagged from t-1 to t-4 as instruments for the equations in differences, and t-1 for the equations in levels, as Blundell and Bond (1998) suggest, when deriving the system estimator used in this piece of work.

Finally, we check for potential misspecification of the models. First, we use the Hansen J statistic of over-identifying restrictions in order to test for the absence of correlation between the instruments and the error term. Tables II.6 and II.7 show that the instruments used are valid. Second, we use the m_2 statistic, developed by Arellano and Bond (1991), in order to test for lack of second-order serial correlation in the first-difference residual. Tables II.6 and II.7 show that there is no problem of second-order serial correlation in our models (see m_2). Note that although there is first-order serial correlation (see m_1), this is caused by the first-difference transformation of the model and, consequently, it does not represent a specification problem of the models. Third, the results shown in Tables II.6 and II.7 provide good outcomes for the following three Wald tests: z_1 is a test of the joint significance of the reported coefficients; z_2 is a test of the joint significance of the time dummies; and z_3 is a test of the joint significance of the country dummies.

Table II.6

Estimation results of the basic and extended models

	I	II
Constant	-.05732* (.018832)	-.02273** (.01367)
FCF_{it}	.38534* (.01989)	.44124* (.01211)
D_{it}	.23181* (.01269)	.22471* (.00937)
NI_{it}	.22608* (.03379)	.07396* (.02011)
$TANG_{it}$	.21719* (.01167)	.21248* (.00925)
S_{it}	.01955* (.00165)	.01682* (.00121)
CAT_{it}		.01781 (.00103)
z_1	431.30 (5)	769.21 (5)
z_2	1277.31 (16)	2250.85 (16)
z_3	35.27 (8)	64.34 (8)
m_1	-3.41	-3.40
m_2	-1.24	-0.98
Hansen	428.51 (397)	505.19 (510)

The regressions are performed by using the panel described in Table II.2. The variables are defined in Table II.3. The remainder of the information needed to read this table is as follows: i) Heteroscedasticity consistent asymptotic standard error in parentheses. ii) *,**, and *** indicate significance at the 1%, 5% and 10% levels, respectively; iii) z_1, z_2 and z_3 are Wald tests of the joint significance of the reported coefficients, of the time dummies, and of the country dummies, respectively, asymptotically distributed as χ^2 under the null of no significance, with degrees of freedom in parentheses; iv) m_i is a serial correlation test of order i using residuals in first differences, asymptotically distributed as N(0,1) under the null of no serial correlation; v) Hansen is a test of the over-identifying restrictions, asymptotically distributed as χ^2 under the null of no correlation between the instruments and the error term, degrees of freedom in parentheses.

Table II.7

Estimation results of the moderating role of certain firm characteristics

	I	II	III
Constant	.0484*** (.02764)	-.06136** (.02651)	.08452 (.02806)
FCF_{it}	.40301* (.01329)	.39978* (.01285)	.41178* (.01399)
D_{it}	.23441* (.01239)	.37364* (.01391)	.21581* (.01224)
NI_{it}	.10179* (.02114)	.13973* (.02194)	.05817* (.02238)
$TANG_{it}$	.27127* (.01118)	.27764* (.01167)	.25512* (.01145)
S_{it}	.02595* (.00220)	.03002* (.00219)	.02414* (.00227)
CAT_{it}	.00446 (.00273)	-.13649* (.00584)	.01104* (.00135)
$CAT_{it}DV_{it}$	.02325* (.00330)	.18262* (.00647)	.06480* (.06480)
t		25.07	14.75
z_1	618.18 (7)	586.61 (7)	411.58 (7)
z_2	1702.17 (16)	1674.44 (16)	1552.86 (16)
z_3	146.34 (8)	131.17 (8)	166.17 (8)
m_1	-3.39	-3.42	-3.39
m_2	-.80	-0.43	-1.09
Hansen	483.96 (502)	481.59 (502)	475.67 (502)

The regressions are performed using the panel described in Table II.2. DV_{it} is a dummy variable that takes the following values: a) 1 if the level of liquid assets is above the sample median, and 0 otherwise in Column I; b) 1 if Tobin's q is higher than unity, and 0 otherwise in Column II; c) 1 if the free cash flow is above the sample median, and 0 otherwise in Column III. The remainders of the variables are defined in Table II.3. The remainder of the information needed to read this table is as follows: i) Heteroscedasticity consistent asymptotic standard error in parentheses. ii) *, **, and *** indicate significance at the 1%, 5%, and 10% levels, respectively; iii) t is the t-statistic for the linear restriction test under the null hypothesis of no significance; iv) z_1, z_2 and z_3 are Wald tests of the joint significance of the reported coefficients, of the time dummies, and of the country dummies, respectively, asymptotically distributed as χ^2 under the null of no significance, with degrees of freedom in parentheses; v) m_i is a serial correlation test of order i using residuals in first differences, asymptotically distributed as N(0,1) under the null of no serial correlation; vi) Hansen is a test of the over-identifying restrictions, asymptotically distributed as χ^2 under the null of no correlation between the instruments and the error term, degrees of freedom in parentheses.

II.4 Results

In this section, we first present the results of our basic model in equation (3), which includes the explanatory variables that have been traditionally considered determinants of a firm's payout ratio. We then extend this basic model by incorporating a variable capturing investor sentiment into model (4). Finally, we test the implications of the catering theory by means of several firm characteristics, three in particular: liquid assets, investment opportunities, and free cash flow.

II.4.1 Results of the basic and extended models

The results for the GMM estimation of our basic model in (3) are provided in Column I of Table II.6. Consistent with *Hypothesis 1*, the level of a firm's free cash flow positively affects its payout ratio. Therefore, consistent with Jensen's (1986) theory, we find that firms with higher levels of free cash flow are encouraged to pay more dividends as a way to restrain manager discretion, and to prevent them from overinvesting. In agreement with Jensen (1989), the coefficient of leverage is positive, and suggests that debt and dividends are complementary agency-cost control mechanisms. Therefore, our evidence supports Hypothesis 2b, according to which a new issue of debt requires a higher dividend payment in order to limit managerial discretion over the new funds and, consequently, to avoid overinvestment in the firm. The positive relationship between a firm's earnings and its payout ratio predicted in *Hypothesis 3* is confirmed by our results. Consistent with Lintner (1956), firms in our sample increase their payout ratios when their earnings rise, in order to get a stable pattern of dividends and to avoid dividend cuts. Regarding the nature of the firm's

assets, *Hypothesis 4b* holds, which supports the above-mentioned results concerning the complementary relationship between debt and dividends. That is, firms with more tangible fixed assets are more leveraged and, consequently, maintain larger payout ratios as a way to control the new funds. Finally, and as expected, the positive coefficient on size supports *Hypothesis 5*, according to which larger firms pay higher dividends.

Column II of Table II.6 presents the results of the GMM estimation of Model (4). As shown in this table, the signs of the coefficients of the variables included in the basic model remain identical once the catering effect, CAT_{it}, is entered into the model. In short, a firm's payout ratio is positively affected by its level of free cash flow, its leverage, its net income, its level of tangible fixed assets, and its size. Regarding the influence of a firm's investor sentiment on its payout ratio, the positive coefficient of the catering variable confirms *Hypothesis 6*. Consistent with Baker and Wurgler (2004b), this finding highlights the link between the propensity to pay dividends and catering incentives. In other words, our result suggests that firms cater to their investors' preferences such that they are more prone to increase payout ratios when investors exhibit preference for dividend-paying stocks. This evidence provides empirical support for the catering model previously documented in US firms by Baker and Wurgler (2004a, b), and Li and Lie (2006), among others. Moreover, this result confirms that, as suggested by Von Eije and Megginson (2008), delving into the intricacies of measuring the catering effect may lead the catering theory to become as relevant in European countries as it is in the US.

II.4.2 The moderating role of some firm characteristics

After corroborating the existence of a catering effect with our results, we go a step further, and investigate whether certain firm characteristics moderate this effect. We then propose a test of the moderating role played by three features – namely, liquid assets, investment opportunities, and free cash flow. It is worth noting that, as far as we know, there is no prior evidence supporting this view, and providing empirical support for this issue is thus one of the major contributions of this research. Despite the lack of previous evidence, there are strong arguments that lead us to contend that investor preference for dividend-paying stocks changes in accordance with the above-mentioned characteristics.

First, Pinheiro, de Paula and Igan (2006) extend the model of Fama and French (2001) by adding a measure of liquid assets, and they find that firms are more likely to pay dividends if they have more liquid assets. Furthermore, these authors' results indicate that the decision to pay dividends depends directly on how much importance a firm's managers attach to shareholder preferences and on the firm's level of liquid assets. This leads us to expect that a firm's liquid assets and its investor sentiment about dividends could be related. Specifically, we expect investor preference for dividend-paying stocks to increase with a firm's liquid assets.

Second, it has been widely documented that dividends convey information about a firm's future prospects (see, for instance, Bhattacharya, 1979; John and Williams, 1985; Miller and Rock, 1985). According to signaling arguments, investors are optimistic about firms initiating or increasing dividends in that they interpret such a decision as meaning that there are valuable investment opportunities that guarantee the future distribution of such funds. Additionally, the managerial discretion associated

with a high level of intangibles in the firm may make dividends more desirable for investors, as a way to control for such discretion. Overall, this leads us to expect investor preference for dividends to be stronger for firms with valuable investment opportunities.

Third, as commented on in Section II.1.1, the free cash flow theory proposes that dividends lessen the agency costs deriving from the conflicts of interest between managers and owners with respect to a firm's free cash flow. This theory suggests a positive relationship between dividends and the level of free cash flow, a relation that is confirmed by the results presented in the previous section. Based on this result, and given the proven role of dividends in controlling for overinvestment processes, we expect investor preference for dividends to be stronger for firms with high levels of free cash flow.

To investigate whether these firm characteristics moderate the catering effect, we propose the following model to be estimated:

$$CPR_{it} = \gamma_0 + \gamma_1 FCF_{it} + \gamma_2 D_{it} + \gamma_3 NI_{it} + \gamma_4 TANG_{it} + \gamma_5 SIZE_{it} + CAT_{it}\left(\gamma_6 + \lambda DV_{it}\right) + \varepsilon_{it}, \qquad (5)$$

where DV_{it} is a dummy variable constructed according to the firm's level of liquid assets, investment opportunities, and free cash flow. It is worth noting that in all cases whenever the dummy variable equals one and both parameters (γ_6 and λ) are significant, a linear restriction test is needed in order to know whether their sum ($\gamma_6+\lambda$) is significantly different from zero. The null hypothesis to be tested in these cases is the hypothesis of no significance, H_0: $\gamma_6+\lambda=0$.

Column I of Table II.7 reports the results of the model, including the interaction of catering with liquid assets.[17] In this case, DV_{it} takes value 1 if the firm's level of liquid assets is above the sample median, and 0 otherwise. In this way, the coefficient of the catering variable is γ_6 for firms with low levels of liquid assets (since DV_{it} takes value zero), and $\gamma_6+\lambda$ for firms with high levels of liquid assets (since DV_{it} takes value one). As shown in the table, there is no effect from a firm's investor sentiment on its payout ratio when the firm has low liquid assets (γ_6 not significantly different from zero). However, the effect is positive and significant for firms with high levels of liquid assets ($\gamma_6+\lambda=\lambda=0.02325$, significantly different from zero), which confirms that, as expected, investor preference for dividend-paying stocks increases with liquid assets. That is, our evidence suggests that investor demand for dividends translates into higher payout ratios only in those firms with high liquid assets, whereas firms with low liquid assets do not seem to cater to investor preferences.

The interaction of the catering effect and investment opportunities is tested in the model presented in Column II of Table II.7. In this model, DV_{it} takes value 1 if the firm's Tobin's q is higher than one, and 0 otherwise. As shown in the table, the catering effect is negative in firms with non-valuable investment opportunities (γ_6=-0.13649), whereas this effect turns positive for firms with valuable investment opportunities ($\gamma_6+\lambda$=0.04613, significantly different from zero, see t). These results point out that the expected catering effect clearly manifests itself when there are future prospects for the firm, which affords managers the opportunity to exploit the potential divergence between inside and market expectations, and which makes dividends more valuable to

[17] This variable stands for money available for use in the normal operations of the firm, scaled by the replacement value of total assets; it represents the most liquid of all of the firm's assets.

investors. In contrast, non-valuable investment opportunities prevent firms from catering to investor sentiment about dividend-paying stocks, probably because the lack of positive NPV projects may lead to not being able to maintain high payout ratios in the future.

Finally, we investigate the interaction between the catering effect and the free cash flow by estimating the model presented in Column III of Table II.7. In this case, DV_{it} takes value 1 if the firm's free cash flow is above the sample median, and 0 otherwise. As can be seen in the table, the coefficient of the catering variable is higher for firms with high levels of free cash flow ($\gamma_6+\lambda=0.07584$, significantly different from zero, see t) than for firms with low levels of free cash flow ($\gamma_6=0.01104$). Therefore, it seems that catering incentives (i.e., investor preference for dividend-paying stocks) manifests more strongly in firms with high levels of free cash flow, in which dividends are much more valuable as an agency-cost control mechanism. This evidence again supports Jensen's (1986) theory.

Overall, this evidence provides an excellent robustness check for the results of the basic and extended models, since the sign of the coefficients of both the traditional explanatory variables, and the catering variable remain identical once we control for the moderating role of certain firm characteristics.

II.5 Conclusions

This study provides a test of the predictions of the catering theory of dividends by proposing a new approach for analyzing the effect that investor sentiment exerts on corporate dividend policy. Accordingly, a traditional dividend model is extended to incorporate an original measure of the catering effect at the firm-level, proxied by the error term of a market valuation model.

Our results show that investor sentiment impacts payout ratios in Eurozone member countries after controlling for traditional determinants of dividends, such as the free cash flow, leverage, earnings, tangible fixed assets, and size. This finding seems to indicate that dividend policies are driven to some extent by investor sentiment, thus revealing the desire of firm managers to cater to such preferences. Therefore, our evidence provides empirical support for a psychological component in the decision to pay in Eurozone firms, and it thus provides empirical support for the catering model previously documented in US firms.

Furthermore, this study contributes to an understanding of the implications of catering incentives for dividend policies by examining the moderating role played by certain firm characteristics. This idea has not been accounted for in previous studies, either theoretically or empirically, but our findings corroborate that the way in which investors appreciate dividend payments depends on the firm's liquid assets, investment opportunities, and free cash flow. First, investor preference for dividend-paying stocks translates into higher payout ratios only in those firms with high liquid assets. Second, investor sentiment positively impacts the payout ratio of only those firms with valuable investment opportunities, for which investors manifest stronger expectations about

receiving higher dividends. Finally, a firm's free cash flow is a driving force behind investor preference for dividend-paying stocks, which is stronger in firms with higher levels of free cash flow in that dividends are probably much more valuable as a mechanism to avoid overinvestment.

CHAPTER III

DIVIDENDS: INSTITUTIONAL FACTORS AND CATERING INCENTIVES

Introduction

One of the most important financial decisions that a firm's managers make is the amount and stability of dividends. That is why the dividend policy has long been an issue of interest in the financial literature and, in spite of the vast research on the topic, it is still an open matter. In fact, dividends have always been a bit of a puzzle in the theory of the firm. According to Baker, Powell and Veit (2002b, p. 255), "despite a voluminous amount of research, we still do not have all the answers to the dividend puzzle."

Since Miller and Modigliani (1961) and their proposition of irrelevance in perfect capital markets, the financial research has made great efforts to find alternative explanations of dividends in imperfect markets. Within this strand of literature, there are many works that investigate the important role played by a firm's characteristics in shaping its dividend decision; one of the most remarkable is by Fama and French (2001). The question as to why companies pay out dividends has given rise to different explanations, the most relevant ones stemming from the agency theory.

The overinvestment problem that is likely to appear in firms with free cash flow is one of the offered explanations for dividends. In this context, the literature shows that

more profitable firms pay more dividends,[18] while firms with more investment opportunities pay less,[19] which is consistent with the propositions of Easterbrook (1984) and Jensen (1986) about the role of dividends in controlling the agency costs of free cash flow. Specifically, Jensen's (1986) free cash flow theory states that higher free cash flow should lead to higher dividend payments in order to prevent firms from overinvesting. Hence there is a positive relationship between a firm's free cash flow and its payout ratio.[20]

Agency problems call not only for higher dividends but for more debt, as well. In fact, financial literature documents the role played by debt and dividends as agency-cost control mechanisms (see Ross, 1977; Grossman and Hart, 1980; Jensen, 1986; and Harris and Raviv, 1991 for debt; Lintner, 1956; Bhattacharya, 1979; Rozeff, 1982 and Jensen, 1986 for dividends). This suggests that debt and dividend may be somehow related, although there is no consensus about the way they are related. On the one hand, the substitution hypothesis predicts a negative relationship between debt and dividends, based on the minimization of agency conflicts without duplicating efforts (see Rozeff, 1982; Jensen, 1986; Crutchley and Hansen, 1989; Jensen, Solberg and Zorn, 1992); and Chen and Steiner, 1999). On the other hand, the alternative hypothesis points to the complementary use of these two mechanisms and consequently, to a positive relationship between them (see Jensen, 1989; Eckbo and Verma, 1994; and Zwiebel, 1996).

[18] See, for example, Lintner (1956), Jensen, Solberg and Zorn (1992), Fama and French (2001), DeAngelo, DeAngelo and Skinner (2004), and Li and Lie (2006).
[19] See, for instance, Wang, Erickson and Gau (1993), or Barclay, Smith and Watts (1995).
[20] The positive relationship between dividends and free cash flow is confirmed by, for instance, Chaplinsky and Niehaus (1993) and Holder, Langrehr and Hexter (1998). More recently, Gaspar, Massa and Matos (2005) and DeAngelo, DeAngelo and Stulz (2006) document the role played by dividends in controlling for overinvestment processes in firms with high levels of free cash flow.

Lintner (1956) points to another important explanation of dividends. He argues that firms seek to maintain the stability of dividends, and he finds that a firm's earnings are probably the key factor to account for in order to get a stable dividend pattern. Consequently, a positive relationship between a firm's earnings and its dividend payments will exist.[21]

The nature of a firm's assets has also been documented as a determinant of dividends (see, for instance, Allen and Michaely, 2003; Aivazian, Booth and Cleary, 2003). According to Scott (1977), firms with a high proportion of tangible assets are more leveraged, which will in turn positively or negatively affect dividend payments, depending on whether there is a substitution or a complementary relationship between debt and dividends.

Size has also been traditionally considered among the determinants of dividend policy, and previous evidence seems to agree that larger firms pay higher dividends (see, for instance, Fama and French, 2001 and Denis and Osobov, 2005, 2008).

More recently, there is the argument that the characteristics of the firms paying dividends (that is, their levels of free cash flow, leverage, earnings, tangible fixed assets and size) should not be separately analyzed from certain psychological components, in that an important part of the decision to pay dividends may be due to a firm's desire to satisfy investors' expectations. In fact, in agreement with the recent trends in the theory of the financial behavior, time-varying catering incentives also appear to shed light on the "disappearance" of dividends by Fama and French (2001).[22] This new explanation of dividends has its origin in the catering theory proposed by Baker and Wurgler

[21] More evidence on earnings being a determinant of dividends can be found in, for instance, Nissim and Ziv (2001), DeAngelo, DeAngelo and Skinner (2004), Koch and Sun (2004), Brav et al. (2005), Denis and Osobov (2008), and Skinner (2008).

[22] For recent research on disappearing dividends, see for instance, DeAngelo, DeAngelo and Skinner (2004); Amihud and Li (2006), Denis and Osobov (2008), or Hoberg and Prabhala (2009).

(2004a), according to which the changes in the amount that companies pay on dividends can be explained by what they call "catering incentives", that is, a measure of the market desire for dividend-paying stocks. According to this new theory, when investors' demand for payouts increases, firms are more likely to increase payouts (via either dividends or repurchases[23]). Recent studies (see, among others, Brown and Cliff, 2004, 2005; Lai, 2004; Denis and Osobov, 2005; Fairchild and Zhang, 2005; Gemmil, 2005; Hsieh and Wang, 2006; Cohen and Yagil, 2008; Han, 2008; Hoberg and Prabhala, 2009) show the growing interest that is lending to this new theory and they suggest that investors' sentiments can be decisive in the resolution of the dividend puzzle.

There is also literature, although not as much, that refers to the importance of the different institutional factors for a firm's payout. For example, La Porta et al. (2000a) obtain empirical evidence that confirms that the corporate dividend policy varies according to the legal system, in such a way that stronger legal protection of investors leads to higher dividend payouts.

This evidence is confirmed by Shleifer and Wolfenzon (2002), who suggest that better-protected investors expect more of their firms' profits to come back to them, instead of being expropriated by the entrepreneur who controls the firm.

There are other institutional factors besides investor protection that have been found to be linked to firms' dividend decisions. For instance, in Zwiebel (1996), managers voluntarily pay dividends in order to avert challenges for control, and Pan (2007) shows an association between the propensity to pay dividends and measures of

[23] In our work we didn't include repurchases because the difficulty of some markets in this type of transaction would bias the sample differently from our purpose. As documented by Farinha and López de Foronda (2009), historically stock repurchases in most of the European countries have not been a frequent event, and most of the stock repurchases up to 1998 happened in the UK.

managerial entrenchment based on indices of anti-takeover charter provisions.[24] Aivazian, Booth and Cleary (2003) find that in countries where the stock market is not so important in financing firms, changes in dividend payouts are more usual, and they document that firms in emerging markets have more unstable dividend payments than their US counterparts. The financial literature proposes two different ownership concentration systems, revealing a much more concentrated ownership for Continental European countries than for the Anglo-Saxon ones. The results in Schooley and Barney (1994) and Farinha (2003) point out that there is a relationship between dividends and ownership concentration that may change along with the increase of ownership concentration, leading to a non-linear relationship between them. Faccio, Lang and Young (2001) find evidence on the structure of ownership and control influencing dividend policies in European and East Asian firms and show that firms that exhibit a wider discrepancy between ownership and control paying higher dividends.

Gugler and Yurtoglu (2003) claim that dividend payouts decrease with the control stake of the largest shareholder, whereas the size of the second-largest shareholder is positively related to dividend payouts. Finally, Brennan and Thakor (1990), and Allen, Bernardo and Welch (2000) find that higher dividends lead to a higher fraction of shares held by institutional investors, whereas Grinstein and Michaely (2005) find that larger institutional ownership does not lead to higher payouts in that institutional investors, in contrast to individual investors, tend to prefer a payout policy based on stock repurchase rather than on dividend payments.[25]

[24] See, for example, Claessens et al. (2002); Farinha (2003); Hu and Kumar (2004); John and Knyazeva (2006), among others, for the relationship between managerial entrenchment and payout policy.
[25] For a review between institutional ownership and corporate dividend policy see, for instance, Han, Lee and Suk (1999); Short, Zhang and Keasey (2002), or Ravi (2007).

All this research reveals that institutional characteristics, such as investor protection, development of capital markets, contestability of the market for corporate control, the level of ownership concentration and the effectiveness of boards of directors, as well as corporate governance system, are relevant for a firm's dividend decision. This chapter tries to provide broader empirical evidence by examining whether these institutional factors shape the implications of the key dividend theories by determining managers' incentives to behave according to their predictions. Note that in respect to the catering theory of the dividends, Baker and Wurgler (2004b) claim that institutional factors cannot explain the decision of dividends through this theory because such factors explain the existence of the clientele effect. More recently, Hsieh and Wang (2006) examine empirically the possible impact of the different legal environments and the investors' preferences on the dividend decision. Their results, however, do not support the catering theory of dividends, although they show a new piece in the construction of the dividend puzzle.

To analyze all these implications, the focus of our research is to study in-depth how the institutional context affects firms' dividend policies. This analysis rests on the premise that the institutional disparity, and the subsequent differences in the nature of existing agency problems, leads to differences on the relationship between dividends and one of their key and more innovative determinants-that is, the catering incentives.

In fact, given the growing interest in the new catering theory of dividends, our main purpose in this chapter is to investigate how different institutional factors affect the evaluation that investors make of the firms and of who decides the allotment of dividends and what would lead to differences in the catering effect of dividends in different institutional contexts.

Hence we offer a study of the impact of several institutional factors on the investors' sentiment that support the catering theory of dividends. As far as we know, our work differs from existing literature in that it tries to answer to several unanswered questions about the dividends policy from the perspective of catering incentives around the world. There is no prior evidence supporting this view, and providing empirical support to this issue is thus one of the major contributions of this piece of this work. The literature more thoroughly known on these subjects portrays the relationship between dividends and institutional variables, almost always for countries usually belonging to common law.

In this context, the aim of our study is to explain how the different institutional factors in different corporate governance systems[26] affect dividends decisions according to a firm's desire of satisfying investors' sentiments. Despite the lack of previous evidence, there are strong arguments that lead us to argue that investors' preference for dividend-paying stocks changes according to the above-mentioned institutional variables.

The results from the estimation of the model by using the Generalized Method of Moments provide interesting results. Consistent with the predictions of the catering theory, we find that companies in Eurozone countries and the US, UK, Canada and Japan cater to their investors' sentiments. More interesting, our findings show an interaction effect between catering and institutional factors, particularly the legal protection of investors, development of capital markets and the orientation of the financial systems, the effectiveness of the market for corporate control, the level of

[26] We consider Corporate Governance to be a result of several institutional and legal factors: the legal protection of investors, the development of capital markets, the role of the market for corporate control, the level of ownership concentration and the effectiveness of boards.

ownership concentration and the effectiveness of boards of directors. We find a substitute effect of external corporate governance mechanisms on catering dividends.

The remainder of this chapter is organized as follows: First, we describe the main legal and institutional factors characterizing the corporate governance systems and summarize previous literature and empirical evidence on this matter which leads us to pose our hypotheses. Section III.2 describes the data and our model of dividends and discusses the estimation method. The results are discussed in section III.3 and, finally, the concluding remarks are presented in Section III.4.

III.1 Institutional features: previous evidence and hypothesis

In what follows, we describe the key institutional factors that may influence a firm's dividend policy and review previous evidence on the matter in order to pose our hypotheses about the role played by the institutional context in moderating the implications of the main dividend theories.

III.1.1 The legal protection of investors

One of the most widely accepted explanations for the different patterns of corporate finance across countries is based on the role played by laws in protecting investors. The new institutional economics that has come to be called the *Law and Finance* approach (see La Porta et al., 1998) assumes that the quality of law across countries depends on their legal origin. In this way, two legal traditions are identified: civil law and common law. On the one hand, civil law has its origin in Roman law and

is prevalent in most Continental European countries and in Japan. On the other hand, common law is English in origin and includes the UK, the US and Canada, among others. According to the results in La Porta et al. (1997, 1998, 2000b, 2002), common law countries protect investors better than those with civil law. This piece of evidence has given rise to an extensive literature on the efficiency of laws in protecting investors (both shareholders and creditors) and on their enforcement across countries (see, for instance, Shleifer and Vishny, 1997; La Porta et al., 1997, 1998; Johnson and Shleifer, 1999; Demirgüç-Kunt and Levine, 2001).

There are several previous studies revealing that the discussion of the dividend policy cannot be separated from legal features. La Porta et al. (2000b) provide evidence that the stronger the protection of minority shareholder, the higher the dividend payouts. This evidence is consistent with the so-called outcome agency model of dividends, according to which firms operating in countries where shareholders' protection is weak pay lower dividends because of the higher agency problems between managers and shareholders, whereas in countries where shareholders are more protected, more dividends are paid because shareholders are enabled to force managers to disgorge cash. This result is corroborated by Shleifer and Wolfenzon (2002). However, the dividend policy can also be seen as a substitute for the legal protection of investors. According to the substitute model, insiders interested in issuing equity in the future pay dividends in order to establish a reputation for a decent treatment of minority shareholders. Supporting this model, Faccio, Lang and Young (2001) find that in countries with weak investor protection the allotment of dividends is higher, as a way to limit the expropriation of minority shareholders. Dittmar, Mahrt-Smith and Servaes (2003) also

find significantly higher cash disgorgements in countries where shareholders have little legal protection.

In short, the influence of laws on dividends is a matter of record. However, previous evidence on the role played by the legal protection of investors in shaping a firm's dividend policy is somewhat mixed, or even perhaps confusing. For the whole exposed literature, we know that payout ratio is systematically related to the degree of shareholders' legal power. To shed light on this matter, we analyze the differences in payout ratios across different legal contexts to learn whether the outcome or the substitute model applies. On the basis that the different legal features of a country will shape managers' incentives to accommodate payout ratios to the firm characteristics and the investors' sentiments, we pose our first hypothesis:

Hypothesis 1: The degree of investor's protection will influence the extent to which firms cater to their investors' sentiments.

To test this hypothesis, we have constructed several indices. The first one, Legal Origin index, classifies the countries under analysis according to their legal origin, and it takes value 1 if the country is a common law country[27] and 0 if it is a civil law one.[28] Within this law-driven approach, additional indices have been proposed to assess the effectiveness and quality of enforcement of laws across countries. The second one, Anti-director Rights, measures how strongly the legal system favors minority shareholders over managers or dominant shareholders.[29] Like other previous papers, such as Demirgüç-Kunt and Maksimovic (1999, 2002); Beck et al. (2001) and Leuz,

[27] US, UK, Canada and Ireland are common law countries in our study.
[28] Áustria, Belgium, Finland, France, Germany, Greece, Italy, Japan, Netherlands, Portugal and Spain are civil law countries in our study.
[29] For example, Ball, Robin and Wu (2003), and Hope (2003) find that the presence of strong anti-director rights provides an effective deterrent against the manipulation of financial reports because managers would be aware that investors might sue them for losses.

Nanda and Wysocki (2003), we follow La Porta et al. (1997, 1998) in the construction of this index, which results from adding up the scores of six indices referring to the protection of minority shareholders.[30] The third index, Creditor Rights, is obtained following Pindado and Rodrigues (2004), who provide a deeper analysis of the insolvency law than La Porta et al. (1998) and also correct some of their indices.[31] The fourth index proxies for the degree of enforcement of a country's laws (see La Porta et al., 1998; Beck and Levine, 2002; Beck, Demirguç-Kunt and Levine, 2003; Giannetti, 2003, and Leuz, Nanda and Wysocki, 2003) and is constructed through the average of Law and Order and Efficiency of Judicial System. The last two indices, Protection of Investors and Effective Protection of Investors, are constructed by using the previous ones to reinforce the underlying idea.[32]

III.1.2 Capital Markets

The development of capital markets and the orientation of the financial systems are the two main features of capital markets that have been broadly used to establish institutional differences across countries. Rajan and Zingales (1995) were the first to establish the dichotomy between bank-oriented and market-oriented financial systems and since then, a lot of empirical studies on the matter have been developed (see, for

[30] Proxy by mail allowed, shares not blocked before meeting, cumulative voting or proportional representation, oppressed minorities mechanism, pre-emptive rights, and percentage to call an extraordinary shareholders' meeting. Note, however, that the score of Germany in the Proxy by Mail Allowed index and the score of the US in the Cumulative Voting or Proportional Representation index reported by La Porta et al. (1998) have been corrected following Miguel, Pindado and de la Torre (2005). First, although German shareholders are not allowed to vote by mail, most of them follow this practice, when necessary; through their bank (see Vagts, 2002). Second, cumulative voting is not mandatory in Delaware corporate law, and it is rarely observed by American firms (Roe, 2002).

[31] Specifically, the score of the United States in the Absolute Priority and Reorganization with Creditors' Consent indices, and the score of Spain in the Absolute Priority index, have been corrected according to their respective insolvency laws.

[32] The Protection of Investors index is measured through the average of the Anti-director rights index and Creditor rights index; the Effective Protection of Investors is measured by averaging the indices of Protection of Investors and Enforcement.

instance, Beck and Levine, 2002; Demirgüç-Kunt and Maksimovic, 2002; and Levine, 2002). Market-oriented systems, such as the ones of the US, the UK and Canada, are characterized by well-capitalized stock markets. In contrast, the banking sector is of great importance in financing firms, and financial markets are usually small in bank-oriented countries, such as Continental European countries and Japan. The influence of the development of capital markets on the dividend decision has received scarce attention in the literature. On the one hand, according to Demirgüç-Kunt and Maksimovic (1996), in countries with developed stock markets there is a substitution of equity for debt financing. This reliance on equity financing makes managers more concerned with aligning interests with those of shareholders in order to maintain a good reputation in the capital market. Dividend payments may be a solution to the conflict of interests between managers and shareholders (Rozeff, 1982; Easterbrook, 1984), hence firms operating in developed capital markets are expected to pay higher dividends as a way to keep shareholders satisfied and consequently, have their market value increased. Asymmetric information problems are also critical for firms in developed stock markets. According to signaling theories, higher information asymmetry between managers and shareholders leads firms to be more willing to incur costs associated with dividend signaling, in that dividends convey management's confidence about the future profitability of a firm and consequently, about dividend stability (e.g., Bhattacharya, 1979; Talmor, 1981; Miller and Rock, 1985; Bar-Yosef and Huffman, 1986; Nissim and Ziv, 2001). All this suggests that dividend distributions enable firms to obtain equity financing on favorable terms (John and Williams, 1985), and thus higher dividends are expected in market-oriented systems. On the other hand, agency and asymmetric information problems in a bank-oriented system are likely to be resolved by internal

channels between the firm and its creditors.[33] In this context, managers' bigger concern is to be on good terms with the firm's creditors to be able to obtain future financing. Given that dividends cause a transfer of wealth from bondholders to shareholders, debt contracts usually restrict the distribution of dividends in the firm, thus downgrading the importance of the dividend decision. Except in La Porta et al. (1998),[34] previous evidence supports this argument. For instance, Aivazian, Booth and Cleary (2003) consider dividends as a substitute for the direct communication between the firm and its external investors and find that institutional structures prevalent in developing countries make corporate dividend policy a less viable mechanism for signaling future earnings and reducing agency costs than in countries with developed capital markets, such as the US. Dewenter and Warther (1998) make a similar point by arguing that stable dividend payments may not be as important for Japanese that are part of a *keiretsu*, due to the close ties between managers and investors in this kind of bank-based structure. Similar results are found by Correia da Silva, Goergen and Renneboog (2005) for the German case. They document a smaller signaling role of dividends in Germany, where firms with banks as their major shareholders are more willing to omit or cut their dividends than firms controlled by other types of shareholders.

In short, dividend payments are expected to be higher in firms operating in market-oriented systems than in firms operating in bank-oriented systems. To go further in the effect of capital markets' development on a firm's dividend policy, we pose our second hypothesis:

[33] For example, Roe (1994) finds that in a bank-oriented system, such as the ones in Japan and Germany, banks own controlling stakes and play a central role in monitoring and supplying information. Also, Gorton and Schmid (2000) find evidence supporting the notion that banks are an important part of the corporate governance mechanism in Germany.

[34] La Porta et al. (1998) document that the lack of transparency, inadequate legal infrastructure, and weak investor protection in emerging markets all enhance the role of dividends as a reputation mechanism, and make the payment of dividends a necessary mechanism to attract capital.

Hypothesis 2: Market-oriented systems encourage managers to cater to a larger extent to investors' dividend demand.

Following Beck et al. (2001) and Demirgüç-Kunt and Maksimovic (2002), we have constructed a Market index that takes value 1 if the country is classified as a market-oriented system and 0 if it is considered a bank-oriented system. We provide four additional indices of capital market development (see Beck and Levine, 2002).The first one, Stock Market Capitalization relative to GDP, captures the importance of stock markets in the financial system. The second index, Total Value Traded to GDP, is a measure of the capital market's liquidity. Note that common law countries are characterized by higher market capitalization and liquidity than those with civil law. The last two indices, index of market development and index of banking development, were constructed by us using the previous ones to reinforce the underlying idea.[35]

In sum, at the macro level, King and Levine (1993), Levine and Zervos (1998), and Beck, Levine and Loayza (2000) show that financial development promotes growth and that differences in legal systems could explain most differences in financial development.

III.1.3 Contestability of the market for corporate control

The concept of the market for corporate control as a control mechanism was originally suggested by Marris (1963) and Manne (1965), and subsequently, the financial theory has traditionally held the assumption that the takeover market plays an important role in disciplining management by aligning the interests of owners and

[35] The index of market development is measured by the average of the market capitalization to GDP with Total Value Traded to GDP, and index of banking development is the average of the ratio of the sum of bank liquid liabilities, bank assets and deposit bank domestic relative to GDP.

managers.[36] First, even the widespread threat of a takeover places the management under greater discipline by institutionalizing an evaluation mechanism of corporate decision-making. Second, when the threat of an acquisition is not enough to guarantee managers' efficiency in the construction of value, the threat is carried out and management in charge is substituted. Consistent with previous arguments, the financial literature supports the effectiveness of the market for corporate control in resolving shareholder-manager conflicts (see, among others, Jensen and Ruback, 1983; Brickley, Lease and Smith, 1988, 1994; Jarrell, Brickley and Netter, 1988; Franks and Mayer, 1996).

Berglof (1990) and Franks and Mayer (1997) find that one of the biggest institutional differences among G-7 countries is the contestability of the market for corporate control. Berglof and Burkart (2003, p. 173) affirm that, "while increased contestability of control is desirable hostile takeovers are a rather blunt instrument for regulation and the market for corporate control is only one of many corporate governance mechanisms to be honed in order to promote corporate restructuring in Europe."

On the one hand, market-based systems are generally characterized by highly active markets for corporate control. Specifically, a market for corporate control is usually associated with the US and the UK (see Jensen and Ruback, 1983; Jarrell, Brickley and Netter, 1988 for the US; Franks and Mayer, 1997 for the UK),[37] where firms' stock rights are highly decentralized and shareholders have limited influence over

[36] See Becht, Bolton and Roell (2003) for a comprehensive review of the conventional corporate governance mechanisms that include market for corporate control.

[37] In fact, there is evidence on a substantial number of takeovers in the US and the UK, particularly during the nineties (see, for instance, Conn and Connell, 1990; Hopt et al., 2000; and Goergen and Renneboog, 2004), and although most of the takeovers in these countries are non-aggressive bids, the fraction of unfriendly bids is not negligible (approximately 47% for the US, see Cottner, Shivdasani and Zenner, 1997; and 25% for the UK, see Franks and Mayer, 1996).

companies' operations and management. Something different occurs in the case of Canada. Attig and Gadhoum (2003) report that more than 80% of Canadian listed firms have controlling shareholders, which make hostile takeovers more difficult. On the other hand, an active market for corporate control is virtually absent in bank-based systems. As Renneboog (2000, p. 2) argues, whereas in Anglo-Saxon countries managerial performance is maintained by the complementary intervention of both internal and external control mechanisms, the disciplinary function of the takeover market in Belgium, and in most other Continental European countries, is limited. For instance, in countries such as Japan and Germany, the market for corporate control is by no means dynamic since stock rights are highly concentrated. Actually, in Germany the market for corporate control has not played a significant role in the post-war period (Höpner and Jackson, 2001), and only three hostile takeovers occurred during the years 1945 and 1995 (Franks and Mayer, 1998). In Japan, the influence of banks and the strength of cross-shareholdings typical of *keiretsus* represent the main structural barriers to takeovers.[38] [39] In Japan the ownership concentration is plenty high and the banks are the main shareholders being also common the big participations inter-companies (Prowse, 1992; Berglof and Perotti, 1994). The market for corporate control is quite inactive in this country. In Spain, a weak market for corporate control is dominant. Traditionally, the market for corporate control among Spanish firms was practically non-existent because of high ownership concentration of quoted firms and poor minority shareholder rights. Perotti and Von Thadden (2006) argue that a society with

[38] Holmstom and Kaplan (2001), Köke (2004); Grullon, Kanatas and Weston (2004), and Kini, Kracaw and Mian (2004) provide more detailed discussions on the market for corporate control.

[39] Morck and Nakamura (1999) point out that the post-war US occupation imposed a dispersed ownership structure on Japanese firms. In response to the hostile takeovers and greenmail payments that took place in the 1960s and 1970s, a rapid growth of intercorporate equity holdings occurred. For evidence on the takeover market in Japan, see Kester (1991), and Kaplan and Minton (1994).

more diffused financial wealth should exhibit developed equity markets, strong minority protection, and a market for corporate control. They show for a sample of 13 OECD countries that in 1970, stock market capitalization as a percentage of GDP was highest in Britain, Canada, and the US, and lowest in Austria, France, Germany, and Italy, closely followed by Belgium. Our results also show that with information for 13 OECD countries, given the available information, it seems that Japan, Austria, and Belgium are close to Germany and France, while Canada are closer to the US and the UK.[40]

The influence of the market for corporate control contestability on firms' dividend policy is scarcely documented in the literature. Zwiebel (1996) proposes a model in which managers voluntarily pay dividends when they are under a constant takeover threat. Pan (2007) shows that firms choose a combination of governance provisions and dividend policy to maximize value, and that dividend payment that reduces a firm's cash holdings can be used to deter hostile takeovers. De Jong (1997) shows empirically, using the 100 larger European companies between 1991 and 1994, that firms in countries with active markets for corporate control tend to pay higher dividends, while companies in countries where hostile takeovers do not exist pay a higher part of net value added in wages.

This previous evidence suggests higher dividends when there is an active market for corporate control, which is consistent with the role played by this market as an external control mechanism, capable of bringing down agency costs and mitigating

[40] For recent literature, Bebchuk, Cohen and Allen (2005), and Cremers and Nair (2005) examine one important dimension of corporate governance, namely, the market for corporate control. They show a negative relation between various indices of antitakeover provisions and both firm value and long-run stock return performance. However there are authors, for instance, Masulis, Wang and Xie (2007), that question the exact channels of antitakeover provisions that negatively affect shareholder value.

conflicts between shareholders and management. Our third hypothesis relies on this assumption and predicts the following:

Hypothesis 3: In countries with active markets for corporate control, firms will cater to a larger extent to their investors' sentiments.

We have constructed the Corporate Control variable, which accounts for the role played by this market in corporate governance, in order to test this hypothesis. This index takes value 1 in countries where an active market for corporate control exists and 0 otherwise. Note that the coincidence between this index and the Market variable defined in the previous section is complete, with the exception of Ireland. In fact, the usefulness of the market for corporate control is based on the premise that stock prices reflect managerial inefficiencies, thus creating the threat of a takeover.

III.1.4 The level of ownership concentration

With the increased separation of ownership from control, managers frequently face very little supervision. In this context, a commitment to a high dividend policy attenuates managerial opportunism and forces the firm to frequently intersect with the capital markets.

The separation of ownership and control in the modern corporation has given rise to the well-known principal-agent problem, which is the basis of corporate ownership being a key governance feature. In fact, financial literature proposes ownership structure as one of the main corporate governance mechanisms, especially helpful in solving the conflicts of interests between owners and managers and in minimizing the associated agency costs. Actually, the interesting point for corporate governance is that in an environment of highly dispersed ownership, the individual

shareholder has little or no incentive to monitor management. Hence a concentrated ownership is considered one of the key mechanisms of corporate governance in that larger stakes provide shareholders with enough capability and incentives to undertake monitoring activities (Jensen and Meckling, 1976; Shleifer and Vishny, 1986).

There are significant differences in corporate ownership patterns across countries. These broad differences are documented through different perspectives. For instance, La Porta et al. (1998) argues that the extent of investors' legal protection is one of the most important determinants of the choice between concentrated and dispersed ownership of corporate shares. In common law countries investor protection is reinforced by stronger law enforcement, whereas in countries with weaker investor rights higher ownership concentration is needed. Therefore, a relatively high ownership concentration in many developed and developing economies may be an equilibrium response to a low level of protection of minority shareholders.[41] The results in La Porta et al. (1998) support this argument and show that the stronger the legal protection of shareholders' rights, the lower the ownership concentration**.** The concentration of corporate ownership is also closely related to questions surrounding stock market participation that have attracted considerable interest in the recent literature, for example, Ferreira, Ornelas and John (2005), studying the impact of the ownership structure of a corporation on the characteristics and efficiency of the market for corporate control. These authors explain the operation of the market for corporate control and how the structure of ownership affects efficiency. Perotti and Von Thadden (2006) show that over the long term, politics drives the development of the equity

[41] Recent theoretical and empirical studies relating ownership and payout include, among others, Eckbo and Verma (1994); Lucas and McDonald (1998); Allen, Bernardo and Welch (2000); Fenn and Liang (2001); Short, Zhang and Keasey (2002); Denis and McConell (2003); Farinha (2003); Gugler (2003); Gugler and Yurtoglu (2003), Perez-Gonzalez (2003), Brav et al. (2005), Grinstein and Michaely (2005), Mancinelli, and Ozkan (2006), or Baker et al. (2007), among others.

market. Kaustia and Torstila (2008) show a causal link from increased stock ownership to increased voting for right-of-center parties, and it is possible that governments use this to manipulate the electorate to their own advantage. In fact, the rate of share ownership has also been the subject of a large body of literature on stock market participation and another example is that by Vissing-Jorgensen (2002) that with our work shows that the limited participation may be a cause of the equity premium puzzle and finds that (nonfinancial) income positively affects the likelihood of participation.[42] As a result, the question as to what facilitates and propels ownership diffusion remains a central research question in corporate finance and dividends policy.[43] Additionally, Pagano and Lombardo (1999), Pagano and Volpin (2001), and Roe (2006) argue that political determinants primarily explain differences in ownership concentration. However, it is clear that significant differences exist in ownership structures within the European Union (Barca and Becht, 2002; Faccio and Lang, 2002, and Gugler and Yurtoglu, 2003). Moreover, those last authors find that the role of financial institutions is scarcely relevant in Spain, France and Italy, because those countries have families that usually control most of the firms. In fact, Faccio and Lang (2002) showed that in countries in Continental Europe (Civil Law tradition) insider ownership is mostly associated with large shareholders who control, through many varied mechanisms such as corporate networks or family links.

The financial literature traditionally distinguishes between two types of ownership concentration systems (see, for instance, Moerland, 1995; Kaplan, 1997; Gedajlovic and Shapiro, 1998; Mayer and Sussman, 2001). On the one hand, the so-

[42] For example, Kothare (1997), and Pham, Kalev and Steen (2003) find that a less concentrated ownership structure contributes to market liquidity.
[43] See, for instance, Gugler (2003) on the different impact of government-controlled or shareholder-controlled ownership structures on dividend policies.

called Anglo-Saxon legal system, prevalent in the US, the UK, and Canada, among others, is characterized by dispersed shareholdings and a high level of institutional ownership.[44] On the other hand, the Continental European model, dominant not only in continental European countries but also in Japan, is characterized by concentrated ownership, which usually belongs to families and banks. For example, Becht and Mayer (2002) report that in more than 50% of European companies there is a single voting block of shareholders that commands a majority of shares. In contrast, in the UK and US, it is less than 3%.[45]

Previous research has focused on the role of corporate ownership in shaping the dividends decision. For instance, Faccio, Lang and Young (2001) examine the structure of ownership and control, and they find evidence of systematic expropriation of outside shareholders' interests by controlling owners in European and East Asian firms. They then try to find how this phenomenon is related to firms' dividend behavior. What they find is that a second large shareholder mitigates agency conflicts in European firms by increasing dividend payments, whereas multiple controlling shareholders intensify the conflicts of interest in East Asian firms, because they tend to collude in expropriating minority shareholders by paying lower dividends. Gugler and Yurtoglu (2003) claim that dividend payouts decrease with the control stake of the largest shareholder, whereas the size of the second-largest shareholder is positively related to dividend payouts. More

[44] For instance, Morck et al. (2004) review the evolution of corporate ownership in Canada during the twentieth century.

[45] These differences between Anglo-Saxon and Continental European countries are corroborated by Franks and Mayer (1997). Faccio and Lang (2002) reveal the same results; moreover, they found that the role of financial institutions is scarcely relevant in Spain, France and Italy, where families usually control most of the firms. See too, Becht and Roel (1999), Mayer and Sussman (2001), Volpin (2002), and Aganin and Volpin (2003).

recently, Khan (2006) obtains results consistent with dividends being a substitute for poor monitoring by a firm's shareholders.[46]

We focus on the differences in ownership concentration levels across countries and expect higher dividends in firms with more concentrated patterns, on the basis of ownership concentration being a monitoring device of managerial discretion. This monitoring effect leads us to pose our fourth hypothesis:

Hypothesis 4: The higher a firm's ownership concentration, the larger the extent to which firms cater to their investors' sentiments.

In our study we have constructed, following La Porta et al. (1998), an index measuring Ownership Concentration.[47] This index reveals a high level of ownership dispersion in common law countries, whereas ownership is much more concentrated in those with civil law, except for Japan.

III.1.5 The effectiveness of boards of directors

The function of the board of directors in the corporate governance is to protect shareholders' interest and discipline management. If the board succeeds in carrying out its implementation and ratification roles, it will ensure that shareholder interests are safeguarded. However, if the functioning of this internal control mechanism is weak or inadequate, shareholder interests will become of secondary importance and managers' discretionary activity will increase. Thus, if boards of directors fail, shareholders suffer

[46] In the same vein, Fenn and Liang (2001) report that firms with low managerial stock-option holdings have significantly higher dividend and total payout ratios (including repurchases). This result could be due to the lack of "dividend protection" afforded by most executive stock option contracts (Lambert, Lanen and Larker, 1989).

[47] Some recent papers by Carlin and Mayer (2003), and Leuz, Nanda and Wysocki (2003) also used the same index.

because of the combined effects of costly discretionary behavior, poor financial performance and a falling stock market valuation.

In short, this internal control mechanism represents an alternative way of restricting potential conflicts of interests between managers and shareholders. There seems to be no disagreement on the need for monitoring and control by boards of directors; however, their effectiveness differs considerably across countries, which allows us to establish institutional differences according to two key features: the composition of the board and its internal structure. In fact, several academic studies show that board composition varies with firms' characteristics and the institutional environment (for example, Brickley and James, 1987; Hermalin and Weisbach, 1988; and Denis and Denis, 1994) and suggest a homogeneous composition, therefore that may be optimal for some firms but not for others.[48] The composition of the board is critical to its efficacy in that the more independent the board members, the greater its effectiveness in monitoring management. In this context, a considerable body of the ongoing debate in the US and the UK deals with the optimal composition of the board of directors.[49] Actually, Anglo-Saxon boards have been generally considered a competent control mechanism because of their independence of management, since the designation of independent or non-executive directors constitutes a widespread practice in these countries.[50] In contrast, the role of boards of directors in most Continental European countries may be questioned, given the lack of clear regulation.[51]

[48] See Bhagat and Black (1999, 2002); Denis and Sarin (1999); Hermalin and Weisbach (2003), and Raheja (2005) for an extensive review of board structure and function.
[49] See, for instance, for a recent research on corporate boards, Dahya, Dimitrov and McConnell (2008), although in another perspective, of value. They find that firm value is positively correlated with the fraction of directors unaffiliated with dominant shareholders, especially in countries with weak legal protection for minority shareholders.
[50] More details can be found in Prowse (1995) and Morck (2004).
[51] In a recent and interesting study, Adams and Ferreira (2007) show a theory of friendly boards from cross countries variation on board structure. They argue that shareholders should be allowed to choose

In fact, given the diversity of board structure among several countries in our study, we used the term board in a broad sense; in other words, as an internal mechanism of corporate governance with either management, monitoring or supervisory functions. We should stress that the obvious difficulty of classification of the "boards" in the different countries is attested by the fact that they do not always adjust their characteristics to legal systems or guidelines and principles accepted and globally recognized.[52]

Where shareholdings are highly concentrated, as occurs in Continental European countries and Japan, non-executive directors may be considered as a mechanism to control majority shareholders, but without them being able to actively take part in the firm's decision-making process. This is why boards are rarely composed of independent directors in these countries. Although boards in most European counties are evolving towards an effective governance mechanism thanks to the various Codes of Best Practice,[53] they are still far from this concept because the greater presence of controlling

---

between board structures (sole board system or dual board system) and their model illustrates that shareholders are always at least slightly better off if the board has an advisory role.

[52] The diversity of board structures among IOSCO members and the OECD Principles' recognition that there are potentially many differences, and in that measured the studies on this matter should cover non-executive board members of companies with unitary boards; members of supervisory (i.e., non-executive) boards of companies with dual board structures; and members of the board of auditors elected by shareholders (which exist, for example, in Italy, Japan and Portugal): See IOSCO (2002), and OECD (2004).

[53] As documented by Ho Chi-Kun (2005, p 212), internationally, many corporate governance guidelines and codes of best practices have been published by supra-national agencies, for example: the Commonwealth Guidelines (CACG, 1999); the OECD (1999) Principles; the World Bank Framework for Implementation, 1999), national regulatory bodies (e.g. the French Vienot Commission's Recommendations (AFG-ASFFI, 1998 and amended 2001); the German Code (GPCG, 2000); the Japanese Principles (CGFJ, 1997 and revised 2001); the UK Combined Code of Best Practice (CCGUK, 2000)), and non-regulatory institutions (e.g. the CalPERS (1997 and revised 1999) Principles and Guidelines; the TIAACREFF (2000) policy statement; the European Shareholders Association's Guidelines (ESA, 2000); the International Corporate Governance Network's Statement (ICGN, 1999); the Business Roundtable (1997) Statement). The website of European Corporate Governance Institute (http://www.ecgi.org) provides a full list of these international guidelines, among others.

shareholders there makes it difficult to comply with these Codes' voluntary requirements.

Besides composition, the internal structure of the board is also fundamental for the effectiveness of this mechanism in corporate governance. In this sense, the existence of a one-tier or a two-tier board structure plays a key role in guiding and supervising a company. Firms in Anglo-Saxon countries (specifically the US, the UK and Canada (Hopt and Leyens, 2004; Adams and Ferreira, 2007; and Dargenidou, Mcleay and Raonic, 2007) and in most European countries except Germany, the Netherlands (Renneboog, Franks and Mayer, 2001 and Chirinko et al., 2004), and Denmark have adopted the unitary board structure, which implies that all board members are considered to be in the same position since they manage the company and also supervise its activity. There is thus no distinction between managing and supervisory functions. In contrast, the two tier structure is characterized by the existence of two bodies, an executive board and a supervisory board, which guarantees that the last is separated from and independent of management. In fact, although in general both the unitary board of directors and the supervisory body in the two-tier structure are elected by shareholders, and that there is usually a supervisory function and a managerial function under both structures, the distinction between these two functions is indeed more formalized in the two-tier structure.

There is not previous empirical evidence, as far as we know, on the structure and composition of boards being determinants of a firm's dividend policy. However, given that there is no disagreement on the key role played by this mechanism in protecting shareholders from managers' abuses, higher dividends are likely to be found in firms with independent and two-tier structures in that they are assumed to better monitor

managers in shareholders' interests. This argument leads us to pose the following hypothesis:

Hypothesis 5: Independent boards and two-tier boards will lead managers to better fit their dividends to investors catering incentives.

To consider the role played by boards of directors in our analysis, we have constructed the Board variable: a score of 1 is assigned to a country with a predominant two-tier board structure or when non-executive directors represent a significant proportion on boards,[54] and 0 otherwise. The control over the behavior of managers will be more effective when there is a clearer distinction between the 'supervisor' and those being 'supervised'.

III.1.6 Corporate Governance

Research on corporate governance has identified a number of mechanisms intended to insure that management acts in the best interests of shareholders, and these can include external and internal corporate governance mechanisms.

In fact, the relationship between corporate governance and dividend policy has recently been emphasized by La Porta et al. (2000a); Gugler and Yurtoglu (2003), Holmstom and Kaplan (2003), and Correia da Silva, Goergen and Renneboog (2004), among others. La Porta et al. (2000a) explain for 33 countries the economic basis for testing for a relationship between dividends and quality of governance, highlighting two considerations with opposite implications for the sign of this relationship. On one side, these authors describe an outcome model that leads to the prediction of a positive relationship between dividends and the quality of governance. They interpret their

[54] Both rules prevent those supervised from being supervisors, and thus lead to independent boards of directors. In fact, an outside-dominated board can be considered as coming close to the two-tier board regime (Wymeersch, 1998; and Hopt et. al., 2000).

evidence of higher dividends in well-governed firms as a result of effective pressure by minority shareholders on insiders to release cash. On the other hand and in opposition of the outcome model, the substitute view expected a negative relationship; that is, weak governance increases the need to pay out cash as dividends in order to overcome agency problems.[55] Gugler and Yurtoglu (2003) find large negative effects of announced dividend changes in German companies where corporate insiders have more power. Correia da Silva, Goergen and Renneboog (2004) find a U-shaped relationship such that dividends first decrease and then increase with the voting share of the largest owner. In fact, most theoretical and empirical corporate governance studies use U.S data. We can see an exception in Denis and McConnell (2003), who provide a most comprehensive international literature review on corporate governance, and the lack of cross-country European studies is quite evident. Faccio and Lang (2002) is another exception, as they examine ownership structure throughout Europe.

More recently, John and Knyazeva (2006) show evidence that dividends and total payouts (i.e., the sum of dividends and repurchases) are significantly higher when internal and external governance measures indicate weak governance. So we understand the type of monitoring mechanism is relevant for predicting dividends payouts. Those authors find that firms with weak corporate governance on average pay higher dividends. Managers faced with a high takeover threat (external monitoring) are more likely to repurchase and tend to repurchase more on average. On the other hand, strong internal governance (board) allows more accurate following of managerial actions and is associated with fewer cash distributions. They also find that the incidence of payouts is significantly lower among firms with better governance because these firms face

[55] See, for instance, the traditional models of Rozeff's (1982), and Jensen's (1986) with managers versus shareholder agency conflict.

lower agency costs of free cash flows and conclude that in the presence of high agency costs, governance plays a greater role in determining corporate payout.

In the same line of reasoning, Tse (2004) questions the logic of the relationship between agency costs and dividend policy in the outcomes model – if well-governed firms are more likely to pay dividends as La Porta et al. (2000a) suggest, then shareholders shouldn't need to rely on the payment of dividends to reduce the agency costs of free-cash-flow, because such costs should already be low for well-governed firms.

Other authors such as Gompers, Ishii and Metrick (2003); Cremers and Nair (2005); and Yermack (2006) show that companies with weak corporate governance have lower security returns than companies with strong corporate governance. The results of Giannetti and Simonov (2006), also find that investors expect lower returns from companies with weak corporate governance. The several arguments given above by the literature described lead us to pose our last hypothesis:

Hypothesis 6: Governance characteristics will moderate the extent to which firms cater to their investors' sentiments.

To test the hypotheses posed we construct a joined index of corporate governance that is measured by averaging the indices of ownership by three largest shareholders, corporate control, independent and two-tier index.

III.2 Data empirical model and estimation method

III.2.1 Data

To test the hypotheses posed in the previous section, we use data from several Eurozone countries, United States, United Kingdom, Canada, and Japan, which represent a great variety of institutional environments.

We have thus used an international database, Worldscope, as our principal source of information. Additionally, international data such as the growth of capital goods prices, the rate of interest of short term debt, and the rate of interest of long term debt, have been extracted from the Main Economic Indicators published by the Organization for Economic Cooperation and Development (OECD).

Since our study is intended to present a wide variety of institutional environments, we selected fifteen representative countries and for each country we constructed an unbalanced panel of non-financial companies from 1990 to 2003.

Three countries have been excluded from our analysis for different reasons. As occurs in La Porta et al. (2000b), Luxembourg has been removed from our sample because there are just a few firms listed in Luxembourg's stock exchange, and Greece because dividends are mandatory in this country. Finally, Finland had also to be excluded because no sample with the above-mentioned requirement could be selected. The structure of the samples by number of companies and number of observations per country is provided in Table III.1. As shown in Table III.2, the resultant unbalanced panel comprises 3000 companies and 20,395 observations.

Table III.1

Structure of the samples by countries

Country	Number of companies	Percentage of companies	Number of observations	Percentage of observations
Germany	427	14.23	4,263	20.90
France	391	13.03	3,812	18.70
Netherlands	137	4.57	1,412	6.92
Spain	99	3.3	1,046	5.13
Belgium	83	2.77	841	4.12
Portugal	43	1.43	366	1.80
Ireland	43	1.43	438	2.15
Austria	57	1.9	561	2.75
Italy	135	4.5	1,316	6.45
US	535	17.83	2,140	10.49
UK	560	18.68	2,240	10.98
Canada	79	2.63	316	1.55
Japan	411	13.7	1,644	8.06
Total	3,000	100.00	20,395	100.00

Data of companies in Eurozone countries and US, UK, Canada and Japan were extracted. The resultant samples comprise 427 companies (4,263 observations) for Germany, 391 companies (3,812 observations) for France, 137 companies (1,412 observations) for the Netherlands, 99 companies (1,046 observations) for Spain, 83 companies (841 observations) for Belgium, 43 companies (366 observations) for Portugal, 43 companies (438 observations) for Ireland, 57 companies (561 observations) for Austria, 135 companies (1,316 observations) for Italy, 535 companies (2,140 observations) for US, 560 companies (2,240 observations) for UK, 79 companies (316 observations) for Canada and 411 companies (1,644 observations) for Japan.

Table III.2

Structure of the panel

No. of annual observations per company	Number of companies	Percentage of companies	Number of observations	Percentage of observations
14	327	10.90	4,578	22.44
13	99	3.30	1,287	6.31
12	99	3.30	1,188	5.83
11	93	3.10	1,023	5.02
10	119	3.97	1,190	5.83
9	135	4.50	1,215	5.95
8	159	5.30	1,272	6.24
7	129	4.30	903	4.43
6	124	4.13	744	3.65
5	131	4.40	655	3.21
4	1,585	52.80	6,340	31.09
Total	3,000	100.00	20,395	100.00

Data from firms for which information is available for at least five consecutive years between 1990 and 2003 were extracted. After removing first-year data, used only to construct several variables, the resultant unbalanced panel comprises 3000 companies (20,395 observations).

Table III.3 provides summary statistics (mean, standard deviation, minimum and maximum) of the variables used in our analysis.

Table III.3

Summary statistics

Variable	Mean	Standard deviation	Minimum	Maximum
FCF_{it}	.04239	.11581	-1.1651	1.9621
D_{it}	.10094	.11518	.0000	.89555
NI_{it}	.02199	.07218	-.84731	.62594
$TANG_{it}$	.27837	.18929	.00008	.99679
SI_{it}	13.0143	1.9605	8.4024	20.3265
CAT_{it}	.0000	.74661	-6.0792	8.8978

The table provides summary statistics (mean, standard deviation, minimum, and maximum) of the variables used in our analysis. FCF_{it}, is the free cash flow, NI_{it} denotes net income, $TANG_{it}$ denotes tangible fixed assets, and SI_{it} is the size

III.2.2 Empirical model and estimation method

Using the dependent variable, payout ratio, obtained as explained in previous chapter in Section II.2.2[56], and the traditional explanatory variables mentioned in Section II.2.3[57], as well as the catering variable obtained through the value model (explained in the same chapter, in section II.2.3) our basic model is as follows:

$$CPR_{it} = \gamma_0 + \gamma_1 FCF_{it} + \gamma_2 D_{it} + \gamma_3 NI_{it} + \gamma_4 TANG_{it} + \gamma_5 SIZE_{it} + \gamma_6 CAT_{it} + \varepsilon_{it}, \quad (1)$$

Additionally, and in accordance with the aim of our study, we investigate whether or not several institutional characteristics moderate the catering effect, and for that we propose the following model to be estimated:

$$CPR_{it} = \gamma_0 + \gamma_1 FCF_{it} + \gamma_2 D_{it} + \gamma_3 NI_{it} + \gamma_4 TANG_{it} + \gamma_5 SIZE_{it} + CAT_{it}(\gamma_6 + \lambda DV_{it}) + \varepsilon_{it}, \quad (2)$$

where DV_{it} is a dummy variable constructed according to the institutional characteristics of legal protection of investors; development of capital markets and/or market-oriented financial system and bank-oriented, active markets for corporate control; the level of ownership concentration; effectiveness of boards of directors, and corporate governance. It is worth noting that in all cases whenever the dummy variable equals one and both parameters (γ_6 and λ) are significant, a linear restriction test is needed in order to know whether their sum ($\gamma_6+\lambda$) is significantly different from zero. The null hypothesis to be tested in these cases is the hypothesis of no significance, H_0: $\gamma_6+\lambda=0$.
In fact, in our study we have constructed different indices, in accordance with Section III.1, that we can see in Table III.4.

[56] Once the dependent variable is a censured variable in that some companies pay dividends whereas do not, we predicted a Tobit model following Auerbach and Hasset (2003).
[57] For more details about measures used, see once more, the previous chapter in Section II.2.

Table III.4

Institutional Factors

Country / Variables	Legal Protection of Investors Variables					Development of Capital Markets Variables				Ownership Variable	Corp Gove
	Anti-director Rights	Creditor Rights	Enforcement	Protection Investor	Effective Protection Investor	Market Capitalization/ GDP	Total Value Traded/GDP	Index of Market Development	Index of Banking Development	Ownership Concentration	Corp Gove Index
Germany	2.00	3.00	7.32	2.50	6.10	0.24	0.28	0.48	0.94	0.48	0
France	3.00	0.00	6.89	1.50	3.45	0.33	0.17	0.34	0.85	0.34	0
Netherlands	2.00	2.00	8.00	2.00	5.33	0.69	0.43	0.61	0.95	0.39	0
Spain	4.00	1.00	5.78	2.50	4.81	0.30	0.23	0.40	0.80	0.51	0
Belgium	0.00	2.00	7.85	1.00	2.62	0.36	0.05	0.23	0.81	0.54	0
Portugal	3.00	1.00	5.99	2.00	3.99	0.13	0.05	0.17	0.68	0.52	0
Austria	2.00	3.00	7.85	2.50	6.54	0.12	0.08	0.25	1.03	0.58	0
Italy	1.00	2.00	6.19	1.50	3.10	0.17	0.08	0.22	0.64	0.58	0
Japan	4.00	3.00	7.49	3.50	8.74	0.79	0.28	0.55	1.46	0.18	0
Ireland	4.00	1.00	6.53	2.50	5.44	0.26	0.14	0.30	0.39	0.39	0
U.K.	5.00	5.00	7.29	5.00	12.14	1.13	0.55	0.82	1.09	0.19	0
U.S.	4.00	1.00	8.00	2.50	6.67	0.80	0.62	0.75	0.66	0.20	0
Canada	5.00	1.00	7.78	3.00	7.78	0.59	0.29	0.49	0.66	0.40	0
Sample average	3.00	1.92	7.15	2,46	5.90	0.45	0.25	0.43	0.84	0.41	0

The resultant table of institutional factors comprises a different index constructed in accordance with section III.1. Anti-director Rights measures how strongly the legal system favors minority shareholders over managers or dominant shareholders; Creditor Rights, is obtained following Pindado and Rodrigues (2004); the third index, proxy the degree of enforcement of a country's laws constructed through the average of Law and Order and Efficiency of Judicial System. The last two indices, protection of investor and effective protection of investor were constructed by us using the previous ones to reinforce the underlying idea. We provide four additional indices of capital market development (see Beck and Levine, 2002). The first one, Stock Market Capitalization relative to GDP, captures the importance of stock markets in the financial system. The second index, Total Value Traded to GDP, is a measure of the capital market's liquidity. The last two indices, index of market development and index of banking development, were constructed by us using the previous ones to reinforce the underlying idea. Following La Porta et al. (1998), we constructed an index measuring Ownership Concentration. Finally we constructed a corporate governance index.

All our models have been estimated by using the panel data methodology. Two issues have been considered in making this choice. First, unlike cross-sectional analysis, panel data allow us to control for individual heterogeneity and to eliminate the risk of obtaining biased results because of such heterogeneity (Moulton, 1986, 1987). This point is crucial in our study because the dividend decision is very closely related to the specificity of each company. Specifically, we have controlled for heterogeneity by modeling it as an individual effect, η_i, which is then eliminated by taking first differences of the variables. Consequently, the error term in our models, ε_{it} , has been split into four components: first, the above-mentioned individual or firm-specific effect, η_i. Second, d_t measures the time-specific effect by the corresponding time dummy variables, so that we can control for the effects of macroeconomic variables on the dividend decision. Third, since our models are estimated using data of several countries, we have also included country dummy variables (c_i). Finally, v_{it} is the random disturbance. The second issue that we can deal with by using the panel data methodology is the endogeneity problem. The endogeneity problem is likely to arise in that the dependent variable (payout ratio) may also explain some of the explanatory variables. Finally, we have checked for the potential misspecification of the models. First, we use the m_2 statistic, developed by Arellano and Bond (1991), in order to test for lack of second-order serial correlation in the first-difference residual. Tables III.5, III.6, III.7, and III.8 show that there is no a problem of second-order serial correlation in our models (see m_2). Note that although there is first-order serial correlation (see m_1), this is caused by the first-difference transformation of the model and consequently, it does not represent a specification problem of the models. In second place, our results in Tables III.5, III.6, III.7, and III.8 provide good results for the following three Wald tests: z_1 is a test of the

joint significance of the reported coefficients; z_2 is a test of the joint significance of the time dummies; and z_3 is a test of the joint significance of the country dummies.

Table III.5

Estimation results of the basic model

	I
Constant	-.36405* (.01820)
FCF_{it}	.12729* (.02933)
D_{it}	.00847 (.01817)
NI_{it}	.20477* (.05143)
$TANG_{it}$	.03098** (.01202)
S_{it}	.00398* (.00146)
CAT_{it}	.01436* (.00268)
z_1	63.08 (6)
z_2	669.39 (12)
z_3	10.88 (11)
m_1	-5.37
m_2	-0.65

The regressions are performed by using the panel described in Table III.2. The variables are defined in Table III.3. The rest of the information needed to read this table is: i) Heteroskedasticity consistent asymptotic standard error in parentheses. ii) *,** and *** indicate significance at the 1%, 5% and 10% level, respectively; iii) z_1, z_2 and z_3 are Wald tests of the joint significance of the reported coefficients, of the time dummies and of the country dummies, respectively, asymptotically distributed as χ^2 under the null of no significance, degrees of freedom in parentheses; iv) m_i is a serial correlation test of order i using residuals in first differences, asymptotically distributed as N(0,1) under the null of no serial correlation.

Table III.6

Estimation results of the moderating role of the legal protection of investors

	I	II	III	IV	V	VI
Constant	-.3679* (.01495)	-.3599*(.01563)	-.3859* (.01575)	-.3608* (.01675)	-.3596* (.01615)	-.3557* (.01645)
FCF_{it}	.06793* (.01945)	.12132* (.02411)	.13536 * (.02740)	.13873* (.02679)	.10148* (.02534)	.12884* (.02588)
D_{it}	.03071* (.00987)	.02842*** (.01526)	.01258 (.01574)	.00541 (.01663)	.01507 (.01623)	.00769 (.01637)
NI_{it}	.37866* (.01736)	.29814* (.03813)	.19761 * (.04509)	.25902* (.04492)	.32389* (.04306)	.27232* (.04278)
$TANG_{it}$	.01139 (.00997)	.01225 (.00941)	-.00669 (.00976)	.01887*** (.01663)	.02429** (.01038)	.02441** (.01063)
S_{it}	.00393* (.00118)	.00437* (.00125)	.00320 * (.00126)	.00449* (.00134)	.00446* (.00128)	.00469* (.00131)
CAT_{it}	.01316* (.00234)	.01444 *(.00242)	.00856 ** (.00357)	.03954* (.00420)	.01605* (.00238)	.02157* (.00252)
$CAT_{it}DV_{it}$	-.00794* (.00269)	-.01916* (.00418)	.01219 * (.00426)	-.03863* (.00470)	-.00747** (.00379)	-.02078* (.00377)
t	3.66	-1.34	7.91	.378	2.61	.255
z_1	237.24 (7)	60.77 (7)	50.14 (7)	76.78 (7)	68.34 (7)	67.01 (7)
z_2	1001.58 (12)	776.19 (12)	794.46 (12)	736.00 (12)	748.03 (12)	771.93 (12)
z_3	14.05 (11)	17.15 (11)	10.83 (11)	9.20 (11)	11.23 (11)	8.69 (11)
m_1	-5.33	-5.35	-5.31	-5.36	-5.34	-5.35
m_2	-.66	-.65	-.60	-.58	-.66	-.65

The regressions are performed by using the panel described in Table III.2. DV_{it} is a dummy variable that takes the following values: a) 1 for common law countries and 0 for civil law countries in Column I; b) 1 if the index of anti-director rights is above the sample mean, and 0 otherwise in Column II; c) 1 if the index of creditor rights is above the sample mean, and 0 otherwise in Column III; d) 1 if the index of enforcement is above the sample mean, and 0 otherwise in Column IV; e) 1 if the index of protection investor is above the sample mean, and 0 otherwise in Column V; f) 1 if the index of effective protection investor is above the sample mean, and 0 otherwise in Column VI. Note these indices are defined in Table III.4. The remainder of the variables is defined in Table III.3. The rest of the information needed to read this table is: i) Heteroskedasticity consistent asymptotic standard error in parentheses. ii) *,** and *** indicate significance at the 1%, 5% and 10% level, respectively; iii) t is the t-statistic for the linear restriction test under the null hypothesis of no significance; iv) z_1, z_2 and z_3 are Wald tests of the joint significance of the reported coefficients, of the time dummies and of the country dummies, respectively, asymptotically distributed as χ^2 under the null of no significance, degrees of freedom in parentheses; v) m_i is a serial correlation test of order i using residuals in first differences, asymptotically distributed as N(0,1) under the null of no serial correlation.

Table III.7

Estimation results of the moderating role of the development of capital markets and the contestability of market for corporate control

	I	II	III	IV	V	VI
Constant	-.3484* (.01595)	-.3512* (.01587)	-.3613* (.01582)	-.3555* (.01679)	-.3905* (.01657)	-.3377* (.01949)
FCF_{it}	.11946* (.02248)	.12954* (.02284)	.10996* (.02705)	.13621* (.02608)	.15493* (.02696)	.09933* (.03591)
D_{it}	.01376 (.01609)	-.00014 (.01592)	.00484 (.01598)	.00696 (.01632)	.01134 (.01668)	-.00503 (.02066)
NI_{it}	.31572* (.03523)	.27864* (.03616)	.24288* (.04599)	.26625* (.04458)	.27255* (.04340)	.27516* (.04952)
$TANG_{it}$	.02397** (.01066)	.02231** (.01051)	.02082** (.01052)	.02271** (.01077)	.01625 (.01052)	.02174*** (.01316)
S_{it}	.00550* (.00127)	.00549* (.00125)	.00442* (.00126)	.00475* (.00135)	.00222** (.00133)	.00652* (.00157)
CAT_{it}	.01677* (.00322)	.02532* (.00344)	.01989* (.00362)	.02996* (.00380)	.00186 (.00339)	.01379* (.00354)
$CAT_{it}DV_{it}$	-.01241* (.00321)	-.02218* (.00342)	-.01089* (.00409)	-.02529* (.00422)	.02015* (.00414)	-.01087* (.00365)
t	3.52	2.54	3.72	2.12	8.16	1.68
z_1	88.82 (7)	86.41 (7)	50.66 (7)	73.15 (7)	71.31 (7)	35.62 (7)
z_2	729.74 (12)	733.92 (12)	795.53 (12)	746.80 (12)	747.24 (12)	599.22 (12)
z_3	12.81 (11)	12.26 (11)	11.29 (11)	9.78 (11)	14.53 (11)	8.73 (11)
m_1	-5.37	-5.36	-5.29	-5.36	-5.39	-5.30
m_2	-.64	-.61	-.60	-.59	-.73	-.65

The regressions are performed by using the panel described in Table III.2. DV_{it} is a dummy variable that takes the following values: a) 1 if the country is classified as a market-oriented system and 0 if it is considered a bank-oriented system in column I; b) 1 if the index of market capitalization to GDP is above the sample mean, and 0 otherwise in Column II; c) 1 if the index of total value traded to GDP is above the sample mean, and 0 otherwise in Column III; d) 1 if the index of market development is above the sample mean, and 0 otherwise in Column IV; e) 1 if the index of banking development is above the sample mean, and 0 otherwise in Column V; f) 1 in countries where an active market for corporate control exists, and 0 otherwise in Column VI. Note these indexes are defined in the Table III.4. The remainder of the variables is defined in Table III.3. The rest of the information needed to read this table is: i) Heteroskedasticity consistent asymptotic standard error in parentheses. ii) *,** and *** indicate significance at the 1%, 5% and 10% level, respectively; iii) t is the t-statistic for the linear restriction test under the null hypothesis of no significance; iv) z_1, z_2 and z_3 are Wald tests of the joint significance of the reported coefficients, of the time dummies and of the country dummies, respectively, asymptotically distributed as χ^2 under the null of no significance, degrees of freedom in parentheses; v) m_i is a serial correlation test of order i using residuals in first differences, asymptotically distributed as N(0,1) under the null of no serial correlation.

Table III.8

Estimation results of the moderating role of certain institutional characteristics (ownership concentration, independent director of boards and corporate governance)

	I	II	III
Constant	-.3672* (.01588)	-.3583* (.01653)	-.3521* (.01572)
FCF_{it}	.14382* (.02653)	.10286* (.02575)	.10385* (.02473)
D_{it}	.01557 (.01538)	.00411 (.01672)	.01277 (.01554)
NI_{it}	.20439* (.04186)	.32892* (.04299)	.28613* (.03674)
$TANG_{it}$	.00343 (.01039)	.03195* (.01079)	.01077 (.01057)
S_{it}	.00444* (.00127)	.00430* (.00131)	.00554* (.00125)
CAT_{it}	.00774* (.00178)	.00329 (.00318)	.01755* (.00287)
$CAT_{it}DV_{it}$	.01097* (.00368)	.01228* (.00370)	-.01451* (.00294)
t	5.62	6.28	2.31
z_1	51.83 (7)	67.20 (7)	60.92 (7)
z_2	746.82 (12)	749.29 (12)	780.82 (12)
z_3	11.39 (11)	10.55 (11)	12.31 (11)
m_1	-5.32	-5.35	-5.32
m_2	-.60	-.66	-.62

The regressions are performed by using the panel described in Table III.2. DV_{it} is a dummy variable that takes value 1 if the index of ownership concentration is above the sample mean, and 0 otherwise in Column I. In column II, DV_{it} is a dummy variable that takes value 1 for countries with a predominant two-tier board or when non-executive directors represent a significant proportion on boards and 0 otherwise. DV_{it} is a dummy variable that takes value 1 if the index of corporate governance is above the sample mean, and 0 otherwise in Column III. The indexes of the column 1 and 3 are described in the Table III.4. The remainder of the variables is defined in Table III.3. The rest of the information needed to read this table is: i) Heteroskedasticity consistent asymptotic standard error in parentheses. ii) *,** and *** indicate significance at the 1%, 5% and 10% level, respectively; iii) t is the t-statistic for the linear restriction test under the null hypothesis of no significance; iv) z_1, z_2 and z_3 are Wald tests of the joint significance of the reported coefficients, of the time dummies and of the country dummies, respectively, asymptotically distributed as χ^2 under the null of no significance, degrees of freedom in parentheses; v) m_i is a serial correlation test of order i using residuals in first differences, asymptotically distributed as N(0,1) under the null of no serial correlation.

III.3 Results

In this section, we first present the results of model in equation (1), which includes the explanatory variables that have been traditionally considered as determinants of a firm's payout ratio at the same time that they also incorporate a variable capturing investors' sentiment, that is, the catering variable. We then extend this model, and we test the implications of the catering theory by means of some

institutional variables, particularly variables capturing investors' protection, development of capital markets and the orientation of the financial systems, contestability of the market for corporate control, the level of ownership concentration, the effectiveness of boards of directors and corporate governance.

III.3.1 Results of the basic and extended models

The results of the GMM estimation of our basic model in (1) are provided in the Column I of Table III.5. The level of a firm's free cash flow positively affects its payout ratio, consistent with Jensen's (1986) theory. The coefficient of leverage is not significant. Consistent with Lintner (1956), the positive relationship between a firm's earnings and its predicted payout ratio is confirmed by our results. Regarding the nature of the firm's assets, our results show that firms with more tangible fixed assets have larger payout ratios. Finally, we find a positive coefficient on size, according to which larger companies pay higher dividends, consistent, for instance, with Fama and French (2001) or more recently, Denis and Osobov (2008).

Regarding the influence of a firm's investors' sentiments on its payout ratio, the positive coefficient of the catering variable confirms the link between the propensity to pay dividends and catering incentives, consistent with Baker and Wurgler (2004b). Our result suggests that firms cater to their investors' preferences, so that they are more prone to increase payout ratios when investors exhibit a preference for dividend-paying stocks.

III.3.2 The moderating role of institutional variables

Once the existence of a catering effect has been corroborated by our results, we go a step forward and investigate whether or not the institutional context moderates this effect.

Columns I to VI of Table III.6 report the results of the model including the interaction of catering with investor protection. Column I shows the interaction of catering with a dummy variable, which takes value 1 for common law countries and value 0 for civil law countries. As can be seen, the catering effect in civil law countries (γ_6=0.01316) is stronger than the one in common law countries ($\gamma_6+\lambda$=0.0052, significantly different from zero, see t). This result corroborates that the stronger the legal protection of investors, the smaller the extent to which firms cater to their investors' sentiments, supporting the substitute model by La Porta et al. (2000a).

The results in columns II to VI confirm this finding by using other investor protection dummies, such as anti-director rights, creditor's rights, enforcement, protection investor and effective protection investor.[58]

The interaction of the catering effect and development of capital markets/market-oriented systems is tested in the models presented in Columns I to V of Table III.7. In this case, as shown in column I, DV_{it} takes value 1 if the country is classified as a market-oriented system and 0 if it is considered a bank-oriented system. This way, the coefficient of the catering variable is γ_6 for countries considered a bank-oriented system (since DV_{it} takes value zero), and $\gamma_6+\lambda$ for firms considered a market-

[58] Column II shows the interaction of catering with a dummy variable which takes value 1 if the index of anti-director rights is above the sample mean and 0 otherwise; column III shows the interaction of catering with a dummy variable which takes value 1 if the index of creditors rights is above the sample mean and 0 otherwise; column IV shows the interaction of catering with a dummy variable which takes value 1 if the index of enforcement is above the sample mean and 0 otherwise; column V shows the interaction of catering with a dummy variable which takes value 1 if the index of protection investor is above the sample mean and 0 otherwise and finally, the interaction of the catering effect and effective protection investor is tested in the model presented in Column VI of Table III.6 with a dummy variable which takes value 1 if the index of effective protection investor is above the sample mean and 0 otherwise.

oriented system (since DV_{it} takes value one). As can be seen, the catering effect in countries considered bank-oriented systems (γ_6=0.01677) is stronger than the one in countries considered market-oriented systems ($\gamma_6+\lambda$=0.0044, significantly different from zero; see t). As shown in the column I of Table III.7, our evidence does not support Hypothesis 2; however, our evidence suggests that in countries considered a bank-oriented system, managers are more encouraged to cater to a large extent to investors' demand for dividends, confirming once more the substitute model by La Porta et al. (2000a).

The results in columns II to V of Table III.7 corroborate the same conclusions by using other dummies of development of capital markets, such as market capitalization to GDP, total value traded to GDP, market development and banking development.[59]

We next investigate the interaction between the catering effect and the contestability of market for corporate control by estimating the model presented in Column VI of Table III.7. In this case, DV_{it} takes value 1 in countries with effective markets for corporate control, and 0 otherwise. As can be seen, the catering effect in countries where there is less contestability in market for corporate control (γ_6=0.01379) is stronger than the one in countries where an active market for corporate control exists ($\gamma_6+\lambda$=0.0029, significantly different from 0; see t). These results are very similar to those obtained for the previous hypotheses and corroborate that the more active the market for corporate control is, the smaller the extent to which firms cater to their investors' sentiments.

[59] Column II shows the interaction of catering with a dummy variable which takes value 1 if the index of market capitalization to GDP is above the sample mean and 0 otherwise; column III shows the interaction of catering with a dummy variable which takes value 1 if the index of total value traded to GDP is above the sample mean and 0 otherwise; column IV shows the interaction of catering with a dummy variable which takes value 1 if the index of market development is above the sample mean and 0 otherwise; the interaction of the catering effect and development of capital markets is tested in the model presented in Column V of Table III.7 with a dummy variable which takes value 1 if the index of banking development is above the sample mean and 0 otherwise.

Column I of Table III.8 reports the results of the model, including the interaction of catering with ownership concentration. Ownership concentration may be a monitoring mechanism, as it can be a bonding device triggering corporate control actions. Therefore, higher levels of ownership concentration may translate into higher dividends. As shown in column I, DV_{it} takes value 1 if the index of ownership concentration is above the sample mean and 0 otherwise. As can be seen, the catering effect in countries with high levels of ownership concentration ($\gamma_6+\lambda=0.01871$, significantly different from 0; see t) is stronger than the one in countries with low levels of ownership concentration. It seems that catering incentives (i.e., investors' preference for dividend-paying stocks) manifest more strongly in firms with more concentrated patterns, corroborating the monitoring effect.

The interaction of the catering effect and independent boards is tested in the model presented in Column II of Table III.8. In this case, DV_{it} takes value 1 for countries with a predominant two-tier-board or when non-executive directors represent a significant proportion on boards and 0 otherwise. As shown in the table, there is no effect of a firm's investors' sentiments on its payout ratio when the firm has poor executive and supervisory boards (γ_6 not significantly different from zero). However, the effect is positive and significant for firms with predominant two-tier-boards characterized by the existence of two bodies, which guarantees that the supervisory board is separated from and independent of management ($\gamma_6+\lambda=\lambda=0.01228$, significantly different from 0; see t), which confirms that, as expected, the catering effect in countries with a predominant two-tier-board or when non-executive directors represent a significant proportion on boards is stronger than the one in countries where this monitoring device is poor.

These results point out that the expected catering effect clearly manifests itself when there are independent boards in the firm.

Finally, we investigate the interaction between the catering effect and the corporate governance index by estimating the model presented in Column III of Table III.8. In this case, DV_{it} takes value 1 if the corporate governance index is above the sample mean, and 0 otherwise. As can be seen in the table, the coefficient of the catering variable (γ_6=0.01755) is larger for firms with weak corporate governance than the one for firms with stronger corporate governance ($\gamma_6+\lambda$=0.00304, significantly different from 0). Our evidence suggests that investors' demand for dividends translates into higher payout ratios in firms that operate in countries with weak governance. It is worth highlighting that the results of this aggregated index of corporate governance make the legal influence prevail. In other words, the substitute model is supported once again in that this last result suggests that the weaker the governance in a country, the higher the need to cater to investors' sentiments regarding the payment of dividends. This evidence is consistent with the notion that firms adopt a policy of paying dividends under pressure to reduce agency costs, and is consistent with, for instance, Harford, Mansi and Maxwell (2008), who report that firms with weak governance (shareholders' rights) hold lower cash reserves and are more likely to pay dividends.[60]

Overall, this evidence provides an excellent robustness check for the results of the basic and extended models, since the sign of the coefficients of both the traditional explanatory variables and the catering variables remain identical once we control for the moderating role of certain institutional variables.

[60] See also Hu and Kumar (2004), who find that the likelihood and level of dividend payouts is increasing when factors such as managerial and outside blockholder ownership, CEO compensation policy, and board independence indicate a high likelihood of managerial entrenchment and high agency costs.

III.4 Conclusions

This piece of our study provides a test of the predictions of the catering theory of dividends by proposing a new approach for analyzing the effect that investors' sentiments exert on corporate dividend policy.

Our results show that investors' sentiments impact the payout ratios in Eurozone countries, the US, the UK, Canada and Japan after controlling for traditional determinants of dividends, such as the free cash flow, leverage, earnings, tangible fixed assets and size. This finding seems to indicate that dividend policies are driven to some extent by investors' sentiments, thus revealing the desire of firms' managers to cater to such preferences. Therefore, our evidence provides empirical support for the existence of a physiological component in the decision to pay, as proposed by the catering theory.

Our analysis has several policy implications that are particularly relevant, allowing the possibility to better understand the implications of catering incentives for dividends by examining the moderating role played by certain institutional variables. This idea has not been accounted for in prior studies, either theoretically or empirically, but our findings corroborate that the way in which investors appreciate dividend payments depends on the internal and external corporate governance mechanisms. In fact, our research makes a further check to see which institutional variables moderate dividend payout to managers' action to cater.

We trace firm-level corporate governance practices in fifteen countries around the world, and in our empirical tests, we find that the higher a firm's ownership concentration and independence of boards of directors, the better the fit of dividends to investors catering incentives. Our evidence also provides empirical support that external mechanisms are important to force firms to disgorge cash within the predictions of the

substitute model. This suggests that the dividend payout is more important to investors when their level of investor protections is low.

According to our evidence and the substitute model, dividend payments can be a substitute for other characteristics because poorly-governed firms need alternative ways of establishing a reputation for acting in the interests of shareholders if they intend to raise capital from markets in the future; hence a policy of paying dividends is the most valuable at the margin to firms with agency problems.

In fact, our results suggest the presence of a more general phenomenon of the catering effect in companies with a high quality of internal corporate governance mechanisms. It is important to recognize that this view relies on the assumption that managers are more encouraged to cater to a large extent to investors' preferences for dividend-paying stocks in those firms with more efficiency and independence in the boards of directors and with higher ownership concentration by the three largest shareholders. Our evidence points out that the joined measure used in ownership concentration is in favor of a manager monitoring role for dividends. Therefore, the institutional context plays a key role in explaining managers' catering behavior and consequently firms' dividend policy.

CHAPTER IV

OWNERSHIP STRUCTURE AND CATERING THEORY OF DIVIDENDS: EVIDENCE FROM EUROZONE COUNTRIES

Introduction

Since the early 1980s a great number of papers have offered alternative explanations to disentangle the role played by corporate ownership structure in determining corporate dividend policy (see, for instance, Baker, Stein and Wurgler, 2003). Dividends have been a bit of a puzzle in the theory of the firm since Miller and Modigliani (1961), and many scholars have tried to give alternative explanations for dividends in imperfect markets. In fact, existing research has had some success in explaining dividend payouts through a variety of market imperfections such as agency problems (see, for example, Easterbrook, 1984; Jensen, 1986; La Porta et al., 2000a; or Gugler, 2003), informational asymmetries (see, for example, Talmor, 1981; Miller and Rock, 1985; Dewenter and Warther, 1998; Baker, Stein and Wurgler, 2003), and taxes (see, for example, Lasfer, 1996; Amihud and Murgia, 1997; Bell and Jenkinson, 2002; Rau and Vermaelen, 2002; Oswald and Young, 2004 or Morck and Yeung, 2005).

Our study asserts agency-cost explanations of corporate payout policy and behavioral considerations as a starting point for explaining the catering theory of dividends on different ownership structures across Eurozone countries.[61] According to agency theories, those who control the firm are tempted to do what is in their own best

[61] Prior studies have provided significant insights into how agency conflicts affect a firm's payout policy. See, for instance, Fenn and Liang (2001), and Michaely and Roberts (2007) for US firms; and La Porta et al. (2000a), and Faccio, Lang and Young (2001) for cross- country analyses.

interests (Pinkowitz, Stulz and Williamson, 2006, p. 2725). When corporate governance works well, managers are more likely to act in the interests of shareholders and pursue value-maximizing policies; that is, corporate decisions are made to increase shareholders' wealth.

In contrast, with poor corporate governance, the dominant shareholder has greater ability to expropriate resources that would have been otherwise shared with minority owners; that is, he can obtain substantial private benefits from control at the expense of minority shareholders (see, for instance, Nenova, 2003; Dyck and Zingales, 2004, Dahya, Dimitrov and McConell, 2008). Several empirical studies have tried to determine the exact role played by ownership structures in the decision making process concerning corporate dividend policy. However, the evidence is mixed.[62] The idea that dividends play a role in corporate governance is introduced by Easterbrook (1984) and Jensen (1986). Easterbrook (1984) argues that firms pay dividends to help reduce the agency costs associated with the separation of ownership and control. In fact, managers prefer to retain earnings to increase private consumption, because by paying dividends they must raise funds more frequently in the capital markets, where they are subjected to the scrutiny and the disciplining effects of the market. Jensen (1986) advocates a similar agency-theory argument, according to which dividend payments reduce free cash flow under insiders' discretion.[63] Higher dividends achieve a cost-effective substitute to the shareholder. Rozeff (1982), Lang and Litzenberger (1989), Jensen, Solberg and Zorn (1992), and Agrawal and Jayaraman (1994) provide empirical support for these agency explanations for paying dividends. As point out by Fama and French

[62] Recently researchers have investigated the interaction between dividend policies and various ownership characteristics of public firms, and find mixed results. See, for example, Fenn and Liang (2001), Perez-Gonzalez (2003), Grinstein and Michaely (2005), Graham and Kumar (2006), and Brown, Liang and Weisbenner (2007), among others.

[63] Baker, Powell and Veit (2002a) focus on the managerial perspectives dividend policy to show that managers of NASDAQ firms strongly believe that dividend policy matters. In other words, dividend policy influences stock prices. This result is inconsistent with the irrelevance proposition of Miller and Modigliani (1961), and is explained by the imperfections of the market.

(2001), the agency control function of corporate payout is linked to the severity of the manager-shareholder conflict. Jensen and Meckling (1976) and Shleifer and Vishny (1986), among others, identify the importance of agency problems in analyzing the ownership structure and value of corporations. One dimension of conflict in a corporate setting is the link between insiders (i.e., managers) and outside shareholders.

Rozeff (1982) was among the first to explicitly recognize the role of insiders as one of monitoring the managers. Consistent with this view, the literature offers two competing hypotheses regarding this relationship: on one hand, managerial ownership can be used for the alignment of interests between managers and shareholders, however, the relationship between insiders and the alignment of shareholder and managerial interests may be non-monotonic, as suggested by Morck, Shleifer and Vishny (1988), Farinha (2003) or Pindado and de la Torre (2006).[64] This close link is not a monotonous relationship, since it may combine a convergence effect at lower levels of managerial ownership with an entrenchment effect at higher levels of manager ownership.

The role of large owners in the economy is also one of the most important topics in recent research on the relationship between dividends and ownership around the world. In fact, the divergence of interests of managers and owners can be reduced through the monitoring exerted by large shareholders (Shleifer and Vishny, 1986; Jensen and Murphy, 1990; Maug, 1998). In short, large owners may play a valuable role in reducing the original agency problem between shareholders and managers because a concentrated ownership solves the free-riding problem characterizing dispersed structures. The relevant consequence of financial discipline is that fewer resources are consumed in low return projects and more cash flows can thus be distributed as dividends. However, recent research has emphasized that large blockholdings give rise

[64] Studies for the UK show that there is a negative relationship between insider ownership and dividends. See, for instance, Short, Zhang and Keasey (2002); Farinha (2003), and Renneboog and Trojanowski (2006).

to a second agency problem between controlling owners and minority shareholders.[65] In this case the relationships between large shareholders and dividend decisions cannot be positive because the expropriation hypothesis predicts that the high level of ownership concentration increases the propensity for expropriation of minority shareholders by large shareholders. As argued by Shleifer and Vishny (1997), when large shareholders gain nearly full control, they start generating private benefits of control that are not shared with minority shareholders.

On the international front, La Porta et al. (2000a) provide a cross-country comparison from 33 countries and find that dividend differ consistent with a particular version of the agency theory of dividends. Specifically, they show that in Continental Europe where ownership structures are more likely to be concentrated, dividend payouts are generally lower and more flexible than in the Anglo-Saxon countries.[66] However, despite the global importance of the European Union,[67] very little published research has examined ownership structures and dividend payout across Europe. As far as we know, the most recent studies are single-country analyses, such as Crespi (1997) and Miguel, Pindado and de la Torre (2005) for Spain; Maury and Pajuste (2002) for Finland; Gugler (2003) for Austria; Gugler and Yurtoglu (2003) for Germany; Ginglinger and L'Her (2006) for France; and Renneboog and Szilagyi (2007) for the Netherlands, among others.[68] Building on the agency framework developed by Jensen and Meckling (1976), a number of authors suggest that a higher equity ownership by

[65] See, for instance, Shleifer and Vishny (1997), La Porta, Lopez-de-Silanes and Shleifer (1999), Claessens, Djankov and Lang (2000), Faccio and Lang (2002), Becht, Bolton and Röell (2003), or Farinha (2003), who suggest that the relevant agency problem is not the one between corporate managers and shareholders but rather between controlling shareholders and minority shareholders.

[66] This finding is supported by the lower cash holdings of better-governed firms reported in Dittmar, Mahrt-Smith and Servaes (2003), and more recently, in Dittmar and Mahrt-Smith (2007).

[67] Note that a considerable amount of research has examined the influence of ownership and control structures on firms' financing decisions and performance in United States and United Kingdom.

[68] Some authors, for instance, La Porta et. al, (2000a), Thomsen (2005), Chay and Suh (2006), or Pinkowitz, Stulz and Williamson (2006), Denis and Osobov (2008), and von Eije and Megginson (2008) study this subject for more than a country; however, for a reduced number of countries of Eurozone.

controlling shareholders enhances their interest in non-distortionary distribution of dividends (Filatotchev et al., 2001; La Porta et al., 2000a).[69] When expropriation of private benefits of control involves costs, an increase in the size of the equity stake of a large block shareholder would reduce the marginal benefits of expropriation (see Bennedsen and Wolfenzon, 2000; Claessens et al., 1999, for a discussion). Maury and Pajuste (2002) examine the relationship between controlling shareholders and dividend policy for Finnish listed firms, and they show that dividend payout ratio is negatively related to the control stake of the controlling shareholder. Their results suggest evidence for the existence of private benefits of control by strong blockholders. Moreover, Gugler and Yurtoglu (2003) argue that in countries characterized by high ownership concentration, the case of Eurozone countries in our study, the conflict between large and controlling owners and small outside shareholders is one of the main issues in corporate governance. An increase in dividends reduces the funds at the discretion of the controlling shareholder and increases the market value of the firm. A decrease in dividends potentially implies more severe rent extraction and expropriation of small shareholders.[70] Concretely, they show for German firms that dividend payout ratios decrease in the equity share of the largest shareholder and report that lower dividend payout of majority controlled firms is related to the probability that controlling shareholders extract private benefits at the expense of minority shareholders; that is, an increase on dividends implies less cash available for expropriation and therefore a positive abnormal return.

[69] Private benefits of control by dominant owners are the focus of Grossman and Hart (1988), Modigliani and Perotti (1997), Bebchuck (1999), Bebchuck, Kraakman and Triantis (2000), Shleifer and Wolfenzon (2002), Almeida and Wolfenzon (2006), among others.

[70] An example of one concrete industry is demonstrated for Hansen, Kumar and Shome (1994), who show that payout ratios of electric utilities respond in much the same fashion as unregulated firms when the concentration of ownership changes. Their findings suggest that as the concentration of ownership increases, the level of monitoring increases and the need for a higher dividend payout decreases.

Overall, this prior research reveals that ownership structures impact firms' dividend decisions.

Since the distribution of power within the company is reflected in a firm's dividend policies, we expected that the investors' perceptions of it impact payout ratio. In fact, recent developments in financial literature provide a new related theory of dividends, i.e., that dividend policy is related to catering towards investor demands (Baker and Wurgler, 2004a). The propensity of firms to pay dividends seems to vary over time and these authors with their new explanation for dividends suggest that the time varying preferences of investors are the main driver behind this. According to this new theory, when investors' demand for payouts increases, firms are more likely to increase payouts.

Recent studies (see, among others, Brown and Cliff, 2004, 2005; Lai, 2004; Fairchild and Zhang, 2005; Gemmil, 2005; Ferris, Sen and Yui, 2006; Kumar and Lee, 2006; Li and Lie, 2006; Zhang, 2006; Denis and Osobov, 2008; and Hoberg and Prabhala, 2009) show that this new theory can be decisive in the resolution of the dividend puzzle through investors' sentiments. Furthermore, a related strand of the recent behavioral literature focuses directly on developing measures of sentiment and relating these to expected stock return (see, for instance, Brown and Cliff, 2005; Baker and Wurgler, 2006, 2007; Lemmon and Portniaguina, 2006, or Qiu and Welch, 2006). There is also literature, although much scarcer and conflicting, which refers to the importance of the ownership characteristics for a firm's payout. Richardson, Teoh and Wysocki (2001) find that earnings-guidance (a form of investor relations) is more prominent for firms whose insiders sell stocks from their personal accounts after earnings announcements; Ferris, Narayanan and Sanjiv (2008) show that catering is an important factor in explaining the differences in dividend policies across countries and

find that measures of shareholder empowerment, such as the level of anti-director rights and the extent of equity ownership concentration, influence dividend catering.

Although there is no previous evidence, as far as we know, on what we are studying, there are strong arguments that lead us to argue that investors' preference for dividend-paying stocks change according to the above-mentioned ownership characteristics. Under the influence of this prior research, we go a step further and we investigate whether or not a firm's ownership characteristics moderate the extent to which firms cater to their investors' sentiments. In this piece of work we provide new empirical evidence by examining whether corporate ownership shapes the implications of this theory by determining managers' incentives to behave according to its predictions.

The remainder of this chapter is organized as follows: In Section IV.1, we describe the main ownership characteristics that impact on dividend payout and summarize previous empirical evidence on this matter; we also report evidence on catering theory of dividends and how we posed our hypotheses. Section IV.2 describes the data and our model of dividends and discusses the estimation method. The results are discussed in Section IV.3 and, finally, the concluding remarks are presented in Section IV.4.

IV.1 Theories and hypotheses

In this section, we first summarize the main contributions from previous research to the debate on the impact of ownership structures on dividend payments for better understanding the ownership structure on the catering theory of dividends. We

next discuss the key arguments of ownership structure on the catering theory of dividends and review previous evidence on the matter in order to pose our hypothesis. Note that to investigate this prediction empirically, and to get a step ahead of the intrinsic effect of investor sentiment, we start with a summary of the rises and falls of dividends payout with ownership characteristics, specifically managerial ownership, and ownership concentration.

IV.1.1 Managerial Ownership and Dividend Payout

Several earlier studies have argued, from an agency perspective, that corporate payout is generally viewed as a control device that helps reduce managerial discretion, and as such, it is part of the firm's optimal monitoring. That is, the agency control function of dividend payout is linked to the severity of the manager-shareholder conflict. Rozeff (1982) reports that companies with more managerial participation pay fewer dividends. He shows that insider ownership provides direct incentives of alignment between managers and shareholders while dividends serve as a mechanism that reduces the managers' propensity to make unprofitable investments out of internal funds. The results of Lloyd, Jahera and Page (1985); Moh'd, Perry and Rimbey (1995), and Holder, Langrehr and Hexter (1998) also show this negative relationship between dividends and managerial ownership.

In fact, there is extensive theoretical and empirical research on how managerial ownership influences dividend decisions.[71] For instance, the signaling models for paying dividends, developed by Bhattacharya (1979), John and Williams (1985), and Miller and Rock (1985), suggest that managers as insiders choose dividend payment levels and dividend increases to signal private information to investors. The traditional

[71] See, for instance, Lambert, Lanen and Larcker (1989); Jolls (1998); Weisbenner (2000); Bettis, Bizjak and Lemmon (2001), Fenn and Liang (2001), Kahle (2002); Hu and Kumar (2004) or Brown, Liang and Weisbenner (2007), among others.

agency theories, such as Jensen and Meckling (1976), Easterbrook (1984), and Jensen (1986), implicitly assume that any managerial entrenchment (more power to insiders) is undesirable because entrenched managers will always behave in ways that are costly to shareholder wealth.[72] Jensen and Meckling (1976), for instance, suggest that managers have a natural tendency to allocate the firm's resources in their own best interests; hence the payment of dividends reduced the agency problem between manager and shareholder by reducing the discretionary funds available to managers. Managers may opt not to use the firm's resources in ways that increase shareholder returns, but squandering excess cash flow by investing in unprofitable projects, perquisites consumption, or other sort of value-destroying behavior.

More recently, the evidence also suggests an inverse relation between managerial stock ownership and dividends. An increase in dividend payout will reduce the need for managerial ownership to control agency problems and it is expected that dividend payout ratio is inversely related to the level of managerial ownership.[73] Gugler and Yurtoglu (2003) find a large negative effect of announced dividend changes in German companies where corporate insiders have more power.

In fact, if on one side managerial ownership can be used for the alignment of interests between managers and shareholders, on the other side, the augmentation of managerial ownership constitutes a means of empowerment of managers, giving them the opportunity to serve their personal interests, as it contributes to the reduction of the strict control imposed by shareholders; in other words, that is designated in the financial literature for management entrenchment hypothesis (see, for instance, Weston, 1979;

[72] Stulz (1988, 1990); Shleifer and Vishny (1997); Claessens et al. (2002), and La Porta et al. (2002), show that ownership structures can affect corporate policies and firm value in the context of managerial entrenchment.

[73] See, for instance, Jensen, Solberg and Zorn (1992); Agrawal and Jayoraman (1994). They find that if the insider owners hold the major shares of the company then management naturally prefers not to declare more dividends, then, the level of managerial stock ownership has a negative impact on firms' dividend levels.

Fama and Jensen, 1983 or Demsetz, 1983).[74] As a result, dividend policy depends on the level of managerial ownership. In this vein of research, Schooley and Barney (1994) find a significant non-linear relationship between managerial ownership and dividends in US firms. Morck, Shleifer and Vishny (1988) argue that when managers control a substantial fraction of the firm's equity, the entrenched managers may be more inclined to consume perquisites. Also, Short, Zhang and Keasey (2002) and Farinha (2003) show a strong U-shaped relationship between dividend payouts and insider ownership for UK firms. In a similar fashion, as documented by Pindado and de la Torre (2006), insiders may offset their lower potential of shirking by increasing the amount of dividends they receive through share ownership. Those authors also find that initial increases in insider ownership result in a convergence of interests, while higher levels of insider ownership result in managerial entrenchment, showing a quadratic relation between dividends and insider ownership.

In fact, while the traditional agency theory suggests a uniformly negative relationship between managerial ownership and dividend payout ratio, the entrenchment theory proposes a non-monotonic relationship.[75] Thanh and Heaney (2007) argue from 37 countries around the world that firms are less likely to pay dividends and pay fewer dividends when the largest shareholder is an insider, suggesting that powerful insiders may impose low dividend policies upon the firm in order to increase the cash flow at their discretion. Finally, as Morck, Shleifer and Vishny (1988) and Stulz (1988) find when examining the relation between firm value and managerial ownership, perhaps the two hypotheses (alignment of interests and managerial entrenchment) interact, each one

[74] For example, Grossman and Hart (1988) document that large insiders may have a preference for retained earnings over dividends for rent extraction.

[75] Alford et al. (1993) and Ali and Hwang (2000) show that managerial entrenchment and the subsequent abuses of minority shareholders are more relevant in Continental European countries where the legal protection of minority shareholders is weak and firms often adopt anti-shareholder devices that violate the one-share-one-vote rule (La Porta et al., 1998). Others studies report that weak shareholder protection is associated with more severe expected agency costs of managerial entrenchment (see, for instance, La Porta et al., 2002; Claessens et al., 2002; Lins, 2003; Klapper and Love, 2004).

dominating in different ownership levels.[76] The relationship between dividends and managerial ownership may be positive across low levels of ownership, and this relationship could then turn out to be negative with higher levels of ownership.

Generally, as a result of previous literature, it is expected that for lower levels of managerial ownership, the ownership of shares by managers leads to the alignment of their interests with those of external shareholders, resulting in a high dividend payout ratio. For higher levels of managerial ownership, however, the ownership of shares by managers can lead to distortions in the operating decisions that they make, resulting in lower payout ratio.

IV.1.2 Ownership Concentration and Dividend Payout

In most Eurozone countries, firms often have large controlling shareholders. Then, in firms with a concentrated ownership structure, a conflict of interest arises between large and small shareholders (Burkart, Gromb and Panunzi, 1997; La Porta, Lopez-de-Sinales and Shleifer, 1999). Controlling shareholders may be efficient monitors, but like managerial ownership, they may also keep payout levels low to expropriate minority shareholders. As argued by Shleifer and Vishny (1997), large shareholders have a dual impact on firms, on one side, incentive to monitor management and on the other side, extract rents and enjoy private benefits of control.

In the vein of these arguments, the literature offers two competing hypotheses regarding this relationship. On one side, the expropriation hypothesis predicts that the high level of ownership concentration increases the propensity for expropriation of minority shareholders by large shareholders and that controlling shareholders with

[76] Morck, Shleifer, and Vishny (1988), and Stulz (1988) find a non-monotonic empirical relationship between management ownership and firm value. For studies on the relationship between ownership structures and firm value, see for example, Demsetz and Villalonga (2001), Gompers, Ishii and Metrick (2006), and Adams and Ferreira (2008).

substantial power adopt a policy that retains a larger amount of earnings that they can expropriate, resulting in lower payout. The substitution hypothesis is based on the assumption that firms need to raise external funds, and in order to sustain outside equity in the firm, the controlling shareholders establish a reputation for not expropriating wealth from minority shareholders by paying out more dividends. That is, the benefits of large shareholding can be summarized in terms of monitoring hypotheses. In agreement with these hypotheses, the largest shareholders make a basic paper in corporate governance by reducing agency costs. When a firm has free cash flows, managers cannot spend those amounts on unprofitable projects; they are forced to distribute these funds, resulting in higher dividend payouts. However, the presence of large shareholders with high stocks or controlling shareholders may be harmful to dividend payout. As discussed by Shleifer and Vishny (1997), when large shareholders have great control, they start generating private benefits of control that are not shared with minority shareholders. Then, the more important agency problem is expropriation of outside shareholders by the controlling shareholder (Kouki and Guizani, 2009). In fact, firms with large controlling shareholders may channel corporate resources to projects that generate utility for the controlling owners but provide few benefits to minority owners.

Based on the monitoring or expropriation hypotheses, there is much literature to show this relationship with the various financial decisions. Rozeff (1982) reports that companies with less dispersed ownership pay fewer dividends. Claessens et al. (2002), for instance, find stronger support for the view that firm value increases with cash-flow ownership of the largest shareholder.[77]

[77] See, for instance, Lemmon and Lins (2003) for an important research on ownership structure and firm value in East Asia. Likewise, Laeven and Levine (2004) shows for 13 Western European countries that over forty percent of the public firms with one large shareholder have two or more owners holding more than 10 percent of the voting rights each. Moreover, they show that firm value increases with the equity

In contrast, Shleifer and Vishny (1986) and Grossman and Hart (1980) argue in favor of a positive relationship between ownership concentration and dividends, leaning on the preference for the allotment of these largest shareholders, habitually companies, for tax reasons.[78] As suggested by Faccio, Lang and Young (2001), the presence of multiple owners might alleviate expropriation of minority shareholders by the controlling shareholder. However, they find that the presence of multiple large shareholders helps to limit the expropriation of minority shareholders by controlling shareholders in European firms, but exacerbates agency problem in East Asian firms. This implies a negative rather than positive relationship between multiple owners and dividend payouts.[79]

Maury and Pajuste (2002) examine the relationship between controlling shareholders and dividend policy for Finnish listed firms. They find that dividend payout ratio is negatively related to the control stake of the controlling shareholder. Moreover, their evidence supports the mitigating role of another large shareholder; they even report that the cumulative ownership of the three largest shareholders has a negative effect on dividend payout. They interpret this result as evidence for the existence of private benefits of control by strong shareholders.

Gugler and Yurtoglu (2003) analyze dividend announcements and dividend payout from German firms, focusing upon the large-small shareholder conflict. They

---

stake of a second large shareholder only if the gap in voting rights between the first and the second largest shareholder is small, as one would expect to occur in governance structures under shared control. These findings confirm the results by Volpin (2002), who document that 15 percent of the firms listed in the Milan Stock Exchange were controlled by large shareholders that entered into explicit agreements to vote as a block. More recently, and in the same vein of research, López-de-Foronda, López-Iturriaga and Bertin (2008) show, from 11 European countries, that existence of a controlling coalition in family-owned firms and the contestability of control of the largest shareholder affect the value of the family-owned firms

[78] For instance, Claessens et al. (1999) find that concentrated ownership contributes to higher profitability and market valuation. Thomsen and Pedersen (2000) find a high correlation between ownership share of the largest owner and the closely held shares measure.

[79] Wolfenzon (1999), and Faccio, Lang and Young (2001) argue that the possibility for expropriation is larger when the corporation is affiliated to a group of corporations, everything controlled by the same shareholder.

present interesting results consistent with the rent extraction hypothesis. Their results show that the market reacts more negatively when large, uncontrolled shareholders reduce the dividends they are willing to pay out to minority shareholders. Gugler and Yurtoglu (2003) also report that payout levels decrease in the power of the largest shareholder but increase in the power of the second-largest shareholder. This evidence suggests on the one hand that, if the first shareholder is sufficiently powerful, it withholds dividends to expropriate minority investors for its private benefit; on the other hand, it points to a considerable monitoring function of large shareholders other than the largest shareholder.

Correia da Silva, Goergen and Renneboog (2005) report that dividends should be lower in the presence of a large controlling shareholder, because they need not constitute an additional control device and would lead to unnecessary liquidity constraints. Studies by Khan (2006) indicate a similar negative relationship between the largest shareholder and dividends from UK firms using a dynamic panel data.[80]In contrast, Renneboog and Szilagyi (2007) report in Dutch firms that target payout ratios and the extent of dividend smoothing increase rather than decrease in the equity interest of the largest shareholder.

In general, the evidence is supportive of the hypothesis indicating that firms that have a strong controller tend to present lower payout ratios. This effect, for some authors, can be mitigated when there is a second block holder in the company.

IV.1.3 Ownership structure and dividend policy on catering theory

In the contemporary research concerning cross-section corporate governance, little has been said about the role which rapid fluctuations in investor sentiment can play

[80] Renneboog and Trojanowski (2006) find that in the UK payout levels are lowest in firms controlled by individual investors.

in shaping corporate ownership structures. The dominant topic in the literature has traditionally been on legal matters. However, recent works provide evidence that investor sentiment has explanatory power for the cross-section of stock returns (see, for instance, Baker and Wurgler, 2006), and motivated by these findings, we go a step further and empirically investigate whether or not investors' preferences for dividend-paying stocks depend on the characteristics of corporate ownership. In this context, our study evaluates how the ownership structure affects the disposition of the firms to adjust their payouts to their investors' sentiments, establishing a relationship between the ownership structure and a proxy capturing investors' sentiments, which are built at firm level.

In fact, the explanation that has received the most recent attention, for being pioneering, is Baker and Wurgler's (2004a) catering theory. Consistent with their theory, those authors report empirical evidence that managers of U.S. firms attempt to cater to investor preferences and the aggregate dividend initiations are positively related to their measure of dividend premium. Baker and Wurgler (2004b) report that the dividend premium is related to the propensity to pay dividends, documented in Fama and French (2001). That is, these authors support the catering theory of dividends, which predicts that the time variation in dividends is driven by the demand from investors, according to which the changes in the amount that companies pay on dividends can be explained by what they denominate "catering incentives", that is, a measure of the market desire for dividend-paying stocks. Specifically, Baker and Wurgler (2004b) argue that while the dividend decision may be very important, it is even more important to base the direction of this decision on the prevailing investor sentiment.

Previous literature on behavioral finance shows that investor sentiment does indeed influence future returns and plays a role in the formation of returns.[81] For instance, De Long et al. (1990) suggest that the limited arbitrage is formed by the irrational noise traders. According to their research, irrational traders affect market price much more than the arbitrageurs. This result forms a basic assumption in behavioral finance, which is called limitation of arbitrage. This alternative model can explain the divergence of asset price. Barberis, Shleifer and Vishny (1998) explain how individual investors underreact or overreact to past returns or fundamentals with a parsimonious model. More recently, Li and Lie (2006) extend the theory of Baker and Wurgler (2004a) and find support for the catering theory. They show that the dividend premium is positively related to the sign and magnitude of changes in dividends, and that this relationship is also manifested in the stock market reaction to these dividend changes. Their results suggest that the capital market rewards managers for considering investors' demand for dividends when making decisions about the level of dividends.

A natural question that arises when attempting to quantify the influence of sentiment on dividends decisions is how to measure the unobserved sentiment. Theoretical and empirical literature have used different proxies of investors' sentiment.[82] For instance, Lee, Shleifer and Thaler (1991) introduced one of the most popular financial measures, the closed-end fund discount, and Neal and Wheatley (1998) also used the same measure. Also consistent with behavioral models of investor

[81] See, for instance, De Long et al. (1990), and Shleifer and Vishny (1997), or Barberis, Shleifer and Vishny (1998) for models of investor sentiment, in which investors' beliefs affect prices and returns.
[82] Existing studies distinguish between two fundamental methods of measuring investor sentiment: financial-based measures (or market-wide measures) and survey based measures.

overconfidence, Barber and Odean (2000) provide empirical evidence that households, which hold about half of U.S. equities, trade too much, on average.[83]

Wang (2003) presented a sentiment index which is based on current net positions and historical extreme values and find that funds with higher sentiment sensitivities (larger potential discounts) have a greater incentive to adopt a target distribution policy. Moreover, researchers exploit many quantities, such as mutual fund flows (Frazzini and Lamont, 2005, or Chiu, 2006); initial public offering volume and initial premium, and trading patterns of insiders. Schmitz, Glaser and Weber (2005) deduced a new measure for sentiment from individual investors' warrant transactions and reveal that returns have a negative influence on sentiment and the influence of stock market returns on sentiment is stronger than vice versa. Additionally, Bandopadhyaya and Jones (2006) suggest an equity market sentiment index which is based on the rank of daily return and the historical volatility. Baker and Wurgler (2006) built a sentiment composite index that is based on six proxies for sentiment. They show that investors' sentiment may have significant effects on the cross section of stock prices. Kumar and Lee (2006) suggest a sentiment measure, which is based on the retail investors' trading, and find that systematic retail explains return co-movement for stocks with high retail concentration.[84] Baker and Wurgler (2007) show that the sentiment indicator is correlated in the expected way with the returns of portfolios sorted on volatility and also with the market. Finally, some studies use data from investor surveys, for instance,

[83] See, for instance, Odean (1998) and; Coles, Suay and Woodbury (2000) who report a relationship between advisor fees and premium or discount; Khorana, Wahal and Zenner (2002) exploring the agency conflicts in closed-end funds by examining rights offerings, among others.
[84] Also, Lo and Lin (2005), or Kaniel, Saar and Titman (2006) denote investor sentiment as a fundamental factor on the price formation of assets.

Brown and Cliff (2005), or Qiu and Welch (2006),[85] and Kamstra, Kramer and Levi (2003) employ investor mood.[86]

In fact, there are a growing number of studies that examine the role of investor sentiment and its implications for financial markets and institutions. Essentially, a surge in research for investor sentiment demands concerns to the "legal matters". However, in the contemporary discourse concerning the relationship between ownership structures and investors' sentiments legality seems ill-explored and no consensus exists. For instance, Barclay, Holderness and Pontiff (1993) find a stable and significant relationship between discounts and concentration of ownership. They speculate that block-holders might align with management to resist open-ending, and their results are more with managerial entrenchment than incentive (convergence of interest) effects. Hong and Huang (2005) find that insiders have a strong incentive to allocate resources to enhance the liquidity of their own block of stocks because of potential liquidity needs. In contrast, they show that dispersed shareholders care little about market illiquidity because of their relatively small holdings, leading to a divergence of interest on investor-relations policies. They show that liquidity needs and size of equity stakes are important determinants of the extent of investors' relations across firms.[87] Ferris, Narayanan and Sanjiv (2008) show that catering is an important factor in explaining the differences in international decisions of dividend policy, and they show that catering is a much stronger phenomenon for firms operating in countries with low levels of

[85] A survey-based measure was used also by Solt and Statman (1989); Lee, Jiang and Indro (2002), and Ang, Bekaert and Wei (2006).

[86] One strand of literature provides evidence that the optimism reflected in generic non-economic proxies of investor mood is positively correlated with the optimistic beliefs about future economic conditions (Conrad, Cornell and Landsman, 2002; Hirshleifer and Shumway, 2003; Edmans, Garcia and Norli, 2007, and Puri and Robinson, 2007).

[87] See, for example, Brennan and Tamarowski (2000) for a history and overview of investor relations. See also Adams, Almeida and Ferreira (2005), and Bertrand and Schoar (2003) for direct evidence that managers have discretion.

ownership concentration and consequently, less ability to exploit their minority shareholders.

From the review above, we can say that previous literature offers several proxies for investors' sentiments, all of them at the market level. We propose a new empirical approach that allows us to measure investor sentiment at the firm level. Specifically, we use the error term of a valuation model to obtain a proxy for the catering effect on dividend payments (see Chapter II).

There is no evidence, as far as we know, regarding ownership structure and the catering incentives for dividends. However, we use the argument offered in the previous sections to pose our hypotheses. These arguments point to the convergence of interests and entrenchment hypotheses with respect to the managerial ownership. Regarding the effect of ownership concentration on catering incentives, we rely on arguments pointing to monitoring versus expropriation effects. Finally, we go into this issue in-depth and investigate interaction between the first and second-largest shareholders, taking into account whether there is collusion or contestability between them.

Despite the lack of previous evidence, there are strong arguments that lead us to believe that investors' preference is for dividend-paying stocks changes in accordance with the above-mentioned ownership characteristics. Hong and Huang (2005), for instance, find that insiders have a strong incentive to allocate resources to enhance the liquidity of their own block of stocks because of potential liquidity needs. Ferris, Narayanan and Sanjiv (2008) are among the few authors that approach, although in a brief way, one of the pointed characteristics. They document that higher levels of ownership concentration would be associated with greater exploitation of minority shareholders; thus, if firms are generally characterized by high levels of ownership

concentration,[88] then in their results the payment of dividends should be associated with increased value and this would be reflected in a higher dividend premium level (their catering measure). However, those authors do not support this hypothesis and they find that, although catering occurs within firms irrespective of ownership concentration levels, the coefficient for the dividend premium is significantly greater for firms in countries with lower ownership concentration levels. They document that catering is a much stronger phenomenon for firms operating in countries with low levels of ownership concentration and consequently less ability to exploit their minority shareholders. This leads us to expect that for our analysis, an ownership concentration and its investor sentiment about dividends could be related.

According to the finance literature that has analyzed the payout questions, and following our objective, we expect that different ownership structures affect the catering incentives to dividends payout.

In respect to managerial ownership, previous empirical evidence shows an unequivocal relation between managerial ownership and the firm's payout policy (see section IV.1.1), and despite the fact that none of these authors studied investors' sentiment on dividends, their work serves to justify our arguments and therefore this hypothesis. The arguments for this hypothesis are based in the convergence of interests or entrenchment effect (for instance, Morck, Shleifer and Vishny, 1988). The incentive effect predicts that payout ratio will be higher when managers' interests are better aligned with small shareholders' interests. Therefore, a positive relation should exist between managerial ownership and catering incentives of dividends. On the other hand, the entrenchment effect predicts that a manager who controls substantial ownership may have enough voting power to determine policies which are beneficial to him at the

[88] In their research, ownership concentration is the average ownership of the three largest shareholders in the 10 largest publicly traded companies.

expense of other shareholders. Jensen, Solberg and Zorn (1992), analyze the determinants of cross sectional differences in insider holdings and dividend policies of firms, and they find that if insider owners hold the major shares of the company then management naturally prefers not to pay dividends. This is consistent with Rozeff's model. Based on the above discussion, from higher level of managerial ownership, it is expected that investor preference for dividend-paying stocks manifests to a smaller extent; according to this view, the following hypothesis is posed:

Hypothesis 1: The higher the managerial ownership, the smaller the extents to which firms cater to their investors' sentiments.

To test the relationship between the ownership by the largest shareholder and catering incentives of dividends, we use the arguments related to the literature that we showed previously based on the monitoring or expropriation effect.

According to Grossman and Hart (1980) and Shleifer and Vishny (1986), management should be monitored, and this monitoring must be done by large shareholders. The presence of such shareholders mitigates the free rider problem of monitoring a management team and hence reducing the agency costs. Consistent with monitoring hypothesis, shareholders control managers' discretion, and they cannot expend free cash flow on unprofitable projects and are forced to pay dividends. On the contrary, when the conflict between large and small shareholders is more outstanding, as in the case of civil law countries, ownership by the largest shareholder favors a potential risk of expropriation. Shleifer and Vishny (1997) document that dominant shareholders derive private benefits from corporate resources under their control. Accordingly, their preference is for lower dividend payments, which prevents minority investors from cashing out their share of the firm's profits.

We rely on the intuition that the effect of the ownership by the largest shareholder on catering incentives should be according to the above theoretical arguments, i.e., monitoring and expropriation hypotheses. In fact, we expected that the stronger the control exerted by the first large shareholder, the lesser the extent to which the firm caters to the rest of investors' sentiments under expropriation hypothesis (firms paying out less dividends when the controlling shareholders have substantial power to expropriate) because our sample is constituted fundamentally for civil law countries. These arguments lead us to pose the following hypothesis.

Hypothesis 2: The higher the ownership by the largest shareholder, the smaller the extent to which firms cater to their investors' sentiments.

Financial literature also offer other factors in determining dividend payout, such as the influence of large shareholders other than the largest one, that may influence the alignment of interests or the expropriation of wealth between shareholders

In this line of research, Gugler and Yurtoglu (2003) suggest that controlling shareholders obtain private benefits from retaining resources inside the firms and refusing to satisfy the rest of shareholders' preference for dividends. Moreover, their results also indicate a considerable monitoring function of large shareholders other than the largest shareholder, that is, those authors point out a positive relation between the existence of a second shareholder and dividends. Accordingly, we expect that when investors perceive the existence of another shareholder who can moderate the control over the largest one, the demand for dividend payments may increase, and the following hypothesis is proposed:

Hypothesis 3: The existence of a second large shareholder moderates the extent to which firms cater to their investors' sentiments.

In firms with more than the first largest shareholder, these large shareholders interact and the second shareholder can contest the power of the first or collude with the same interests, i.e., the influence of a second shareholder is twofold, depending on whether there is contestability or collusion between them.

Faccio, Lang and Young (2001) report that dividend payouts are higher in Europe, but lower in Asia when there are multiple large shareholders. They find that the presence of multiple large shareholders dampens expropriation in Europe (due to monitoring), but exacerbates it in Asia (due to collusion).

Based on this assumption, Maury and Pajuste (2002) find that the negative effect of ownership concentration on dividends is not driven by the concentration of only the largest shareholder's voting power, but also the second largest shareholder's stake. These findings propose that the largest and second largest shareholders might collude in generating private benefits that are not shared with minority shareholders, as indicated by the lower dividend payout levels.

Maury and Pajuste (2005) document that on the one hand, by holding a substantial voting block, others besides the largest shareholder have the power and the incentives to monitor the largest shareholder and therefore the ability to reduce profit diversion. On the other hand, the second-largest shareholder can form a controlling coalition with other blockholders and share the diverted profit. Related to these arguments, those authors hypothesize that firm value is positively affected by the ability to challenge the largest block, i.e., by contestability, and negatively affected by the presence of blockholders, who, by colluding, can increase the efficiency of private benefit extraction. Accordingly, we admitted that with another large shareholder, the intention of expropriating by the first can be contested and that is reflected positively in investors' demand for dividend paying stocks, and the last hypothesis is proposed:

Hypothesis 4: The joint effect of the first and second-largest shareholders on catering incentives will depend on whether there is contestability or collusion between them.

IV.2 Data, empirical model and estimation method

IV.2.1 Data

To test the hypotheses posed in the previous section, we use data from several Eurozone countries. We selected an international database, Worldscope, as our principal source of information.[89] Additionally, international data such as the growth of capital goods prices, the rate of interest on short-term debt, and the rate of interest on long-term debt, are extracted from the Main Economic Indicators published by the Organization for Economic Cooperation and Development (OECD).

Since our study is intended to present a wide variety of ownership characteristics, we selected Eurozone countries and for each country we constructed an unbalanced panel of non-financial companies from 1990 to 2003. For each country, we constructed an unbalanced panel of nonfinancial firms whose information is available for at least six consecutive years This strong requirement is a necessary condition since we lose one year of data in the construction of some variables, we lose another year of data because of the estimation of the model in first differences, and four-consecutive-year data is required in order to test for second-order serial correlation, as Arellano and Bond (1991) point out. We must test for second-order serial correlation because our estimation method, the GMM, is based on this assumption.

[89] We also obtained ownership data from the Worldscope database for the year-end closest to December 31, 2003.

Three of the twelve countries have been excluded from our analysis for various reasons. As occurs in La Porta et al. (2000b), Luxembourg has been removed from our sample because there are just a few firms listed in Luxembourg's stock exchange, and Greece because dividends are mandatory in this country. Finally, the Netherlands also had to be excluded because no sample with the above-mentioned ownership factors could be selected. The structure of the samples by number of companies and number of observations per country is provided in Table IV.1. As shown in Table IV.2, the resultant unbalanced panel comprises 487 companies and 4,535 observations.

Table IV.1

Structure of the samples by countries

Country	Number of companies	Percentage of companies	Number of observations	Percentage of observations
Germany	91	18.69	885	19.51
France	79	16.22	721	15.90
Belgium	67	13.76	693	15.28
Spain	62	12.73	603	13.30
Finland	60	12.32	528	11.64
Portugal	44	9.03	362	7.98
Ireland	39	8.01	394	8.69
Austria	31	6.37	241	5.31
Italy	14	2.87	108	2.38
Total	487	100.00	4,535	100.00

The table shows extracted data from firms for which information is available for at least five consecutive years between 1990 and 2003. After removing the first-year data, used only to construct several variables, the resultant samples comprise 91 firms (885 observations) for Germany, 79 firms (721 observations) for France, 67 firms (693 observations) for the Belgium, 62 firms (603 observations) for Spain, 60 firms (528 observations) for Finland, 44 firms (362 observations) for Portugal, 39 firms (394 observations) for Ireland, 31 firms (241 observations) for Austria and 14 firms (108 observations) for Italy.

Table IV.2

Structure of the panel

No. of annual observations per company	Number of companies	Percentage of companies	Number of observations	Percentage of observations
13	96	19.71	1,248	27.52
12	50	10.27	600	13.23
11	40	8.21	440	9.70
10	39	8.01	390	8.60
9	53	10.88	477	10.52
8	59	12.11	472	10.41
7	50	10.27	350	7.72
6	58	11.91	348	7.67
5	42	8.62	210	4.63
Total	487	100.00	4,535	100.0

Data from firms for which information is available for at least five consecutive years between 1990 and 2003 were extracted. After removing first-year data, used only to construct several variables, the resultant unbalanced panel comprises 487 firms (4,535 observations).

Finally, Table IV.3 provides summary statistics (mean, standard deviation, minimum and maximum) of the variables used in our analysis.

Table IV.3

Summary Statistics

Variable	Mean	Standard deviation	Minimum	Maximum
FCF_{it}	.04878	.11942	-1.6551	1.2737
D_{it}	.10835	.12269	.0000	.83362
NI_{it}	.02696	.06346	-.78456	.65152
$TANG_{it}$	.43242	.18674	.00006	.98799
SI_{it}	12.6767	1.6982	7.7376	18.4956
CAT_{it}	.0000	.64772	-2.9818	8.0215

The table provides summary statistics (mean, standard deviation, minimum, and maximum) of the variables used in the construction of the explanatory variables. D_{it} represents debt ratio, FCF_{it} is the free cash flow, NI_{it} denotes net income, $TANG_{it}$ denotes tangible fixed assets, SI_{it} is size, and CAT_{it} denotes catering variable, constructed according to the second chapter.

IV.2.2 Empirical model and estimation method

Using the dependent variable, payout ratio, obtained as explained in chapter II, Section II.2.2 [90], and the traditional explanatory variables as well as the catering variable obtained through the value model (explained in the same chapter, section II.2.3), we next present our models. In accordance with the aim of our study, we investigate whether or not several ownership characteristics impact the catering effect of dividends on firms across Eurozone countries, and for that we propose the following models to be estimated:

$$CPR_{it} = \gamma_0 + \gamma_1 FCF_{it} + \gamma_2 D_{it} + \gamma_3 NI_{it} + \gamma_4 TANG_{it} + \gamma_5 SIZE_{it} + CAT_{it}(\gamma_6 + \lambda DV_{it}) + \varepsilon_{it}, \quad (1)$$

where DV_{it} takes value 1 if the firm's level of managerial ownership is above the sample median, and 0 otherwise. In this way, the coefficient of the catering variable is γ_6 for firms with low levels of insider ownership (since DV_{it} takes value zero), and $\gamma_6+\lambda$ for firms with high levels of insider ownership (since DV_{it} takes value one).

In this first model we investigate the interaction between the catering effect and the level of managerial ownership, to evaluate the moderating role of managerial ownership on catering dividends, where, DV_{it} is a dummy variable constructed according to the level of managerial ownership.

It is worth noting that in all cases whenever the dummy variable equals one and both parameters (γ_6 and λ) are significant, a linear restriction test is needed in order to know whether their sum ($\gamma_6+\lambda$) is significantly different from zero. The null hypothesis to be tested in these cases is the hypothesis of no significance, H_0: $\gamma_6+\lambda=0$.

We also investigate whether the ownership concentration in the hands of the first shareholder moderates the catering effect, by estimating the following model:

$$CPR_{it} = \gamma_0 + \gamma_1 FCF_{it} + \gamma_2 D_{it} + \gamma_3 NI_{it} + \gamma_4 TANG_{it} + \gamma_5 SIZE_{it} + CAT_{it}(\gamma_6 + \lambda DV_{it}) + \varepsilon_{it}, \quad (2)$$

[90] Once the dependent variable is a censured variable in that some companies pay dividends whereas do not, the authors predicted a Tobit model following Auerbach and Hasset (2003).

where DV_{it} is a dummy variable constructed according to the level of ownership concentration by largest shareholder. In this model, DV_{it} takes value 1 if the firm's level of equity ownership concentration by the largest shareholder is above the sample mean, and 0 otherwise.[91]

For testing the interaction between the first and second-largest shareholders with catering incentives, we propose the model that follows:

$$CPR_{it} = \gamma_0 + \gamma_1 FCF_{it} + \gamma_2 D_{it} + \gamma_3 NI_{it} + \gamma_4 TANG_{it} + \gamma_5 SIZE_{it} + CAT_{it}\left(\gamma_6 + \lambda_6 DV_{it} + \alpha_6 SV_{it}\right) + \varepsilon_{it}, \quad (3)$$

where DV_{it} is a dummy variable constructed according to the level of ownership concentration of the largest shareholder and SV_{it} is a dummy variable constructed according to the existence (with equity stock) of the second shareholder. In this case, DV_{it} takes value 1 if the firm's level of equity ownership concentration by the largest shareholder is above the sample mean, and 0 otherwise. SV_{it} takes value 1 if the second shareholder has equity stocks, and 0 otherwise. In this way, the coefficient of the catering variable is γ_6 for firms with low levels of equity shares by the largest shareholder and at the same time for firms where the second shareholder doesn't exist (since DV_{it} and SV_{it} takes value zero). The coefficient is $\gamma_6+\lambda_6$ for firms with high levels of equity ownership by the largest shareholder and at the same time the second shareholder doesn't have equity shares (since DV_{it} takes value one and SV_{it} takes value zero). The coefficient is $\gamma_6+ \alpha_6$ for firms with low levels of equity ownership by the largest shareholder and at the same time the second shareholder exists (since DV_{it} takes value zero and SV_{it} takes value one). The coefficient is $\gamma_6+\lambda_6+ \alpha_6$ for firms with high levels of equity ownership by the largest shareholder and at the same time the second shareholder exists (since DV_{it} and SV_{it} takes value one).

[91] According to the Worldscope variable definition, major shareholders represent any individual or company that owns more than the local legal disclosure requirement of the outstanding shares of a company.

Finally, we investigate whether the joint effect of largest shareholder and the contestability or collusion of the second shareholder moderate catering effect and we estimate the following model:

$$CPR_{it} = \gamma_0 + \gamma_1 FCF_{it} + \gamma_2 D_{it} + \gamma_3 NI_{it} + \gamma_4 TANG_{it} + \gamma_5 SIZE_{it} + CAT_{it}\left(\gamma_6 + \lambda_6 DV_{it} + \alpha_6 CV_{it}\right) + \varepsilon_{it}, \quad (4)$$

where DV_{it} is the same dummy variable constructed according to the level of ownership concentration of the largest shareholder and CV_{it} is a dummy variable constructed according to the contestability or collusion of the second shareholder relative to the first. In this case, DV_{it} takes value 1 if the firm's level of equity ownership concentration by the largest shareholder is above the sample mean, and 0 otherwise. CV_{it} takes value 1 if there is contestability of the second shareholder and 0 if there is collusion.[92] This dummy variable was constructed based on Maury and Pajuste (2005). On the one hand, by holding a substantial equity share, a second shareholder has the power and the incentives to monitor the largest shareholder and therefore the ability to challenge the largest block, i.e., by contestability. On the other hand, the second shareholder can form a controlling coalition with the first shareholder and share the diverted profit; in this case, by colluding, the presence of these two block holders, can increase the efficiency of private benefit extraction.

Our models are estimated by the panel data methodology. Two issues are considered in making this choice. First, unlike cross-sectional analysis, panel data allow us to control for individual heterogeneity. This point is crucial in our study because the dividend decision is very closely related to the specificity of each firm. In fact, each firm has a different propensity to pay dividends, which could be regarded as unobserved heterogeneity. Therefore, to eliminate the risk of obtaining biased results, we control for such heterogeneity by modeling it as an individual effect, η_I, which is then eliminated

[92] There are Contestability and dummy variables that take value 1 when the sum of equity stocks held by the two largest shareholders does not exceed 50% and each one of them has at least 10% of shares. There are Collusion and dummy variables that take value 0 otherwise.

by taking first differences of the variables. Consequently, the error term in our models, ε_{it}, is split into four components: first, the above-mentioned individual or firm-specific effect, η_i. Second, d_t measures the time-specific effect by the corresponding time dummy variables, so that we can control for the effects of macroeconomic variables on the dividend decision. Third, since our models are estimated using data from several countries, we also include country dummy variables (c_i). Finally, v_{it} represents the random disturbance.

The second issue we address by using the panel data methodology is the endogeneity problem. The endogeneity problem is likely to arise insofar as the dependent variable (payout ratio) explains some explanatory variables. For instance, the payout ratio may explain leverage on the basis of arguments used to justify reverse causality (e.g. Moh´d, Perry, and Rimbey 1995, 1998).

Finally, we check for potential misspecification of the models. First, we use the Hansen J statistic of over-identifying restrictions in order to test for the absence of correlation between the instruments and the error term.Tables IV.4 and IV.5 show that the instruments used are valid. Second, we use the m_2 statistic, developed by Arellano and Bond (1991), in order to test for lack of second-order serial correlation in the first-difference residual. Tables IV.4 and IV.5 show that there is no problem of second-order serial correlation in our models (see m_2). Note that although there is first-order serial correlation (see m_1), this is caused by the first-difference transformation of the model and, consequently, it does not represent a specification problem of the models. Third, the results shown in Tables IV.4 and IV.5 provide good outcomes for the following three Wald tests: z_1 is a test of the joint significance of the reported coefficients; z_2 is a test of the joint significance of the time dummies; and z_3 is a test of the joint significance of the country dummies.

IV.3 Results

IV.3.1 The moderating role of ownership variables

In this section we present the results of our models by incorporating a variable capturing investor sentiment, the catering variable, for testing the implications of the catering theory by means of several ownership characteristics, four in particular: the level of managerial ownership, the equity stocks in the hands of the first shareholder, the presence of the second shareholder and the effect of contestability or collusion by this second shareholder relative to the first.

It is worth noting that, as far as we know, there is no prior evidence supporting this view, and providing empirical support for this issue is thus one of the major contributions of this research.

Column I of Table IV.4 reports the results of the model that includes the interaction of the catering variable with managerial ownership. [93] As shown in the table, for firms with low levels of managerial ownership there is a positive effect from a firm's investor sentiment on its payout ratio (γ_6=0.00121, significantly different from zero; see t). However, the effect turns negative for firms with high levels of managerial ownership ($\gamma_6+\lambda$=-0.00259, significantly different from zero; see t). That is, our evidence suggests that investor demand for dividends translates into higher payout ratios only in those firms with low levels of managerial ownership, whereas firms with high levels of insiders do not seem to cater to investor preferences. This suggests that

[93] The level of managerial ownership is measured by the fraction of closely held shares to common shares outstanding (number of closely held shares/common shares outstanding * 100).
According to the *Worldscope* variable definition, closely-held shares represent shares held by insiders: (i) shares held by officers, directors and their immediate families, (ii) shares held in trust, (iii) shares of the company held by any other corporation (except shares held in a fiduciary capacity by banks or other financial institutions), (iv) Shares held by individuals who hold 5% or more of the outstanding shares, etc.

receipt of dividends is more important to investors when managers don't have greater ability to expropriate corporate earnings for their private benefit.

Consistent with *Hypothesis 1*, this result corroborates that the higher the managerial ownership, the smaller the extents to which firms cater to their investors' sentiments. This idea supports, for instance, the key arguments by Rozeff (1982), or Moh'd, Perry and Rimbey (1995), who report that firms with more managerial ownership pay fewer dividends. Our results suggest the entrenchment effect that predicts that a manager who controls substantial ownership may determine policies which are beneficial to him at the expenses of other shareholders, resulting in lower payouts (Jensen, Solberg and Zorn, 1992). Also, Morck, Shleifer and Vishny (1988) observe that at sufficiently high levels of stock ownership, managerial entrenchment may dominate the positive incentive effects of more direct alignment (see section IV.1.1).

The interaction of the catering effect with the variable capturing the ownership in the hands of the largest shareholder is tested in the model presented in Column II of Table IV.4. As shown in the table, the catering effect is positive in firms with low levels of equity concentration by the largest shareholder (γ_6=0.00914), whereas this effect turns negative for firms with high levels of equity ownership concentration in the hands of the largest shareholder ($\gamma_6+\lambda$=-0.00185, significantly different from zero; see t). Our evidence supports *Hypothesis 2*, according to which majority controlled firms by the first-largest shareholder cater to a smaller extent to their investors' sentiments.

Correia da Silva, Goergen and Renneboog (2005) find that, given that strong shareholders exert their control power, there is no need for the dividend policy to constitute an additional monitoring device. We interpret these findings as further evidence of agency conflicts between largest shareholders and minority investors, as for

instance, Thomsen (2005). Therefore, it seems that catering incentives (i.e., investor preference for dividend-paying stocks) manifest more strongly in firms with low levels of ownership in the hands of the largest shareholder. This result intuitively supports traditional arguments by Rozeff (1982), who argues that companies with less dispersed ownership pay fewer dividends. Our evidence suggests that the dominant shareholder has the power to divert corporate resources to himself from other shareholders and that translates into investors' smaller incentives for dividends who perceive expropriation power by majority controlled firms.

Our evidence is also consistent with Maury and Pajuste (2002) and Gugler and Yurtoglu (2003), and suggests that controlling shareholders obtain private benefits from retaining resources inside the firms and refusing to satisfy the rest of shareholders' preference for dividends. As expected, the positive effect predicted by Ferris, Narayanan and Sanjiv (2008) is confirmed by our results (see section IV.1.2).

Table IV.4

Estimation results of the moderating role of certain ownership characteristics (Managerial ownership and ownership concentration in the hands of the largest shareholder)

	I	II
Constant	-.0263* (.00074)	-.02969* (.00064)
FCF_{it}	.00537* (.00023)	.00863* (.00022)
D_{it}	.01097* (.00032)	.01608* (.00038)
NI_{it}	.14767* (.00040)	.02017* (.00047)
$TANG_{it}$	.00665* (.00023)	.01142* (.00027)
S_{it}	.00178* (.00006)	.00186* (.00044)
CAT_{it}	.00121* (.00005)	.00914* (.00014)
$CAT_{it}DV_{it}$	-.00380* (.00012)	-.01099* (.00018)
t	-30.57	-25.97
z_1	323.89 (7)	684.53 (7)
z_2	10735.26 (11)	23577.50 (11)
z_3	90.10 (6)	130.37 (6)
m_1	0.08	-0.03
m_2	-1.24	-1.03
Hansen	347.25 (392)	391.75 (392)

The regressions are performed using the panel described in Table IV.2. DV_{it} is a dummy variable that takes the following values: a) 1 if the level of managerial ownership is above the sample median and 0 otherwise in Column I; b) 1 if the ownership by the largest shareholder is above the sample mean and 0 otherwise in Column II.

The remainder of the information needed to read this table is as follows: i) Heteroscedasticity consistent asymptotic standard error in parentheses. ii) *, **, and *** indicate significance at the 1%, 5%, and 10% levels, respectively; iii) t is the t-statistic for the linear restriction test under the null hypothesis of no significance; iv) z_1, z_2 and z_3 are Wald tests of the joint significance of the reported coefficients, of the time dummies, and of the country dummies, respectively, asymptotically distributed as χ^2 under the null of no significance, with degrees of freedom in parentheses; v) m_i is a serial correlation test of order i using residuals in first differences, asymptotically distributed as N(0,1) under the null of no serial correlation; vi) Hansen is a test of the over-identifying restrictions, asymptotically distributed as χ^2 under the null of no correlation between the instruments and the error term, degrees of freedom in parentheses.

In addition to the largest controlling shareholders, we also tested whether the presence of other large shareholders has influence on catering incentives of dividend policy.

For testing the joint effect of the first and second-largest shareholders on catering incentives, we propose the model presented in Column I of Table IV.5. As shown in the table, firms with low levels of ownership by the largest shareholder and no second-largest shareholders exhibit a positive catering effect (γ_6=0.00943). Our

evidence suggests that in firms without a second shareholder, but where the largest shareholder does not have the power to control, managers are more encouraged to cater to a large extent to investors' demand for dividends, confirming once more that just for high level of ownership the largest shareholder has the power to divert corporate resources to himself from other shareholders, resulting in smaller catering incentives to dividends (results corroborated by hypothesis 2). In this way, our results suggest that in firms with lower levels of ownership by the largest shareholder, dividend payments are a substitute monitoring device.

The catering effect is also positive and larger in firms in which the largest shareholder has a majority stake but there is also a second large shareholder ($\gamma_6+\lambda_6+\alpha_6$ =0.02645, significantly different from zero; see t_2).

This result confirms that a second large shareholder has incentives to control and monitor the largest shareholder. Under pressure, the controlling shareholder is generally expected to pay out more. Thus, the monitoring exerted by other large shareholders makes dividends more likely. In other words, when there is a second large shareholder in the firm, investors perceive that the largest one cannot so easily expropriate their wealth, because the firm caters to a larger extent to their sentiment and higher dividends are paid.

For instance, Gugler and Yurtoglu (2003) document that the power of the second-largest shareholder increases the payout. The second shareholder plays a critical role in contesting the control of the dominant largest shareholder in order to reduce the extraction of private benefits and improve the firm's payout ratios.

More interestingly, the catering effect is even more relevant when the level of equity in hands of the largest shareholder is low and there is a second large shareholder in the firm ($\gamma_6+\alpha_6$ =0.03918 significantly different from zero, see t_2). Financial literature

shows that ownership concentration facilitates the expropriation of wealth from the small shareholders by the largest shareholders. However, our evidence points out that if the first shareholder doesn't have power to control, the existence of other large shareholders comes to reinforce the increase of the investors' incentives for dividends, because in those companies there are no reasons to believe that the minority shareholders can be expropriated.

Finally, the catering effect turns negative when the largest shareholder has a majority stake that confers on him the power to control the company and there is no second large shareholder in the firm ($\gamma_6+\lambda_6$=-0.0033, significantly different from zero, see t_1). This result clearly manifests for expropriation reasons, that is, when the largest shareholder has the power to control, and the second shareholder is not present to contest the control of the dominant largest shareholder in order to reduce the extraction of private benefits and improve the firm's dividend decisions, the first shareholder expropriates the minority's interests.

These results point out that catering incentives clearly manifest themselves when there are no shareholders large enough to control the firm and the dividend decision, or when there is a second large shareholder in the company. This evidence confirms Hypothesis 3 regarding the role played by a second large shareholder, jointly considered with the stake of the largest shareholder, in moderating the catering effect. Additionally, our results suggest that the presence of a second large, non-controlling shareholder in the firm enhances the monitoring of largest shareholders' opportunism. In this line, Gugler and Yurtoglu (2003) show that firms that have a strong controller tend to present lower payout ratios, but this effect is mitigated when there is a second block holder in the company (see section IV.1.2).

Finally, the influence of a second reference shareholder can be twofold: on one hand, the second shareholder can form a controlling coalition with the largest shareholder to share diverted profit; that is, controlling owners are encouraged to expropriate the remaining shareholders, and, hence, to reduce the firm's payout. But on the other hand, the second shareholder has incentives to monitor the largest shareholder; that is, it is possible that the other major shareholders take actions to avoid the expropriation by the larger major shareholders. This effect is called contestability by Maury and Pajuste (2005).

Therefore, we introduce the contestability and collusion effect into our analysis. We investigate whether the joint effect of the first and second largest shareholders on catering incentives depends on whether there is contestability or collusion between them. With this aim, we estimate the model presented in Column II of the Table V. As shown in the table, firms in which the largest shareholder has a low stake and colludes with the second large shareholder exhibit a positive catering effect (γ_6=0.00967). This finding suggests that if the first and second large shareholders have a low level of ownership concentration, there is no possibility nor ability to expropriate: that means both prevail in catering theory.

The catering effect is positive and stronger when the largest shareholder has a majority stake but there is also a second large shareholder that contests the decisions taken by the former. ($\gamma_6+\lambda_6+\alpha_6$ =0.34798, significantly different from zero; see t_2 and t_1).

As reported by Maury and Pajuste (2002, 2005), when second shareholder has a substantial voting block, he also has the power and the incentive to monitor the largest shareholder and therefore the ability to reduce profit diversion and in this case, the ability of large shareholders to contest the largest shareholder should be encouraged.

Accordingly, our results suggest that the contestability of the second shareholder leads to power to limit the expropriation of minority shareholders, resulting in higher catering incentives for dividends.

Once more, the results are still interesting for firms with low levels of equity shares in the hands of the largest shareholder and when the second shareholder has the power to contest ($\gamma_6+\alpha_6$ =0.36022 significantly different from zero; see t_2). We find that when the largest shareholder doesn't have power to control, the contestability of the other large shareholder comes to reinforce the increase of the investors' incentives for dividends, because in those companies there are no reasons to believe that the minority shareholders can be expropriated. Even if it is possible, the second shareholder would have power to contest acting as an effective monitor.

These results corroborate the previous evidence that we had already shown in the model (3) with the presence of a second shareholder. Column II of the Table IV.5, our model (4), also shows that the catering effect turns negative when the largest shareholder has the power to control the decision-making in the company and, additionally, there is collusion with the second large shareholder ($\gamma_6+\lambda_6$=-0.00257, significantly different from zero; see t_1). Therefore, by colluding, the presence of these two blockholders can increase the efficiency of private benefit extraction and it seems that catering incentives (i.e., investors' preference for dividend-paying stocks) lose priority in the firm (see Maury and Pajuste, 2002).

Our evidence suggests that in firms with the power of contestability of the second shareholder, and in the situation that the first shareholder does not have controlling power, management is more encouraged to cater to the firm's investors' demand for dividends. As in Gugler and Yurtoglu (2003), this result is consistent with

the argument that strong minority shareholders demand dividends to avoid being expropriated by the main incumbent shareholder.

Table IV.5

Estimation results of the moderating role of certain ownership characteristics
(ownership concentration in the hands of the largest shareholder and the existence or contestability of second largest shareholder)

	I	II
Constant	-.02746* (.00056)	-.01734* (.00050)
FCF_{it}	.00885* (.00020)	.01194* (.00030)
D_{it}	.01885* (.00037)	.01713* (.00038)
NI_{it}	.02068* (.00040)	.01708* (.00040)
$TANG_{it}$	.00779* (.00030)	.00777* (.00029)
S_{it}	.00183* (.00004)	.00106* (.00004)
CAT_{it}	.00943* (.00012)	.00967* (.00019)
$CAT_{it}DV_{it}$	-.01273* (.00018)	-.01224* (.00023)
$CAT_{it}SV_{it}$	.02975* (.00121)	
$CAT_{it}CV_{it}$		.35055* (.01776)
t_1	-36.32	-30.73
t_2	31.32	20.21
z_1	840.57 (8)	420.21 (8)
z_2	16212.29 (11)	15061.86 (11)
z_3	131.29 (6)	150.63 (6)
m_1	-0.08	-0.12
m_2	-0.96	-0.87
Hansen	397.00 (391)	382.10 (391)

The regressions are performed using the panel described in Table VI.2. DV_{it} is a dummy variable that takes the following values: a) 1 if the ownership concentration by the largest shareholder is above the sample mean and 0 otherwise in Column I; b) SV_{it} is a dummy variable that takes value 1 if a second large shareholder exists and 0 otherwise in Column I; c) CV_{it} is a dummy variable that takes value 1 if there is contestability between the first and second largest shareholders and 0 if there is collusion between them in column II.
The remainder of the information needed to read this table is as follows: i) Heteroscedasticity consistent asymptotic standard error in parentheses. ii) *, **, and *** indicate significance at the 1%, 5%, and 10% levels, respectively; iii) t is the t-statistic for the linear restriction test under the null hypothesis of no significance; iv) z_1, z_2 and z_3 are Wald tests of the joint significance of the reported coefficients, of the time dummies, and of the country dummies, respectively, asymptotically distributed as χ^2 under the null of no significance, with degrees of freedom in parentheses; v) m_i is a serial correlation test of order i using residuals in first differences, asymptotically distributed as N(0,1) under the null of no serial correlation; vi) Hansen is a test of the over-identifying restrictions, asymptotically distributed as χ^2 under the null of no correlation between the instruments and the error term, degrees of freedom in parentheses.

IV.4 Conclusions

This study is built upon the predictions of the catering theory of dividends, and contributes to the somewhat sparse empirical literature towards understanding the implications of catering incentives for dividend policies by examining the moderating role played by certain ownership variables, using a sample of large quoted firms in Eurozone member countries. In fact, our research makes a further check to see which ownership variables moderate dividend payout to managers' action to cater. This idea has not been accounted for in previous studies, either theoretically or empirically, but our findings corroborate that the way in which investors appreciate dividend payments and the incentives of the companies to satisfy these desires depends on the firm's degree of managerial ownership, ownership concentration by largest shareholder, the presence of a second shareholder, and finally, with the possibility of contestability or collusion between the largest and second-largest shareholders.

The results of the empirical analysis reveal, in first place, that investor preference for dividend-paying stocks translates into lower payout ratios in those firms with high levels of managerial ownership. Second, investor sentiment negatively impacts the payout ratio of only those firms with a high degree of equity shares in the hands of the first shareholder, for which investors manifest weaker expectations about receiving higher dividends. Further, we find that for high degree of ownership concentration by the largest shareholder jointly with the presence of a second shareholder, investor sentiment positively impacts the payout ratio. More interesting, our evidence shows that the catering effect persists and is more evident when the first shareholder does not have the power to control the company and the second shareholder has equity shares. Once more, our evidence provides empirical support that the second

shareholder will influence the extent to which firms cater to their investors' sentiments, because when this second shareholder doesn't exist and the ownership by the first is high, the catering effect turns negative. Finally, the results obtained reveal important differences in the ability of dividend catering to explain a firm's propensity to pay dividends when the second shareholder has the possibility to contest the ability to expropriate by largest shareholder. The results are coherent with the previous ones showing that the catering effect of dividends is positively affected by the ability of the second shareholder in challenging the first shareholder through contestability; however, this effect turns negative with the presence of blockholders, the first and second shareholders, who, by colluding, can increase the possibility of private benefits extraction.

CHAPTER V

CONCLUSIONS AND IMPLICATIONS

The purpose of this study has been to examine the influence of the psychological factors in determining dividend payout. The study focuses on four important topics: first, it investigated the influence of catering theory on payout ratio. Second, it explained the sensitivity of various firm characteristics to the catering theory of dividends. Third, it compared the impact of different institutional environments on catering theory of dividends. Finally, in this thesis it is explained how the different ownership characteristics of the companies affect investors' demand for dividend-paying stocks.

In particular, this study demonstrates why psychological factors should be definitively integrated into the explanatory models of dividends. The findings of this study are consistent with previous arguments that investors' sentiments can be decisive in determining dividend payout. This research reveals that investors' sentiment significantly affects a firm's propensity to pay dividends across firms for Eurozone countries and, as expected, this effect is positive after controlling for traditional determinants of dividends, such as the free cash flow, leverage, earnings, tangible fixed assets and size. This finding seems to indicate that dividend policies are driven to some extent by investor sentiment, thus revealing the desire of firm managers to cater to such preferences. Therefore, our evidence provides empirical support for a psychological component in the decision to pay in Eurozone firms, and it thus provides empirical

support for the catering model previously documented in US firms. Additionally, our study provides further evidence on the moderating role of certain firm characteristics on the relation between dividends and investor sentiment. Specifically, we find that investor sentiment positively impacts dividends of firms with high liquid assets. Furthermore, our results reveal a positive catering effect only for firms with valuable investment opportunities. Finally, we show that the catering effect is significantly larger in firms with higher levels of free cash flow.

Based on previous literature that shows a relationship among different institutional characteristics and dividend decisions, our study advances empirical evidence supporting the argument that when companies belong to different institutional environments and the nature of existing agency problems also differs, there will also be differences in the relationship between dividend policy and the catering effect. In this line of research, we show for a more enlarged sample that includes, besides the Eurozone countries, US, UK, Canada and Japan, that the arguments of the catering theory are also applicable and that the institutional environments moderate the catering theory of dividends. No one has either theoretically or empirically tested the impact of institutional characteristics on catering dividends. Our findings reveal that investors' sentiments significantly affect a firm's propensity to pay dividends and, as expected, this effect is positive, after controlling for traditional determinants of dividends, such as free cash flow, leverage, earnings, tangible fixed assets and size. Therefore, we find that companies in Eurozone countries, US, UK, Canada and Japan cater to their investors' sentiments; that is, investors' demand for dividend-paying stocks encourages firms to increase their payouts. Once more, our evidence provides empirical support for the existence of a physiological component in the decision to pay, as proposed by the catering theory. More interestingly, our findings show an interaction effect between

catering and institutional factors such as the legal protection of investors; development of capital markets and the orientation of the financial systems; the effectiveness of the market for corporate control; the level of ownership concentration and the effectiveness of boards of directors. In fact, the analysis performed in our study, stressing the role played by institutional factors, gives rise to the following conclusions: First, we find that firms with higher levels of ownership concentration and with more efficient boards of directors cater to a larger extent to their investor's sentiments. This result suggests that the internal mechanisms exert certain pressure on firms to cater to investors' demand, which in turn translates into higher dividends payout. Second, our results show that the stronger the legal protection of investors, the smaller the extent to which firms cater to their investor's sentiments, which translates into lower dividends payout: this evidence confirms the substitute model. Third, our study provides further evidence for the moderating role of the development of capital markets and the orientation of the financial systems on the relation between dividends and investors' sentiments and specifically, we find that the investors' demand for dividends tends to be "ignored" in firms operating in market-oriented financial systems. We next investigate the interaction between the catering effect and the contestability of market for corporate control, and the results are very similar to those obtained for the previous external corporate governance mechanisms; that is, the more active the market for corporate control, the smaller the extent to which firms cater to their investors' sentiments.

In short, our results suggest a substitution effect between external corporate governance mechanisms and dividends. This result suggests the external mechanisms of corporate governance support the substitute model in opposition to the outcome model in our sample of fifteen countries around the world. Therefore, we find that firms with weak corporate governance mechanisms are more likely to cater their investor's

preferences for dividends and pay higher dividends, while the relation between catering dividends and governance is stronger for firms with high quality of internal corporate governance mechanisms.

Finally, this study contributes to understanding the influence of ownership structure from firms in Eurozone countries on catering theory of dividends. This idea has not been accounted for in previous studies, either theoretically or empirically, but our findings corroborate that the way in which investors appreciate dividend payments depends on the ownership structures.

The results from the estimation of the model by using the Generalized Method of Moments are interesting. Consistent with catering predictions, our findings of the empirical analysis reveal that the strength of the sentiment-payout relation is affected by ownership variables, particularly the firm's level of managerial ownership, the level of ownership concentration by the largest shareholder, the joint effect of the first and second largest shareholder, and the joint effect of the first and second largest shareholder on whether there is contestability or collusion between them.

The results of the empirical analysis reveal, in first place, that investor preference for dividend-paying stocks translates into lower payout ratio in those firms with high levels of managerial ownership, which intuitively shows the negative relationship and the entrenchment effect on dividend policy in previous findings. Our evidence also shows that the presence of a large controlling shareholder will influence the extent to which firms cater to their investors. Specifically, investor sentiment negatively impacts the payout ratio of only those firms with high degree of equity shares in the hands of the first shareholder, for which investors manifest weaker expectations about receiving higher dividends. This result is consistent with previous studies that show that large shareholders have the incentive and ability to expropriate small, outside

shareholders and extract rent translating in lower payout ratio. Furthermore, we explicitly analyze the effects of the presence of a second large shareholder in catering dividends; our evidence shows that the catering effect of dividends is positively affected by the ability of the second shareholder in challenging the first shareholder through contestability. That is, when a second large shareholder has the power to contest the expropriation ability by the largest shareholder, investor demand for dividends translates into higher payout ratios. The results also show that in firms with the power of contestability of the second shareholder, and in the situation that the first shareholder does not, the power of controlling investors' preference for dividend-paying stocks increases. However, it is also necessary to point out that this effect turns negative when these two blockholders, by colluding, can increase the possibility of private benefits extraction.

As we can see through our evidence, this study is relevant to managers and investors as well as researchers. The managers will benefit from understanding the role of and motivation behind investors' demand for dividends. Moreover, managers should take into account the investors' sentiments, as they translate into a dividend premium. Investors, then feel that their motivations are very important for the managers' decisions, which means that they are part of the managerial decision process. The immediate implication for all researchers and school community is the understanding that the psychological factors are fundamental in determining the firm's dividends policies, and this is related to the catering theory. The investors' sentiments, moderated by certain characteristics of the company and certain institutional factors, should be incorporated into the explanatory models of dividends.

All researchers can use this work as a base for future study, basically looking for new paths, for instance, the stock repurchase.

To sum up, the thesis proved in this work is as follows: *Dividend policies are driven to some extent by investors' sentiments, and this catering effect is moderated by the firm's financial characteristics, corporate governance factors and corporate ownership.*

REFERENCES

Adams, Renée B., and Daniel Ferreira, 2007, A Theory of Friendly Boards, Journal of Finance 62, 217-250.

Adams, Renée B., and Daniel Ferreira, 2008, One Share, One Vote: The Empirical Evidence, *Review of Finance* 12, 51-91.

Adams, Renée B., Heitor Almeida, and Daniel Ferreira, 2005, Poweful CEOs and their impact on corporate performance, *Review of Financial Studies* 18, 1403-1432.

Aganin, Alexander, and Paolo Volpin, 2003, History of corporate ownership in Italy, *ECGI, Working Paper,* No. 17/2003.

Agrawal, Anup and Narayanan Jayoraman, 1994, The Dividend Policies of All-Equity Firms: A Direct Test of the Free Cash Flow Theory, *Managerial Decision Economics* 15, 139-148.

Aivazian, Varouj, Laurence Booth, and Sean Cleary, 2003, Do emerging market firms follow different dividend policies than firms in the U.S: evidence from 8 emerging markets, *Journal of Financial Research* 26, 371-387.

Alford, Andrew, Jennifer Jones, Richard Leftwich, and Mark Zmijewski, 1993, The relative informativeness of accounting disclosure in different countries, *Journal of Accounting Research* 31, 183-223.

Ali, Ashiq, and Lee-Seok Hwang, 2000, Country-specific factors related to financial reporting and the value relevance of accounting data, *Journal of Accounting Research* 38, 1-21.

Allen, Franklin, Antonio Bernardo, and Ivo Welch, 2000, A theory of dividends based on tax clientele, *Journal of Finance* 55, 2499-2536.

Allen, Franklin, and Roni Michaely, 2003, Payout Policy, in Constantinides, George, Milton Harris and Rene Stulz ed: *Handbook of the Economics of Finance* (Amsterdam: North-Holland) 337-429.

Almeida, Heitor, and Daniel Wolfenzon, 2006, A theory of pyramidal ownership and fa mily business groups, *Journal of Finance* 61, 2637-2680.

Amihud, Yakov, and Kefei Li, 2006, The declining information content of dividend announcements and the effect of institutional holdings, *Journal of Financial and Quantitative Analysis* 41, 637-660.

Amihud, Yakov, and Maurizio Murgia, 1997, Dividends, Taxes, and Signaling: Evidence from Germany, *Journal of Finance* 52, 397-408.

Ang, Andrew, Geert Bekaert, and MinWei, 2006, Do macro variables, asset markets or surveys forecast inflation better? Finance and Economics Discussion Series 2006/15.

Arellano, Manuel, and Stephen Bond, 1991, Some tests of specification for panel data: Monte Carlo evidence and an application to employment equations, *Review of Economic Studies* 58, 277-297.

Attig, Najah, and Yoser Gadhoum, 2003, The governance of Canadian traded firms: An analysis of the ultimate ownership structure, *SSRN Working Paper,* No 434160.

Auerbach, Alan. J., and Kevin. A. Hassett, 2003, On the marginal source of investment funds, *Journal of Public Economics* 87, 205-232.

Baker, Kent, Gary Powell, and Theodore Veit, 2002a, Revisiting managerial perspectives on dividend policy, *Journal of Economics and Finance* 26, 267-283.

Baker, Kent, Gary Powell, and Theodore Veit, 2002b, Revisiting the dividend puzzle: Do all the pieces now fit? *Review of Financial Economics* 11, 241-261.

Baker, Kent, Saadi Samir, Dutta Shantanu, and Gandhi Devinder, 2007, The perception of dividends by Canadian managers: new survey evidence, *International Journal of Managerial Finance* 3, 70-91.

Baker, Malcolm, and Jeffrey Wurgler, 2004a, A catering theory of dividends, *Journal of Finance* 59, 1125–1165.

Baker, Malcolm, and Jeffrey Wurgler, 2004b, Appearing and disappearing dividends: The link to catering incentives, *Journal of Financial Economics* 73, 271-288.

Baker, Malcolm, and Jeffrey Wurgler, 2006, Investor Sentiment and the Cross-section of Stock Returns, *Journal of Finance* 61, 1645-1680.

Baker, Malcolm, and Jeffrey Wurgler, 2007, Investor sentiment in the stock market, *Journal of Economic Perspectives* 21, 129-151.

Baker, Malcolm, and Jeremy C. Stein, 2003, Market Liquidity as a Sentiment Indicator, *Journal of Financial Markets* 7, 271-299.

Baker, Malcolm, Jeremy Stein, and Jeffrey Wurgler, 2003, When Does the Market Matter? Stock Prices and the Investment of Equity-Dependent Firms, *Quarterly Journal of Economics* 118, 969-1006.

Ball, Ray, Ashok Robin, and Joanna Wu, 2003, Incentives versus standards: properties of accounting income in four East Asian countries, *Journal of Accounting and Economics* 36, 235-270.

Bandopadhyaya, Arindam, and Leah, Jones, 2006, Measuring Investor Sentiment in Equity Markets, *Journal of Asset Management* 208-215.

Banerjee, Suman, Vladimir Gatchev, and Paul A. Spindt, 2007, Stock Market Liquidity and Firm Dividend Policy, *Journal of Financial and Quantitative Analysis* 42, 369–398.

Barber, Brad M., and Terrance Odean, 2000, Trading is hazardous to your wealth: The common stock investment performance of individual investors, *Journal of Finance* 55,773–806.

Barberis, Nicholas, Andrei Shleifer, and Jeffrey Wurgler, 2005, Comovement, *Journal of Financial Economics* 75, 283-317.

Barberis, Nicholas, Andrei Shleifer, and Robert W. Vishny, 1998, A model of investor sentiment, *Journal of Financial Economics* 49, 307-343.

Barca, Fabrizio, and Marco Becht, 2002, The Control of Corporate Europe, Oxford University Press.

Barclay, Michael, Clifford G. Holderness, and Jeffrey Pontiff, 1993, Private benefits from block ownership and discounts on closed-end funds, *Journal of Financial Economics* 33, 263-291.

Barclay, Michael, Clifford Smith, and Ross Watts, 1995, The determinants of corporate leverage and dividend policies, *Journal of Applied Corporate Finance* 7, 4-19.

Bar-Yosef, Sasson, and Lucy Huffman, 1986, The Information Content of Dividends: A Signalling Approach, *Journal of Financial and Quantitative Analysis* 21, 47-58.

Bebchuk, Lucian, 1999, A rent-protection theory of corporate ownership and control. Working Paper, Nº 7203, National Bureau of Economic Research, (Cambridge, MA).

Bebchuk, Lucian A., Alma Cohen, and Ferrell Allen, 2005, What matters in corporate governance? *Harvard Law School John M. Olin Center Discussion Paper 491*.

Bebchuk, Lucian A., Reinier Kraakman, and George Triantis, 2000, Stock pyramids, cross-ownership, and dual class equity: the creation and agency costs of separating control from cash flow rights. In: Morck, R. (Ed.), Concentrated Corporate Ownership 295–315.

Becht, Marco, and Ailsa Roel, 1999, Blockholdings in Europe: An International Comparison, *European Economic Review* 43, 1049-1056.

Becht, Marco, and Colin Mayer, 2002, Introduction to the control of corporate Europe. IN BARCA, F.& BECHT, M. (Eds.) *The Control of Corporate Europe.* Oxford, University Press.

Becht, Marco, Patrick Bolton, and Ailsa Röell, 2003, Corporate Governance and Control, in G. Constantinides, M. Harris and R. Stulz (eds.), The Handbook of the Economics of Finance, North-Holland 1, 1-109.

Beck, Thorsten, and Ross Levine, 2002, Industry Growth and Capital Allocation: Does Having a Market- or Bank- Based System Matter? *Journal of Financial Economics* 64, 147-180.

Beck, Thorsten, Asli Demirgüç-Kunt, and Ross Levine, 2003, Law, Endowment, and Finance, *Journal of Financial Economics* 70, 137-181.

Beck, Thorsten, Asli Demirgüç-Kunt, Ross Levine, and Vojislav Maksimovic, 2001, Financial Structure and Economic Development: Firm, Industry and Country Evidence. In: Demirguç-Kunt, A., Levine, R. (Eds.), Financial Structure and Economic Growth: A Cross-Country Comparison of Banks, Markets and Development. MIT Press, Cambridge, MA.

Beck, Thorsten, Ross Levine, and Norman Loayza, 2000, Finance and the Sources of Growth, *Journal of Financial Economics* 58, 261-300.

Bell, Leonie, and Tim Jenkinson, 2002, New Evidence of the Impact of Dividend Taxation and on the Identity of the Marginal Investor*, Journal of Finance* 57, 1321-1346.

Benartzi, Shlomo, Roni, Michaely, and Richard Thaler, 1997, Do changes in dividends signal the future or the past? *Journal of Finance* 52, 1007-1034.

Bennedsen, Morten, and Daniel Wolfenzon, 2000, The balance of power in closely held corporations, *Journal of Financial Economics* 58, 113-139.

Berglöf, Erik, 1990, Corporate Control and Capital Structure, Essays on Property Rights and Financial Contracts, Institute of International Business, (Stockholm).

Berglof, Erik, and Enrico Perotti, 1994, The governance structure of the Japanese financial Keiretsu, *Journal of Financial Economics* 36, 259-284.

Berglof, Erik, and Mike Burkart, 2003, European takeover regulation, *Economic Policy* 36, 173-208.

Bertrand, Marianne, and Antoinette Schoar, 2003, Managing with Style: The Effect of Managers on Firm Policies, *Quarterly Journal of Economics* 118, 1169-1208.

Bettis, Carr, John Bizjak, and Michael Lemmon, 2001, Managerial Ownership, Incentive Contracting, and the Use of Zero-Cost Collars and Equity Swaps by Corporate Insiders, *Journal of Financial and Quantitative Analysis* 36, 345-370.

Bhagat, Sanjai, and Bernard Black, 1999, The Uncertainty Relationship Board Composition and Firm Performance, *Business Lawyer* 54, 921-963.

Bhagat, Sanjai, and Bernard Black, 2002, The No-Correlation Between Board Independence and Long-Term Firm Performance, *The Journal of Corporation Law* 27, 231-273.

Bhattacharya, Nalinaksha, 2007, Dividend policy: a review, *Managerial Finance* 33, 4-13.

Bhattacharya, Sudipto, 1979, Imperfect Information, Dividend Policy, and "The Bird In The Hand" Fallacy, *The Bell Journal of Economics* 10, 259-270.

Black, Fischer, and Myron S. Scholes, 1974, The effects of dividend yield and dividend policy on common stock prices and returns, *Journal of Financial Economics* 1, 1-22.

Blundell, Richard, and Steven Bond, 1998, Initial conditions and Moment Restrictions in Dynamic Panel Data Models, *Journal of Econometrics* 87,115-144.

Boot, Arnoud, Radhakrishnan Gopalan, and Anjan Thakor, 2008, Market Liquidity, Investor Participation, and Managerial Autonomy: Why do Firms Go Private? *Journal of Finance* 63, 2013-2059.

Boudoukh, Jacob, Roni Michaely, Matthew Richardson, and Michael R. Roberts, 2007, On the implications of measuring payout yield: Implications for empirical asset pricing. *Journal of Finance* 62, 877-915.

Brav, Alon, John Graham, Campbell Harvey, and Roni Michaely, 2005, Payout policy in the 21st Century, *Journal of Financial Economics* 77, 483-527.

Brennan, Michael, and Anjan V. Thakor, 1990, Shareholder Preferences and Dividend Policy, *Journal of Finance* 45, 993–1018.

Brennan, Michael, and Claudia Tamarowski, 2000, Investor relations, liquidity and stock prices, *Journal of Applied Corporate Finance* 12, 26-37.

Brickley, James, and Christopher M. James, 1987, The takehover market, corporate board composition, and ownership structure: the case of banking, *Journal of Law & Economics* 30, 161-180.

Brickley, James, Ronald C. Lease, and Clifford Smith, 1988. Ownership structure and voting on antitakeover amendments, *Journal of Financial Economics* 20, 267-292.

Brickley, James, Ronald C. Lease, and Clifford Smith, 1994, Corporate voting: Evidence from charter amendments, *Journal of Corporate Finance* 1, 5-30.

Brown, Gregory W., and Michael T. Cliff, 2004, Investor sentiment and the near-term stock market, *Journal of Empirical Finance* 11, 1–27.

Brown, Gregory W., and Michael T. Cliff, 2005, Investor Sentiment and Asset Valuation, *Journal of Business* 78, 405−440.

Brown, Jeffrey R., Nellie Liang, and Scott Weisbenner, 2007, Executive Financial Incentives and Payout Policy: Firm Response to the 2003 Dividend Tax Cut, *Journal of Finance* 62, 1935-1965.

Burkart, Mike, Denis, Gromb, and Fausto Panunzi, 1997, Large shareholders, monitoring, and financial duty, *Quarterly Journal of Economics* 112, 693-728.

Carlin, Wendy, and Colin Mayer, 2003, Finance, Investment, and Growth, *Journal of Financial Economics* 69, 191-226.

Chakraborty, Atreya, Mark Kazarosian, and Emery A. Trahan, 1999, Uncertainty in Executive Compensation and Capital Investment: A Panel Study, *Financial Management* 28, 126-139.

Chaplinsky, Susan, and Greg Niehaus, 1993, Do Inside Ownership and Leverage Share Common Determinants? *Quarterly Journal of Business and Economics* 32, 61-78.

Chay, Jong-Bum, and Jungwon Suh, 2006, Cross-sectional determinants of dividend payments: International evidence, Working Paper, (Sungyungkwan University).

Chen, Carl, and Thomas Steiner, 1999, Managerial Ownership and Agency Conflicts: a Nonlinear Simultaneous Equation Analysis of Managerial Ownership, Risk Taking, Debt Policy and Dividend Policy, *The Financial Review* 34, 119-136.

Chen, Sheng-Syan, and Kim W. Ho, 1997, Market Response to Product-Strategy and Capital- Expenditure Announcements in Singapore: Investment Opportunities and Free Cash Flow, *Financial Management* 26, 82-88.

Chirinko Robert, Hans Van Ees, Harry Garretsen, and Elmer Sterken, 2004, Investor Protections and Concentrated Ownership: Assessing Corporate Control Mechanisms In The Netherlands, *German Economic Review* 5, 119-138.

Chiu, Hsin-Hui, 2006, Investor preferences, mutual fund flows, and the timing of IPOs, Working Paper.

Claessens, Stijn, Simeon Djankov, and Larry H. P. Lang, 2000, The separation of ownership and control in East Asian corporations, *Journal of Financial Economics* 58, 81–112.

Claessens, Stijn, Simeon Djankov, Joseph P.H. Fan, and Larry H. P. Lang, 1999, Expropriation of minority shareholders: Evidence from East Asia, *Policy Research Working Paper*, Nº 2088 (The World Bank, Washington D.C.).

Claessens, Stijn, Simeon Djankov, Joseph P.H. Fan, and Larry H. P. Lang, 2002, Disentangling the incentive and entrenchment effects of large shareholdings, *Journal of Finance* 57, 2741–2771.

Cohen, Gil, and Joseph Yagil, 2008, On the Catering Theory of Dividends and the Linkage between Investment, Financing and Dividend Policies, *International Research Journal of Finance and Economics* 17, 33-39.

Coles, Jeffrey, Jose Suay, and Denise Woodbury, 2000, Fund advisor compensation in closed-end funds, *Journal of Finance* 55, 1385-1414.

Conn, Robert, and F. Connell, 1990, International mergers: returns to US and British firms, *Journal of Business Finance and Accounting* 17, 689-711.

Conrad, Jennifer, Bradford Cornell, and Wayne Landsman, 2002, When is bad news really bad news? *Journal of Finance* 57, 2507-2532.

Correia da Silva, Luis, Marc Goergen, and Luc Renneboog, 2004, *Dividend Policy and Corporate Governance, ECGI*, (Oxford University Press).

Correia da Silva, Luis, Marc Goergen, and Luc Renneboog, 2005, When Do German Firms Change Their Dividends*? Journal of Corporate Finance* 11, 375-399.

Cottner, James, Anil Shivdasani, and Marc Zenner, 1997, Do Independent Directors Enhance Target Shareholder Wealth during Tender Offers?, *Journal of Financial Economics* 43, 195-218.

Coval, Joshua, Jeremy Stein, and Malcolm Baker, 2008, Corporate Financing Decisions When Investors Take the Path of Least Resistance, *Journal of Financial Economics* 84, 266-298.

Cremers, Martijn, and Vinay Nair, 2005, Governance mechanisms and equity prices, *Journal of Finance* 60, 2859-2894.

Crespi, Rafel, 1997, A Survey on Spanish Corporate Governance Rules, Statistics and Institutions. The Separation of Ownership and Control: A *Survey of 7 European Countries,* Preliminary Report to the European Commission.

Crutchley, Claire, and Robert Hansen, 1989, A Test of the Agency Theory of Managerial Ownership, Corporate Leverage, and Corporate Dividends, *Financial Management* 18, 36-46.

Dahya, Jay, Orlin Dimitrov, and John J. McConnell, 2008, Dominant Shareholders, Corporate Boards and CorporateValue: A Cross-Country Analysis, *Journal of Financial Economics* 87, 73-100.

Daniel, Kent, David Hirshleifer, and Avanidhar Subrahmanyam, 1998, Investor Psychology and Security Market Under-and Over-reactions, *Journal of Finance* 53, 1839-1885.

Daniel, Kent, David Hirshleifer, and Avanidhar Subrahmanyam, 2001, Overconfidence, arbitrage, and equilibrium asset pricing, *Journal of Finance* 56, 1839-1886.

Dargenidou, Christina, Stuart Mcleay, and Ivana Raonic, 2007, Ownership, Investor Protection and Earnings Expectations, *Journal of Business Finance and Accounting* 34, 247-268.

DeAngelo, Harry, and Linda DeAngelo, 2006, The irrelevance of the MM dividend irrelevance theorem*, Journal of Financial Economics* 79, 293-316.

DeAngelo, Harry, and Linda DeAngelo, 2007, Payout policy pedagogy: What matters and why, *European Financial Management* 13, 11-27.

DeAngelo, Harry, Linda DeAngelo, and Douglas Skinner, 2004, Are dividends disappearing? Dividend concentration and the consolidation of earnings, *Journal of Financial Economics* 72, 425-456.

DeAngelo, Harry, Linda DeAngelo, and René M. Stulz, 2006, Dividend Policy and the earned/contributed capital mix: a test of the life-cycle theory, *Journal of Financial Economics* 81, 227-254.

De Jong, Henk W., 1997, The Governance Structure and Performance of Large European Corporations, *The Journal of Management and Governance* 1, 5-27.

Del Brio, Ester, Javier Perote, and Julio Pindado, 2003, Measuring the impact of corporate investment announcements on share prices: the Spanish experience, *Journal of Business, Finance and Accounting* 30, 715-747.

De Long, Bradford, Andrei Shleifer, Lawrence H. Summers, and Robert J. Waldmann, 1990, Noise trader risk in financial markets, *Journal of Political Economy* 98, 703-738.

Demirgüç-Kunt, Asli, and Ross Levine, 2001, Bank Based and Market-Based Financial Systems: Cross-Country Comparisons. In Demirgüç-Kunt, A., Levine, R. (Eds.), *Financial Structure and Economic Growth: Gross-Country Comparisons of Banks, Markets, and Development*. MIT Press, Cambridge, MA, 81-140.

Demirgüç-Kunt, Asli, and Vojislav Maksimovic, 1996, Stock Market Development and Firm Financing Choices. *World Bank Economic Review*10, 341-369.

Demirgüç-Kunt, Asli, and Vojislav Maksimovic, 1999, Institutions, Financial Markets, and Debt Maturity. *Journal of Financial Economics* 54, 295-336.

Demirgüç-Kunt, Asli, and Vojislav Maksimovic, 2002, Funding Growth in Bank-Based and Market-Based Financial Systems: Evidence from Firm-Level Data. *Journal of Financial Economics* 65, 337-363.

Demsetz, Harold, 1983, The Structure of Ownership and the Theory of the Firm, *Journal of Law and Economics* 26, 301-325.

Demsetz, Harold, and Belen Villalonga, 2001, Ownership Structure and Corporate Performance, *Journal of Corporate Finance* 7, 209-233.

Denis, David, and Diane Denis, 1994, Majority-Owner Managers and Organizational Efficiency, *Journal of Corporate Finance* 1, 91-118.

Denis, David, and Atulya Sarin, 1999, Ownership and Board Structures in Publicly Traded Corporation, *Journal of Financial Economics* 52, 187-223.

Denis, David, and Igor Osobov, 2005, Disappearing dividends, catering incentives and agency costs: international evidence, *SSRN Working paper*, No 778024.

Denis, David, and Igor Osobov, 2008, Why Do Firms Pay Dividends? International Evidence on the Determinants of Dividend Policy, *Journal of Financial Economics* 89, 62-82.

Denis, David, and John McConnell, 2003, International Corporate Governance, *Journal of Financial and Quantitative Analysis* 38, 1-36.

Dewenter, Kathryn, and Vincent Warther, 1998, Dividends, asymmetric information, and agency conflicts: Evidence from a comparison of the dividend policies of Japanese and US firms, *Journal of Finance* 53, 879-904.

Dittmar, Amy, and Jan Mahrt-Smith, 2007, Corporate Governance and the Value of Cash Holdings, *Journal of Financial Economics* 83, 599-634.

Dittmar, Amy, Jan Mahrt-Smith, and Henri Servaes, 2003, International corporate governance and corporate cash holdings, *Journal of Financial and Quantitative Analysis* 38, 111-133.

Douglas, Alan, 2001, Managerial replacement and corporate financial policy with endogenous manager-specific value, *Journal of Corporate Finance* 7, 25-52.

Dyck, Alexander, and Luigi Zingales, 2004, Private benefits of control: An international comparison, *Journal of Finance* 59, 537-600.

Easterbrook, H. Frank, 1984, Two agency-cost explanations of dividends, *American Economic Review* 74, 650-659.

Eckbo, Espen B., and Savita Verma, 1994, Managerial shareownership, voting power, and cash dividend policy, *Journal of Corporate Finance* 1, 33-62.

Edmans, Alex, Diego García, and Øyvind Norli, 2007, Sports sentiment and stock returns, *Journal of Finance* 62, 1967-1998.

Faccio, Mara, and Larry H.P. Lang, 2002, The Ultimate Ownership of Western European Corporations, *Journal of Financial Economics* 65, 365-395.

Faccio, Mara, Larry H.P.Lang, and Leslie Young, 2001, Dividends and Expropriation, *American Economic Review* 91, 54–78.

Fairchild, Richard, and Ganggang Zhang, 2005, Investor Irrationality and Optimal Open-market Share Repurchasing, ICFAI *Journal of Behavioral Finance* 2, 17–31.

Fama, Eugene F., and Kenneth R. French, 2001, Disappearing dividends: Changing firm characteristics or lower propensity to pay? *Journal of Financial Economics* 60, 3-44.

Fama, Eugene F., and Michael C., Jensen, 1983, Separation of ownership and control, *Journal of Law and Economics* 26, 301-325.

Farinha, Jorge, 2003, Dividend Policy, Corporate Governance and the Managerial Entrenchment Hypothesis: An Empirical Analysis, *Journal of Business Finance and Accounting* 30, 1173-1209.

Farinha, Jorge, and Óscar López-de-Foronda, 2009, The relation between dividends and insider ownership in different legal systems: international evidence, *The European Journal of Finance* 15, 169-189.

Fenn, George W., and Nellie Liang, 2001, Corporate Payout Policy and Managerial Stock Incentives, *Journal of Financial Economics* 60, 45-72.

Ferreira, Daniel, Emanuel Ornelas, and Turner John, 2005, Ownership Structure and the Market for Corporate Control, *IBMEC RJ Economics Discussion Paper,* No 2005/09 (University of Georgia)

Ferris, Stephen P., Nilanjan Sen, and Ho Yui, 2006. God Save the Queen and her dividends: Corporate payouts in the UK, *Journal of Business* 79, 1149-1173.

Ferris, Stephen P., Jayaraman Narayanan, and Sabherwal Sanjiv, 2008, International Differences in Dividend Policy: Catering, Legal, and Cultural Effects, Working Paper (under review).

Filatotchev, Igor, Rostislav Kepelyushnikov, Natalya Dyomina, and Sergey Aukusionek, 2001, The effects of ownership concentration on investment and performance in privatised firms in Russia, *Managerial and Decision Economics* 22, 299-313.

Franks, Julian, and Colin Mayer, 1996, Hostile Takeovers and the Correction of Managerial Failure, *Journal of Financial Economics* 40, 163-181.

Franks, Julian, and Colin Mayer, 1997, Corporate Ownership and Control in the U.K., Germany and France, *Journal of Applied Corporate Finance* 9, 30-45.

Franks, Julian, and Colin Mayer,1998, Bank control, takeovers and corporate governance in Germany, *Journal of Banking and Finance* 22, 1385-1403.

Frazzini, Andrea, and Owen Lamont, 2005, Dumb Money: Mutual Fund Flows and the Cross-Section of Stock Returns, *NBER Working Paper*, No 11526.

Gaspar, Miguel, Massimo Massa, and Pedro Matos, 2005, Shareholder investment horizons and the market for corporate control, *Journal of Financial Economics* 76, 135-165.

Gedajlovic, Eric and Daniel Shapiro, 1998, Management and Ownership Effects. Evidence from Five Countries, *Strategic Management Journal* 19, 533-553.

Gemmill, Gordon, 2005, Catering for dividends by stripping mutual-fund portfolios, *SSRN Working paper*, No 807904.

Giannetti, Mariassunta, 2003, Do Better Institutions Mitigate Agency Problems? Evidence from Corporate Finance Choices, *Journal of Financial and Quantitative Analysis* 38, 185-212.

Giannetti, Mariassunta, and Andrei Simonov, 2006, Which Investors Fear Expropriation? Evidence from Investors' Portfolio Choices, *Journal of Finance* 61, 1507-1547.

Ginglinger, Edith, and Jean-François L'Her, 2006, Ownership structure and open market stock repurchases in France, *European Journal of Finance* 12, 77-94.

Goergen, Marc, and Luc Renneboog, 2004, Shareholder wealth effects of European domestic and cross-border takeover bids, *European Financial Mana*gement 10, 9-47.

Gompers, Paul A., Joy Ishii, and Andrew Metrick, 2003, Corporate governance and equity prices, *Quarterly Journal of Economics* 118, 107-155.

Gompers, Paul A., Joy Ishii, and Andrew Metrick, 2006, Extreme Governance: An Analysisof Dual-Class Firms in the United States, Working paper (Harvard, Stanford, and Wharton).

Gorton, Gary, and Frank A. Schmid, 2000, Universal banking and the performance of German firms, *Journal of Financial Economics* 58, 29-80.

Graham, John, and Alok Kumar, 2006, Do Dividend Clienteles Exist? Evidence on Dividend Preferences of Retail Investors, *Journal of Finance* 61, 1305-1336.

Grinstein, Yaniv, and Roni Michaely, 2005, Institutional Holdings and Payout Policy, *Journal of Finance* 60, 1389-1426.

Grossman, Sanford J., and Oliver D. Hart, 1980, Takeover bids, the free–rider problem, and the theory of the corporation, *Bell Journal of Economics* 11, 42-64.

Grossman, Sanford J., and Oliver D. Hart, 1988, One share-one vote and the market for corporate control, *Journal of Financial Economics* 20, 175-202.

Grullon, Gustavo, George Kanatas, and James P. Weston, 2004, Advertising, breadth of ownership, and liquidity, *Review of Financial Studies* 17, 439-461.

Gugler, Klaus, 2003, Corporate Governance, Dividend Payout Policy, and the Interrelation Between Dividends, R&D, and Capital Investment, *Journal of Banking and Finance* 27, 1297-1321.

Gugler, Klaus, and Burcin Yurtoglu, 2003, Corporate governance and dividend pay-out policy in Germany, *European Economic Review* 47,731-758.

Han, Bing, 2008, Investor Sentiment and Option Prices, *The Review of Financial Studies* 21, 387-414.

Han, Ki, Suk Lee, and David Suk, 1999, Institutional Shareholders and Dividends, *Journal of Financial and Strategic Decisions* 12, 53-61.

Hansen, Robert S., Raman Kumar, and Dilip K. Shome, 1994, Dividend Policy and Corporate Monitoring: Evidence from the Regulated Electric Utility Industry, *Financial Management* 16-22.

Harford, Jarrad, Sattar Mansi, and William Maxwell, 2008, Corporate governance and firm cash holdings in US, *Journal of Financial Economis* 87, 535-555.

Harris, Milton, and Artur Raviv, 1991, The theory of capital structure, *Journal of Finance* 46, 297-355.

Hermalin, Benjamin, and Michael Weisbach, 1988, The Determinants of Board Composition, *Rand Journal of Economics* 19, 589-606.

Hermalin, Benjamin, and Michael Weisbach, 2003, Boards of directors as an endogenously determined institution: A survey of the economic literature, *Economic Policy* 9, 7-26.

Hirshleifer, David, and Tyler Shumway, 2003, Good Day Sunshine: Stock Returns and the Weather, *Journal of Finance* 58, 1009-1032.

Ho, Chi-Kun, 2005, Corporate Governance and Corporate Competitiveness: an international analysis, *Corporate Governance*13, 211-253.

Hoberg, Gerard, and Nagpurnanand Prabhala, 2009, Disappearing dividends: the importance of idiosyncratic risk and the irrelevance of catering, *Review of Financial Studies* 22, 79-116.

Holder, Mark, Frederick Langrehr, and Lawrence Hexter, 1998. Dividend Policy Determinants. An Investigation of the Influences of Stakeholder Theory, *Financial Management* 27, 73-82.

Holmstom, Bengt, and Steven Kaplan, 2001, Corporate governance and merger activity in the US: Making sense of the 1980's and 1990's, *Journal of Economic Perspectives* 15, 121–144.

Holmstom, Bengt, and Steven Kaplan, 2003, The State of U.S Corporate Governance: What's Right and what's wrong? *Journal of Applied Corporate Finance*, 8-20.

Hong, Harrison, and Jeremy Stein, 1999, A Unified Theory of underreaction, momentum trading and overreaction in asset markets, *Journal of Finance* 54, 2143-2184.

Hong, Harrison, and Ming Huang, 2005, Talking up liquidity: insider trading and investor relations, *Journal of Financial Intermediation* 14, 1–31.

Hope, Ole-Kristian, 2003, Disclosure Practices, enforcement of accounting standards and analysts' forecast accuracy: An International Study, *Journal of Accounting Research* 41, 235-272.

Höpner Martin, and Gregory Jackson, 2001, An Emerging Market for Corporate Control? The Mannesmann Takeover and German Corporate Governance, *MPIfG Discussion Paper* 01/4.

Hopt, Klaus, and Patrick Leyens, 2004, Board models in Europe: recent developments of internal corporate governance structures in Germany, United Kingdom, France, and Italy, *ECGI, Law Working Paper*, No 18/2004.

Hopt, Klaus, Hideki Kanda, Mark Roe, Eddy Wymeersch, and Stefan Prigge, 2000. Comparative Corporate Governance. The State of the Art and Emerging Research, *The International and Comparative Law Quarterly* 49, 510-511.

Hsieh, Jim, and Qinghai Wang, 2006, Determinants of the Trends in Aggregate Corporate Payout Policy, Working Paper, (George Mason University).

Hu, Aidong, and Praveen Kumar, 2004, Managerial Entrenchment and Payout Policy, *Journal of Financial & Quantitative Analysis* 39, 759-790.

IOSCO, 2002, Principles of Auditor Independence and the Role of Corporate Governance in Monitoring an Auditor's Independence.

Jarrell, Gregg, James A. Brickley, and Jeffry Netter, 1988, The Market for corporate control: The empirical evidence since 1980, *Journal of Economic Perspectives* 2, 49-68.

Jegadeesh, Narasimhan, and Sheridan Titman, 2001, Profitability of Momentum Strategies. An Evaluation of Alternative Explanations, *Journal of Finance* 56, 699-720.

Jensen, Gerard R., Donald Solberg, and Thomas S. Zorn, 1992, Simultaneous Determination of Insider Ownership, Debt, and Dividend Policies, *The Journal of Financial and Quantitative Analysis* 27, 247-263.

Jensen, Michael, 1986, Agency costs of free cash flow, corporate finance, and takeovers. *American Economic Review* 76, 323-329.

Jensen, Michael, 1989, Eclipse of the public corporation, *Harvard Business Review* 89, 61-84.

Jensen, Michael C., and Kevin Murphy, 1990, Performance Pay and Top-Management Incentives, *Journal of Political Economy* 98, 225-264.

Jensen, Michael C., and William Meckling, 1976, Theory of the Firm: Managerial Behavior, Agency Costs, and Ownership Structure, *Journal of Financial Economics* 3, 305-360.

Jensen, Michael C., and Richard S. Ruback, 1983, The market for corporate control: The scientific evidence, *Journal of Financial Economics* 11, 5-50.

John, Kose, and Anzehela Knyazeva, 2006, Payout policy, agency conflicts, and corporate governance, *SSRN Working Paper*, No 841064.

John, Kose, and Joseph Williams, 1985, Dividends, dilution, and taxes: A signalling equilibrium, *Journal of Finance* 40, 1053-1070.

John, Kose, and Lemma W. Senbet, 1998, Corporate Governance and Board Effectiveness, *Journal of Banking and Finance* 22, 371-403.

Johnson, Simon, and Andrei Shleifer, 1999, Coase v. The Coasians, *Harvard Institute of Economics Research*, No 1885.

Jolls, Christine, 1998. Stock Repurchases and Incentive Compensation, National Bureau of Economic Research Working Paper, Nº 6467.

Kahle, Kathleen, 2002, When a Buyback isn't a Buyback: Open-market Repurchases and Employee Options, *Journal of Financial Economics* 63, 235-261.

Kamstra, Mark, Lisa Kramer, and Maurice Levi, 2003, Winter Blues: A SAD Stock Market Cycle, *American Economic Review* 93, 324-343.

Kaniel, Ron, Gideon Saar, and Sheridan Titman, 2006, Individual investor sentiment and stock returns, Johnson School Research Paper Series 13.

Kaplan, Steven, 1997, Corporate Governance and Corporate Performance: a Comparison of Germany, Japan and The U.S, *Journal of Applied Corporate Finance* 9 (4), 86-93.

Kaplan, Steven N., and Bernadette A. Minton, 1994, Appointments of Outsiders to Japanese Boards. Determinants and Implications for Managers, *Journal of Financial Economics* 36, 225-258.

Kaustia, Markku, and Sami Torstila, 2008, Political Preferences and Stock Market Participation, *SSRN Working Paper*, No 966254.

Khan, Tehmina S., 2006, Company Dividends and ownership structure: evidence from UK panel data, *The Economic Journal* 116, 172-189.

Khorana, Ajay, Sunil Wahal, and Marc Zenner, 2002, Agency conflicts in closed-end funds: The case of rights offerings, *Journal of Financial and Quantitative Analysis* 37, 177-200.

Kester, Carl W., 1991, Japanese takehovers: the global contest for corporate control, Journal of International Business Studies 36, 42-61.

King, Robert, and Ross Levine, 1993, Finance and Growth: Schumpeter Might Be Right, *Quarterly Journal of Economics* 108, 717-38.

Kini, Omesh, William Kracaw, and Shehzad Mian, 2004, The Nature of Discipline by Corporate Takeovers, *Journal of Finance* 59,1511-1552.

Klapper, Leora, and Inessa Love, 2004, Corporate governance, investor protection, and performance in emerging markets, *Journal of Corporate Finance 10*, 703-728.

Koch, Adam S., and Amy X. Sun. 2004, Dividend changes and the persistence of past earnings changes, *Journal of Finance* 59, 2093–2116.

Köke, Jens, 2004, The Market for Corporate Control in a bank-based economy: A Governance Device? *Journal of Corporate Finance* 10, 53-80.

Kothare, Meeta, 1997, The effects of equity issues on ownership structure and stock liquidity: A comparison of rights and public offerings, *Journal of Financial Economics* 43, 131-148.

Kouki, Mondher, and Moncef Guizani, 2009, Ownership Structure and Dividend Policy Evidence from the Tunisian Stock Market, *European Journal of Scientific Research* 1, 42-53.

Kumar, Alok, and Charles M. Lee, 2006, Retail Investor Sentiment and Return Comovements, *Journal of Finance* 61, 2451-2486.

Kurov, Alexander, 2008, Investor Sentiment, Trading Behavior and Informational Efficiency in Índex Futures Markets, *Financial Review* 43, 107-127.

Laeven, Luc, and Ross Levine, 2004, Beyond the Biggest: Do Other Large Shareholders Influence Corporate Valuations, W*orking Paper* (University of Minnesota).

Lai, Richard, 2004, A catering theory of analyst bias, *SSRN Working Pape*r, No.548582.

Lambert, Richard, William Lanen, and David Larcker, 1989, Executive stock option plans and dividend policy, *Journal of Financial and Quantitative Analysis* 24, 409-425.

Lamont, Owen, 1997, Cash Flow and Investment: Evidence from Internal Capital Markets, *Journal of Finance* 52, 83-109.

Lang, Larry, Eli Ofek, and René M. Stulz, 1996, Leverage, investment, and firm growth, *Journal of Financial Economics* 40, 3-29.

Lang, Larry, and Robert Litzenberger, 1989, Dividend announcements: cash flow signalling vs. free cash flow hypothesis? *Journal of Financial Economics* 24, 181-192.

La Porta Rafael, Florencio Lopez-de-Silanes, Andrei Shleifer, 1999, Corporate Ownership Around the World, *Journal of Finance* 54, 471-517.

La Porta, Rafael, Florencio Lopez-de-Silanes, Andrei Shleifer, and Robert Vishny, 1997, Legal Determinants of External Finance, *The Journal of Finance* 52, 1131-1150.

La Porta, Rafael, Florencio Lopez-de-Silanes, Andrei Shleifer, and Robert Vishny, 1998, Law and Finance, *Journal of Political Economy* 106, 1113-1155.

La Porta, Rafael, Florencio Lopez-de-Silanes, Andrei Shleifer, and Robert Vishny, 2000a, Agency problems and dividend policies around the world, *Journal of Finance* 55, 1-33.

La Porta, Rafael, Florencio Lopez-de-Silanes, Andrei Shleifer, and Robert Vishny, 2000b, Investor Protection and Corporate Governance, *Journal of Financial Economics* 58, 3-28.

La Porta, Rafael, Florencio Lopez-de-Silanes, Andrei Shleifer, and Robert Vishny, 2002, Investor Protection and Corporate Valuation, *Journal of Finance* 57, 1147-

1170.

Lasfer, Ameziane, 1996, Taxes and Dividends: The UK Evidence*, Journal of Banking and Finance* 20, 455-472.

Lee, Charles, Andrei Shleifer, and Richard Thaler, 1991, Investor sentiment and the closed-end fund puzzle, *Journal of Finance* 46, 75-110.

Lee, Wayne, Christine Jiang, and Daniel Indro, 2002, Stock market volatility, excess returns, and the role of investor sentiment, *Journal of Banking and Finance* 26, 2277-2299.

Lemmon, Michael, and Karl Lins, 2003, Ownership structure, corporate governance, and firm value: evidence from the East Asian financial crisis, *Journal of Finance* 58, 1445-1468.

Lemmon, Michael, and Evgenia Portniaguina, 2006, Consumer Confidence and Asset Prices: Some Empirical Evidence, *Review of Financial Studies* 19, 1499-1529.

Leuz, Christian, Dhananjay Nanda, and Peter D. Wysocki, 2003, Earnings Management and Investor Protection: an International Comparison, *Journal of Financial Economics* 69, 505-527.

Levine, Ross, 2002, Bank-based or market-based financial systems: which is better? *National Bureau of Economic Research* 9138, 1-27.

Levine, Ross, and Sara Zervos, 1998, Stock markets, banks, and economic growth. *American Economic Review* 88, 537-558.

Lewellen, Wilbur, and Swaminathan Badrinath, 1997, On the measurement of Tobin´s Q. *Journal of Financial Economics* 44, 77-122.

Li, Wei, and Erik Lie, 2006, Dividends changes and catering incentives, *Journal of Financial Economics* 80, 293-308.

Lins, Karl V., 2003, Equity ownership and firm value in emerging markets, *Journal of*

Financial and Quantitative Analysis 38, 159-184.

Lintner, John, 1956, Distribution of incomes of corporations among dividends, retained earnings, and taxes, *American Economic Review 46*, 97-113.

Lloyd, William, John Jahera, and Daniel Page, 1985, Agency Costs and Dividend-Payout Ratios, *Quarterly Journal of Business and Economics* 24, 19-29.

Lo, Wen-Chen, and Ku-Jun Lin, 2005, A Review of the Effects of Investor Sentiment on Financial Markets: Implication for Investors, *International Journal of Management* 22, 708-715.

López-de-Foronda, Óscar, Félix López-Iturriaga, and Maurício J. Bertin, 2008, The contest to the control in European Family Firms: How Other Shareholders Affect Firm Value, Corporate Governance 16, 146-159.

Lucas, Deborah, and Robert McDonald, 1998, Shareholder heterogeneity, adverse selection, and payout policy, *Journal of Financial and Quantitative Analysis* 33, 233-254.

Mancinelli, Luciana, and Aydin Ozkan, 2006, Ownership structure and dividend policy: Evidence from Italian firms, *European Journal of Finance* 12, 265,282.

Manne, Henry, 1965, Mergers and the Market for Corporate Control, *Journal of Political Economy* 73, 110-120.

Marris, Robin, 1963, A Model of the "Managerial" Enterprise, *Quarterly Journal of Economics* 77, 185-209.

Masulis, Ronald, Cong Wang, and Fei Xie, 2007, Corporate Governance and Acquirer Returns, *Journal of Finance* 62, 1851-1889.

Maug, Ernst, 1998, Large Shareholders as Monitors: Is There a Trade-off between Liquidity and Control? *Journal of Finance 53*, 65-98.

Maury, Benjamin, and Anete Pajuste, 2002, Controlling Shareholders, Agency

Problems and Dividend Policy in Finland, *Finnish Journal of Business Economics* 51, 15-45.

Maury, Benjamin,and Anete Pajuste, 2005, Multiple large shareholders and firm value, *Journal of Banking & Finance* 29, 1813–1834.

Mayer, Colin, and Oren Sussman, 2001, The Assessment: Finance, Law and Growth, *Oxford Review of Economic Policy* 17, 457-466.

Michaely, Roni, and Michael Roberts, 2007, Corporate Dividend Policies: Lessons from Private Firms*, SSRN Working Pape*r, No. 927802.

Miguel, Alberto, and Julio Pindado, 2001, Determinants of Capital Structure: New Evidence from Spanish Panel Data, *Journal of Corporate Finance* 7, 77-99.

Miguel, Alberto, Julio Pindado, and Chabela de la Torre, 2005, How do entrenchment and expropriation phenomena affect control mechanisms? *Corporate Governance: An Internacional Review* 13, 505-516.

Miller, Merton, and Franco Modigliani, 1961, Dividend Policy, Growth and the Valuation of Shares, *Journal of Business* 34, 411-433.

Miller, Merton, and Kevin Rock, 1985, Dividend policy under asymmetric information, *Journal of Finance* 40, 1031-1051.

Modigliani, Franco, and Enrico Perotti, 1997, Protection of minority interest and the development of security markets, *Managerial and Decision Economics* 18, 519-528.

Moerland, Pieter W., 1995, Corporate Ownership and Control Structures: An International Comparison, *Review of Industrial Organization* 10, 443-464.

Moh'd, Mahmoud, Larry Perry and James Rimbey, 1995, An Investigation of the Dynamic Relationship between Agency Theory and Dividend Policy, *Financial Review* 30,367-385.

Moh'd, Mahmoud, Larry Perry and James Rimbey, 1998, The Impact of Ownership Structure on Corporate Debt Policy: a Time-Series Cross-Sectional Analysis, *Financial Review* 33, 85-98.

Morck, Randall, 2004, Behavioral finance in corporate governance: Independent directors and non-executive chairs, *Harvard Institute of Economic Research Discussion Paper*, No 2037.

Morck, Randall, Andrei Shleifer, and Robert W. Vishny, 1988, Management Ownership and Market Valuation: An Empirical Analysis, *Journal of Financial Economics* 20, 293-315.

Morck, Randall, and Bernard Yeung, 2005, Dividend taxation and corporate governance, *Journal of Economic Perspectives* 19, 163-180.

Morck, Randall, and Masao Nakamura, 1999, Banks and corporate control in Japan, *Journal of Finance* 54, 319-339.

Morck, Randall, Percy Michael, Gloria Tian, and Bernard Yeung, 2004, The rise and fall of the widely held firm: A history of corporate ownership in Canada, *NBER Working Paper*, No W10635, (University of Chicago).

Morgado, Artur, and Julio Pindado, 2003, The underinvestment and overinvestment hypothesis: an analisis using panel data, *European Finacial Management* 9, 163-177.

Moulton, Brent, 1986, Random Group Effects and the Precision of Regression Estimates, *Journal of Econometrics* 32, 385-397.

Moulton, Brent, 1987, Diagnostics for Group Effects in Regression Analysis, *Journal of Business and Economic Statistics*, 5, 275-282.

Neal, Robert, and Simon Wheatley, 1998, Do measures of investor sentiment predict stock returns, *Journal of Financial and Quantitative Analysis* 34, 523–547.

Nenova, Tatiana, 2003, The value of corporate voting rights and control: a cross-country analysis, *Journal of Financial Economics* 68, 325–351.

Nissim, Doron, and Amir Ziv, 2001, Dividend Changes and Future Profitability, *Journal of Finance* 56, 2111-2134.

Odean, Terrance, 1998, Are Investors Reluctant to Realize Their Losses? *Journal of Finance* 53, 1775-1798.

OECD, 2004, Principles of Corporate Governance.

Oswald, Dennis, and Steven Young, 2004, What Role Taxes and Regulation? A Second Look at Open Market Share Buyback Activity in the UK, *Journal of Business Finance and Accounting* 31, 257-292.

Pagano, Marco, and Davide Lombardo, 1999, Law and Equity Markets, *CEPR Discussion Papers*, No 2276.

Pagano, Marco, and Paolo Volpin, 2001, The political Economy of Finance, *Oxford Review of Economic Policy* 17, 502-519.

Pan, Carrie, 2007, Why are firms with entrenched managers more likely to pay dividends? *SSRN Working Paper*, No 905816.

Perez-Gonzalez, Francisco, 2003, Large shareholders and dividends: evidence from U.S. tax reforms, Working paper (Columbia University).

Perfect, Steven B., and Kenneth Wiles, 1994, Alternative constructions of Tobin´s Q: an empirical comparison, *Journal of Empirical Finance* 1, 313-341.

Perotti, Enrico, and Von Thadden, 2006, The Political Economy of Corporate Control and Labor Rents, *Journal of Political Economy* 114, 145-174.

Pham, Peter, Petko Kalev, and Adam Steen, 2003, Underpricing, stock allocation, ownership structure and post-listing liquidity of newly listed firms, *Journal of Banking and Finance* 27, 919-947.

Pindado, Júlio, and Chabela de la Torre, 2006, The Role of Investment, Financing and Dividend Decisions in Explaining Corporate Ownership Structure: Empirical Evidence from Spain, *European Financial Management* 12, 661–687.

Pindado, Júlio, and Luis Rodrigues, 2004, Parsimonious Models of Financial Insolvency in Small Companies, *Small Business Economics* 22, 51-66.

Pinheiro, Marcelo, Aureo De Paula, and Deniz Igan, 2006, Liquidity and Payout Policy, Working Paper, (Princeton University).

Pinkowitz, Lee, René Stulz, and Rohan Williamson, 2006, Does the contribution of corporate cash holdings and dividends to firm value depend on governance? A cross-country analysis, *Journal of Finance* 61, 2725- 2751.

Polk, Christopher, and Paola Sapienza, 2004, The real effects of investor sentiment, *NBER Working Paper,* No.10563.

Prowse, Stephen, 1992, The structure of corporate ownership in Japan, *Journal of Finance* 47, 1121-1140.

Prowse, Stephen, 1995, Corporate governance in an international perspective: a survey of corporate control mechanisms among large firms in the US, UK, Japan and Germany, *Financial Markets Institutions & Instruments* 4, 1-63.

Puri, Manju, and David T. Robinson, 2007, Optimism and economic choice, *Journal of Financial Economics* 86, 71-99.

Qiu, Lily, and Ivo Welch, 2006, Investor Sentiment Measures, *SSRN Working Paper*, No 589641.

Rajan, Raghuram, and Luigi Zingales, 1995. What Do We Know about Capital Structure? Some Evidence from International Data, *Journal of Finance* 50, 1421-1460.

Rajan, Rhaguram, and Luigi Zingales, 1998, Financial dependence and growth,

American Economic Review 88, 559-587.

Raheja, Charu G., 2005, Determinants of board size and composition: A theory of corporate boards, *Journal of Financial and Quantitative Analysis* 40, 283,306.

Rau, Raghavendra, and Theo Vermaelen, 2002, Regulation, Taxes, and Share Repurchases in the United Kingdom, *Journal of Business* 75, 245-282.

Ravi, Jain, 2007, Institutional and individual investor preferences for dividends and share repurchases, *Journal of Economics and Business* 59, 406-429.

Renneboog, Luc, 2000, Ownership, managerial control and the governance of poorly performing companies listed on the Brussels stock exchange, *Journal of Banking and Finance* 24, 1959-1995.

Renneboog, Luc, Julian, Franks, and Colin Mayer, 2001, Who disciplines management in poorly performing companies? *Journal of Financial Intermediation* 10, 209-248.

Renneboog, Luc, and Grzegorz Trojanowski, 2006, Control Structures and payout policy, *Managerial Finance* 33, 43-64.

Renneboog, Luc, and Peter Szilagyi, 2007, How Relevant is Dividend Policy under Low Shareholder protection? *ECGI, Finance Working Paper*, No 128.

Richardson, Scott, Siew H. Teoh, and Peter Wysocki, 2001, The walkdown to beatable analyst forecasts: The roles of equity issuance and insider trading incentives, Working Paper, (Univ. of Michigan Business School).

Roe, Mark, 1994, Srong managers weak owners: the political roots of American Corporate Finance (University Press, Princeton, NJ).

Roe, Mark, 2002, Corporate Law's Limits, *Journal of Legal Studies* 31, 233-272.

Roe, Mark, 2006, Political Determinants of Corporate Governance- Political Context, Corporate Impact. Oxford and New York: Oxford University Press.

Ross, Stephen, 1977, The determination of financial structure: the incentive signalling approach, *Bell Journal of economics* 8, 23-40.

Rozeff, Michael, 1982, Growth, beta and agency costs as determinants of dividend payout ratios, *Journal of Financial Research* 5, 249-259.

Schmitz, Philipp, Markus Glaser, and Martin Weber, 2005, Individual Investor sentiment and Stock Returns – What Do we Learn from Individual Warrant Traders?, Working Paper, (University of Mannheim).

Schooley, Diane, and Dwayne Barney, 1994, Using Dividend Policy and Managerial Ownership to Reduce Agency Costs, *Journal of Financial Research* 17, 363-73.

Scott, James, 1977, Bankruptcy, secured debt and optimal capital structure, *Journal of Finance* 32, 1-19.

Shefrin, Hersh M., and Meir Statman, 1984, Explaining investor preference for cash dividends, *Journal of Financial Economics* 13, 253-282.

Shleifer, Andrei, and Daniel Wolfenzon, 2002, Investor protection and equity markets, *Journal of Financial Economics* 66, 3–27.

Shleifer, Andrei, and Robert Vishny, 1986, Large Shareholders and Corporate Control, *Journal of Political Economy* 94, 461-488.

Shleifer, Andrei, and Robert Vishny, 1997, A Survey of Corporate Governance. *The Journal of Finance* 52, 737-783.

Short, Helen, Hao Zhang, and Kevin Keasey, 2002, The Link between Dividend Policy and Institutional Ownership *Journal of Corporate Finance* 8, 105-122.

Skinner, Douglas, 2008, The Evolving Relation between Earnings, Dividends, and Stock Repurchases, *Journal of Financial Economics* 87, 582-609.

Solt, Michael E., and Meir Statman, 1989, Good Companies, Bad Stocks, *Journal of Portfolio Management* 39-44.

Stulz, René, 1988, Managerial Control of Voting Rights: Financing Policies and the Market for Corporate Control, *Journal of Financial Economics* 20, 25-54.

Stulz, René, 1990, Managerial discretion and optimal financing policies, *Journal of Financial Economics* 26, 3–28.

Talmor, Eli, 1981, Asymmetric Information, Signaling, and Optimal Corporate Financial Decisions, *Journal of Financial and Quantitative Analysis* 16, 413-435.

Thaler, Richard H., and Hersh M. Shefrin, 1981, An economic theory of self-control, *Journal of Political Economy* 89, 392-406.

Thanh, Truong, and Richard Heaney, 2007, Largest shareholder and dividend policy around the world, *The Quarterly Review of Economics and Finance* 47, 667-687.

Thomsen, Steen, 2005, Conflicts of Interest or Aligned Incentives? Blockholder Ownership, Dividends and Firm Value in the US and the EU European Business Organization *Law Review* 6, 201-225.

Thomsen, Steen, and Torben Pedersen, 2000, Ownership structure and economic performance in the largest European companies, *Estrategic Management Journal* 21, 689-705.

Tetlock, Paul, 2007, Giving Content to Investor Sentiment: The Role of Media in the StockMarket, *Journal of Finance* 62, 1139-1168.

Tse, Chin-Bun, 2004, A critique of the logic of the agency costs theory for dividends in the finance literature, *Journal of Interdisciplinary Economics* 15, 25-40.

Twite, Garry, 2001, Capital structure choices and taxes: evidence from the Australian dividend imputation tax system, *International Review of Finance* 2, 217-234.

Vagts, Detlev, 2002. Comparative Corporate Law- The New Wave. In Schweitzer, R. and U. Gasser, (Eds). *Festschrift for Jean-Nicolas Druey,* Zurich: Schlthess Juristische Medien.

Vissing-Jorgensen, Annette, 2002, Towards an Explanation of Household Portfolio Choice Heterogeneity: Nonfinancial Income and Participation Cost Structures, *NBER Working Paper,* No 8884.

Volpin, Paolo, 2002, Governance with Poor Investor Protection: Evidence from Top Executive Turnover in Italy, *Journal of Financial Economics* 64, 61-90.

Von Eije, H., and William Megginson, 2008, Dividends and share repurchases in the European Union, *Journal of Financial Economics* 89, 347-374.

Wang, Changyun, 2003, Investor sentiment, market timing, and futures returns, *Applied Financial Economics* 13, 891-898.

Wang, Ko, John Erickson, and George W. Gau, 1993, Dividend Policies and Dividend Announcement Effects for Real Estate Investment Trusts, *Journal of the American Real Estate and Urban Economics Association* 21, 185-201.

Wang, Yam, Aneel Keswani, and Stephen Taylor, 2006, The Relationships between Sentiment, Returns and Volatility, *International Journal of Forecasting* 22, 109-123.

Weisbenner, Scott, 2000, Corporate Share Repurchases in the 1990s: What Role do Stock Options Play? Board of Governors of the Federal Reserve System, Finance and Economics Discussion Paper 2000/29.

Weston, John, 1979, The tender Takeover, Mergers and Acquisitions 74-82.

Wolfenzon, Daniel, 1999, A theory of pyramidal ownership, Unpublished Working Paper, (Harvard University), Cambridge, MA.

Wymeersch, Eddy, 1998, A Status Report on Corporate Governance Rules and Practices in Some Continental European States, *In Comparative Corporate Governance. The State of the Art and Emerging Research, Hopt, K., Kanda, H., Roe, M. Wymeersch, E., Prigge, S. Eds. Oxford: Clarendon Press*.

Yermack, David 2006, Flights of Fancy: Corporate Jets, CEO Perquisites, and Inferior Shareholder Returns, *Journal of Financial Economics* 80, 211-242.

Zhang, Frank, 2006, Information uncertainty and stock returns, *Journal of Finance* 61, 105-137.

Zwiebel, Jeffrey, 1996, Dynamic capital structure under managerial entrenchment, *American Economic Review* 86, 1197-1215.

Appendix A-Replacement Value of Total Assets

The replacement value of total assets is obtained as follows

$$K_{it} = RF_{it} + \left(TA_{it} - BF_{it}\right),$$

where RF_{it} is the replacement value of tangible fixed assets, TA_{it} is the book value of total assets, and BF_{it} is the book value of tangible fixed assets. The latter two variables are obtained from the firm's balance sheet and the first is calculated according to the proposals of Perfect and Wiles (1994)

$$RF_{it} = RF_{it-1}\left[\frac{1+\phi_t}{1+\delta_{it}}\right] + I_{it},$$

for $t>t_0$, and $RF_{it0}=BF_{it0}$, where t_0 is the first year of the chosen period, in our case 1986. On the other hand, $\delta_{it}=D_{it}/BF_{it}$ and $\phi_t=(GCGP_t-GCGP_{t-1})/GCGP_{t-1}$, where $GCGP_t$ is the growth of capital goods prices extracted from the *Main Economic Indicators*, published by the Organization for Economic Cooperation and Development (OECD).

Appendix B-Market Value of Long-term debt

The market value of long-term debt, $MVLTD_{it}$, is obtained from the following formula

$$MVLTD_{it} = \left[\frac{1 + l_{it}}{1 + i_l}\right] BVLTD_{it} \ ,$$

where $BVLTD_{it}$ is the book value of the long-term debt, i_l is the rate of interest of the long-term debt reported in the *OECD-Main Economic Indicators* and l_{it} is the average cost of long-term debt, defined as $l_{it}=(IPLTD_{it}/BVLTD_{it})$, where $IPLTD_{it}$ is the interest payable on the long-term debt, which is obtained by distributing the interest payable between the short and long-term debt depending on interest rates. That is,

$$IPLTD_{it} = \frac{i_l \, BVLTD_{it}}{i_s \, BVSTD_{it} + i_l \, BVLTD_{it}} IP_{it} \ ,$$

where IP_{it} is the interest payable, i_s is the rate of interest of the short-term debt, also reported in *Main Economic Indicators*, and $BVSTD_{it}$ is the book value of the short-term debt.

Appendix C-Investment

Investment is calculated according to the proposal by Lewellen and Badrinath (1997) as follows

Let FA_{it} be the gross book value of the tangible fixed assets of the period *t*, R_{it} the gross book value of the old assets retired during the year *t,* ABD_{it} the accumulated book depreciation for the year *t,* and BD_{it} the book depreciation expense corresponding to year *t*. We then have the following equalities

$$FA_{it}=FA_{it-1}+I_{it}-R_{it}$$

(A.1)

$$ABD_{it}=ABD_{it-1}+BD_{it}-R_{it} .$$

(A.2)

If we solve Eq. A.2 for R_{it} and substitute it into *Eq*. A.1, we obtain A.3,

$$FA_{it}=FA_{it-1}+I_{it}+ABD_{it}-ABD_{it-1}-BD_{it} .$$

(A.3)

Realigning terms, Eq. A.3 is transformed into expression A.4,

$$FA_{it}-ABD_{it}=FA_{it-1}-ABD_{it-1}+I_{it}-BD_{it} .$$

(A.4)

As for $FA_{it}-ABD_{it}=NF_{it}$, i.e., the net fixed assets, the former equation can be rewritten more compactly as in Eq. A.5,

$$NF_{it}=NF_{it-1}+I_{it}-BD_{it} ,$$

(A.5)

from which we obtain the value of investment

$$I_{it}=NF_{it}-NF_{it-1}+BD_{it} .$$

(A.6)