R&D, Corporate Governance and Profitability of Firms
– a literature review

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ABSTRACT

This paper aims to provide a summarize review of recent empirical research, in the field of
corporate governance and its relation to performance of firms. Specifically, the focus is on the
role of institutional owners in the conflict between controlling shareholders and minority
owners. The paper also contributes to the literature on corporate governance and performance
by providing some discussion on the statistical methods used in most empirical investigations.

Summing up recent studies in the evaluation of firms’ investment performance has shown
significant differences in the valuation of firms, depending on the market expectations and
industry affiliation. Focusing on the role of institutional owners in relation to firms’ investment
performance, the existing empirical evidence suggest that institutional owners have a positive
influence on firms’ investment performance. Studies that looks at the role of institutional
owners from the perspective of dividend policy has shown that institutional owners demand
higher dividends to compensate for aggravated agency conflicts due to vote-differentiated
shares. A large body of research investigates the performance of firms from a long run
perspective. These studies demonstrate that profits converge over time, but the convergence is
incomplete. Investment in R&D is often put forward as an explanation for persistent profits
above the norm. Looking at individual mutual funds, and specifically how to measure
risk-adjusted performance, investigations generally show that mutual funds underperform in
relation to their market benchmark, even when risk-adjusted to the same level of risk.

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1. **INTRODUCTION**

During recent decades the world’s financial markets have seen an ongoing increase in institutional ownership of capital. Do these institutional owners behave differently from other owners, and what are the consequences on firm performance? Do research in corporate governance provide the answers? These issues, and specifically how the increasing institutional ownership has affected investment performance in listed firms, are dealt with in this paper.

The role of the financial market is to transfer savings to investors, and establish relative prices that serve as signals to guide the allocation of capital. The efficiency of this allocation is an essential force in the creation of wealth and economic growth. At the same time, this allocation mechanism is the result of decisions taken by individuals or by people appointed to act on their behalf. Of particular interest therefore are the formal and informal rules that surround and affect this allocation process, that is, the corporate governance system. With a focus on shareholder value Denis and McConnell (2003, p. 2) define corporate governance as:

“the set of mechanisms – both institutional and market based – that induce the self-interested controllers of a company (those that make decisions regarding how the company will be operated) to make decisions that maximize the value of the company to its owners (the suppliers of capital)”.  

More generally corporate governance can be described as the set of processes, customs, policies, laws and regulations that affect the way a corporation is administered and controlled. It can then be separated into three intertwined themes. The first theme concerns the accountability of certain actors in an organisation and the mechanisms used to reduce or eliminate the principal-agent problem. A second theme of corporate governance, much related to the principal-agent problem, deals with the impact of certain corporate governance systems on economic efficiency, often with a strong emphasis on shareholders’ welfare. The third theme of corporate governance concerns the role played by different corporate governance structures in association with all parties related to the corporation, the so-called stakeholder view. With a strong emphasis on the first two fields of corporate governance this paper aims to summarize the existing empirical evidence on the relationships between corporate governance, institutional ownership, and firm performance.

Following Jensen and Meckling’s (1976) seminal article on the conflict arising from a separation of ownership and control, corporate governance research conducted mainly on large US firms, has focused on the conflict between managers and dispersed shareholders (Maury, 2004). A common assumption in many studies is that the principal goal of controlling shareholders is to maximize shareholder value (Short, 1994). If this assumption holds true more concentrated ownership will imply improved performance, since managers are less free to pursue their own goals when a controlling shareholder acts as monitor (Shleifer and Vishny,

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1 For a comprehensive survey of corporate governance, see Shleifer and Vishny (1997).
2 Two hundred years prior to Jensen and Meckling (1976) Adam Smith (1776) noted the problems of a separation of ownership from control. A more in-depth analysis of the diffusion of ownership was then provided in Berle and Means (1932) classical book “The Modern Corporation and Private Property”.
3 Hart (1995) provides an extensive discussion about the importance of corporate governance in the absence of complete contracts. Considerable cross-country variations in the quality of the corporate governance system have been found in a number of studies, see, e.g. La Porta et al. (1998; 1999 and 2000a), Roe (1993), Franks and Mayer (1995), Barca and Becht (2001), and Faccio and Lang (2002).
Controlling shareholders might however be guided by other objectives than maximizing shareholder value. Often related to the person who founded the firm, this type of owner(s) may identify strongly with it (Mueller, 2003). Ensuring survival and growth of the firm, along with protecting the family name and reputation, might be important objectives. Controlling shareholders may also have the possibility to extract other pecuniary and non-pecuniary benefits that are not shared by other shareholders (Williamson, 1963, 1964, and Jensen, 1986). Empirical evidence supports the hypothesis that sizable private benefits exist (Nenova, 2003, and Dyck and Zingales, 2004). The possibility to consume-on-the-job can also have the effect that retained earnings are preferable to dividends.5

Consequently there are both costs and benefits associated with controlling shareholders leading to a potential conflict of interest with minority owners for two principal reasons. First, regulations do not effectively protect the rights of minority shareholders. Second, the governance structure in many countries potentially makes controlling shareholders, who hold the majority of the votes and often have managerial representation, impervious to takeover threats and monitoring (Gomes, 2000).

Although the predominance of controlling shareholders in many countries has been demonstrated in the literature (La Porta et al. 1999, and Faccio and Lang, 2002)6, little research has been done on the identity of different types of controlling shareholders. More research into this area is consequently needed. A recent study by Maury (2004) investigates how firms’ performance is affected by family control on a large cross-sectional sample of European firms. In particular, the effect of family control on performance, measured by Tobin’s q and return on assets (ROA), is investigated. The conclusion is that family controlled firms perform significantly better both in terms of Tobin’s q and ROA than firms controlled by other owners.

Controlling shareholders, such as family owners, typically hold more control rights than cash-flow rights. This type of control enhancement can be accomplished through a number of mechanisms, such as vote-differentiated shares, pyramidal control structures, and cross-holdings7. Examining a large panel of Swedish listed firms Bjuggren, Eklund and Wiberg (2007) present evidence that modify the findings of Maury (2004). Private controlling owners (e.g. families, individuals and even other firms) are shown to have a positive but marginally diminishing effect on investment performance, measured as marginal q. If the control is maintained through disproportional voting arrangements however, this positive incentive effect disappears. The results by Bjuggren, Eklund and Wiberg (2007) also indicate that foreign and institutional owners have a positive effect on investment performance. The issue is thus not simply a matter of identity; the means by which the control is maintained is also an important determinant of both ownership and performance.

The next part of the paper is made up of five sections that focus on the research relating to

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4 In this way centrally controlled business groups can substitute for under-developed economic institutions (Khanna and Yafeh, 2006). More concentrated control can also motivate entrepreneurial effort (Allaire, 2006).

5 This effect may then be reinforced by tax policies, and ultimately lead to over-investment. For the case of Sweden in particular, strong tax incentives have favoured retained earnings relative to dividends as a part of the long-term social democratic economic program up to the 1990s (Högfeldt, 2004, and Henrekson and Jakobsson, 2001; 2005).

6 Investigating the evolution of ownership and control in a transition country Gregoric et al. (2000) finds that the governance structure of Slovenian firms is moving in the direction of the continental European governance system, with controlling private owners and large holdings controlled by financial institutions.

7 A recent theoretical overview concerning control enhancing mechanisms and the ‘one share - one vote’ structure is Burkart and Lee (2008), for the empirical evidence, see Adams and Ferreira (2008), Rydqvist (1992), and Allaire (2006). For pyramids, see Bebchuck et al. (2000) and for cross-holdings within business groups, see Khanna and Yafeh (2006). The optimal allocation of control and cash-flow rights in a firm is analyzed by Grossman and Hart (1988) and Harris and Raviv (1988)
investment and performance in different corporate governance contexts. The first section is named Industry Specific Effects and Performance of Firms. It provides an overview of the research investigating how the performance of listed firms change in response to market sentiments and specific industry attributes. The main conclusion is that market valuation differs between firms operating in new and old industries as a result of information asymmetries. Performance measures based on market valuation must consequently control for these firm and industry-specific effects.

The following two sections of part two focus on the role of institutional owners as monitors in the relation between controlling shareholders and minority owners. Section two titled Institutional Ownership and Performance examines the empirical evidence available which concerns the effect of institutional ownership on investment performance. The evidence seem to indicate that institutional owner’s influence investment performance positively. Furthermore, control instruments such as dual-class shares, are shown to reduce the investment performance of firms. Section three, Institutional Ownership and Dividends, review the studies investigating how institutional ownership affects firms’ dividend policy. By demanding higher dividend payout ratios institutional owners may reduce the cash available for managerial discretion and thus alleviate the conflict between inside and outside shareholders. The effect of control enhancing mechanisms seem to be of particular importance. Control enhancing mechanisms is a corporate governance attribute much spread in continental Europe, yet little empirical evidence exists regarding the effects of this type of instruments.

The fourth section looks at the research that have investigated whether above norm profits exist despite the assumption of competitive markets. The name of the section is Performance and Persistence of Profits. The empirical investigations dealing with the effect of R&D investments in relation to profit persistence is reviewed. The evidence seem to support the idea that above norm profits are the result of amongst other things persistent investment in R&D.

Narrowing the focus on performance to mutual funds, The fifth section titled Risk-Adjusted Performance Measures, examines some evaluation techniques used in comparisons of mutual funds against benchmarks. The literature suggests that mutual funds on average underperform their benchmark indices. This underperformance is often argued to be a consequence of a lower level of risk in the mutual funds then in the benchmark. The usefulness of the Modigliani and Modigliani-measure relative to other more esoteric performance measures is also demonstrated. Part three of the paper deals with some methodical issues common to empirical studies investigating the relationship between corporate governance and performance. Part four ends the paper with a some summarizing conclusions.

2. RESEARCH ON OWNERSHIP, GOVERNANCE AND PERFORMANCE

This following sections present a brief theoretical and empirical framework for each field of research by reviewing some important papers on each topic. The review of papers should not be seen as comprehensive, but rather as an introduction to the problems currently discussed in the different research fields.

2.1 Industry Specific Effects and Performance

A large body of literature has investigated the relationship between corporate governance structures and performance indicators. Although the studies differ greatly both in terms of estimation techniques and samples, most of them have in common the use of Tobin’s average q as performance measure. Tobin’s q is usually approximated by the market-to-book ratio. Although Tobin’s q is commonly used its empirical construction is subject to considerable
An alternative measure of performance is marginal $q$. Marginal $q$ measures the ratio of the change in a firm’s market value to the cost of the change in total assets (i.e., the investment) that caused it (Mueller and Reardon, 1993). A theoretical discussion on the advantages of using a marginal $q$ can be found in Hayashi (1982), a deeper discussion on the methodical issues related to investment performance is provided in section 3.1. Even if marginal $q$ improves the empirical measurement of a firm’s investment performance it assumes efficient capital markets, which imply unbiased estimates of future cash flows in the pricing of securities. Research within the field of behavioural finance has cast doubt on the presumption that the capital market always provides unbiased estimates; see e.g., Shiller (1981, 2000 and 2002) and Shleifer (2000).

Special attention has been devoted to the unusual rise and fall in prices of technology stocks surrounding the millennium year 2000. The event has been described as a stock price “bubble”, see amongst others Shiller (2000), Ofek and Richardson (2002, 2003), Ritter and Warr (2002), Ritter and Welch (2002), Abreu and Brunnermeier (2003), Brunnermeier and Nagel (2004), and Ljungqvist and Wilhelm (2003). One explanation for the “bubble” is that new technology industries such as Internet, telecom and biotechnology promised a new economic era with unprecedented growth in productivity and profits. Shiller (2000) argues that the boom in technology stocks was a result of wide-spread irrational exuberance. Investor overconfidence is another explanation for the bubble; see for instance, Scheinkman and Xiong (2003) and Scheinkman et al. (2005). The recent financial crisis in the wake of the U.S. mortgage crisis is beyond the scope of this paper.

Studying individual shareholdings in Finland, Kyrolainen and Perttunen (2003) find that large, active investors were trend-followers in the period, while small active investors were contrarians. Evidence has also been found for positive feedback trading by institutional investors who profited from, and possibly exacerbated the upward movement in prices (Brunnermeier and Nagle, 2004).

The differences between institutional and retail traders in terms of rationality of their beliefs have been the focus of a emergent line of research see e.g., Barber and Odean (2000, 2001) and Shiller and Pound (1989). Based on this idea Ofek and Richardson (2003) provide empirical evidence that institutional investors, in particular, had a strong effect on the stock price development. The argument is that many institutional investors were bound by short sale restrictions which consequently excluded many pessimistic investors from the market. As short sale restrictions were eventually alleviated a shift from optimistic investors sentiments to pessimistic occurred.

Pástor and Veronesi (2003; 2006) argue that researcher have overlooked the importance of uncertainty about future growth rates of the firm’s book values. This uncertainty will naturally increase the expected return. Consequently, if booms and recessions are the results of bubbles, performance measures such as Tobin’s $q$ and marginal $q$ will differ between booms and

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8 Procedures to approximate Tobin’s $q$ is typically a compromise between analytical precision and computational effort, most researchers approximate Tobin’s $q$ as follows: $q=(MVE+DEBT)/TA$, where MVE is the product of the market value of the firm’s shares times the number of shares outstanding, DEBT is the value of the firm’s short and long-term liabilities, and TA is the book value of the total assets of the firm. For an extended discussion, see Chung and Pruitt (1994).

9 For a survey of the current efficient market hypothesis (EMH) paradigm, see Fama (1991) and Lo (1999).

10 The stock market bubble built up in the late 1990s and burst in the second quarter of 2000 where after stock prices continued to fall for three years, see e.g., Evans (2003) and Sheeran and Spain (2004).

11 Ofek and Richardson (2002) argue that the Internet stock prices of the late 1990s was a result of expectations of implausible high growth rates in Internet earnings. Shultz and Zaman (2001) show that technology firms typically went public early in their life-cycle in the late 1990s.
recessions, because of biased estimates of future cash flows. It is not the efficient use of resources solely that determines the value of the marginal $q$, uncertainty about the firm’s future profitability also affect the value of the firms. Any empirical investigation based on market valuation must therefore control for industry-specific sentiments and time related macro-effects that affect all firms in the market.

2.2 Institutional Ownership and Performance

The increasing ownership controlled by institutional investors is the major ongoing transformation of the capital markets around the world. Since the early 1990s assets under management of institutions have tripled and these professional managers now manage financial assets exceeding $U.S. 45 trillion (including over $U.S. trillion in equities). Despite the increasing role of institutional owners, little is known empirically on how they affect firms’ performance.

It has been suggested that institutional owners can act as monitors of managers (Demsetz, 1983 and Shleifer and Vishny, 1986). The argument is that institutional owners typically have large holdings, and it therefore pays them to develop expertise in managing investments. With substantial resources at hand, professional portfolio managers can be assumed to be more sophisticated than the average retail investor. The actual involvement of institutional investors in the firms’ operations range from the threat of selling shares (exit) to the active use of voting rights (voice) in shareholders meetings. For a more extensive survey of shareholder activism, see Gillian and Starks (2000). By monitoring the management firms are forced to operate in a way that is more consistent with maximising shareholder wealth (Agrawal and Mandelker, 1992, Firth, 1995). The same arguments also apply to the role of institutional investors in the potential conflict between controlling owners and outside minority owners (Gillian and Starks, 2003). Investigating a comprehensive dataset of equity holdings from 27 countries, Ferreira and Matos (2008), show that institutional investors are involved in monitoring firms worldwide. The results further show that firms with high ownership by foreign and independent institutions have higher firm valuation, better operating performance, and lower capital expenditure. Institutional investors also seem to prefer stock of large firms and firms with strong governance indicators. This view of institutional investors can be labelled the ‘active investors’ hypothesis.13

One drawback of many studies of the relationship between ownership and performance is that they use Tobin’s average $q$ as a measure of performance. What is needed is a measure of marginal investment returns relative to the firms cost of capital. Using marginal $q$ Mueller and Reardon (1993) show that a substantial part of the large publicly traded firms in the U.S underperform, in terms of having marginal returns on investment significantly below their cost of capital. An emerging body of literature has since established the usefulness of this measure, as well as provided new empirical evidence related to corporate governance and performance (see Gugler and Yurtoglu, 2003, and Gugler et al. 2004a; 2004b).

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12 Institutional investors can be defined as specialized financial institutions that manage savings collectively on behalf of small investors towards a specific objective in terms of acceptable risk, return maximization, and maturity of claims (Davis and Steil, 2001). In this paper institutional investors is defined in the widest sense including; banks, mutual- and pension-funds, foundations, closed-end investment funds, insurance companies, and other financial institutions that manage portfolios on behalf of some collective group of investors.

13 Empirical support in favour of a certain level of ‘activism’ by institutional investors has been presented in several studies; see, for example, Brickley et al. (1988) and Almazan et al. (2005). Anecdotal evidence suggests that institutional investors collude during certain circumstances and regarding particular issues. To what extent this happens and the importance thereof is an issue of great interest for future research. Here it is sufficed to assume that institutional investors, although often very influential per se, can form shareholder alliances and collude when necessary.
A large fraction of the world’s publicly traded firms are controlled by their founders or members of the founders’ families (La Porta et al. 1999; Claessens et al. 2000; Faccio and Lang, 2002; Andersson and Reeb, 2003; Morck et al. 2000). Such owners often have a substantial part of their personal wealth tied up in the firms, and are thus supposed to have strong cash-flow incentives to monitor the firm (Jensen and Meckling, 1976). Regarded as insiders the controlling owners can also be assumed to be better informed about the firms’ business activities than minority shareholders.

But there are also potential costs associated with controlling-owners. First of all, controlling owners may extract private benefits of control, benefits that are not shared with other shareholders (Thomsen et al. 2006) find a negative association between blockholder ownership, firm value, and accounting returns. It is interpreted as an indication of the conflicts of interest between controlling owners and minority shareholders. Secondly, controlling owners may retain control even when they are no longer competent to run the firm (Burkhart et al. 2003, Shleifer and Vishny, 1997). Thirdly, controlling owners frequently own more control rights than cash flow rights. This is accomplished through the use of different types of control enhancing mechanisms, such as dual-class shares, pyramidal ownership structures, and cross-holdings. These mechanisms effectively entrench the controlling owners against pressure from corporate governance mechanisms, such as the market for corporate control or monitoring by non-controlling shareholders (Cronqvist and Nilsson, 2003). With relevance for continental European firms Crespi-Cladera and Gispert (2002) show that the agency predictions associated with the market for corporate control cannot be fully supported in a sample of Spanish firms.

A related issue is thus whether the widespread use of control enhancing mechanisms distorts the allocation of capital (Morck et al. 2005 and Khanna and Yafeh, 2006). Looking at data from Swedish mergers Holmén et al. (2007), find little evidence of shareholder expropriation. Extralegal institutions, such as tax compliance and media coverage, are claimed to work as informal institutions consistent with greater shareholder protection. Applying the marginal q methodology on Swedish data, Bjuggren et al (2007) however, provide evidence that dual-class shares worsen investment performance. Furthermore, controlling shareholders may favour retained earnings to dividends which can lead to over-investment. The results show that, on average, the Swedish listed firms has marginal investment returns significantly below their costs of capital. These results are confirmed by Eklund (2008) in a study of investment performance of Scandinavian firms.

A influential paper on the impact of institutional ownership on market value of equity is Claessens et al (2002). They investigate a large cross-country sample of 1,301 firms in East Asia in 1996. Regressing market-to-book values against a number of firm specific variables they find that ownership concentration is positively related to market-to-book, interpreted as evidence of the so-called incentive effect. They also find that a wedge between vote and cash-flow rights is negatively related to market value, which supports the entrenchment hypothesis related to the separation of votes from capital. La Porta et al. (2002) examine a sample of more than 500 large firms in 27 countries; they find that Tobin’s q is positively related to country-wide indices of investor protection. The difference between control and cash flow rights of the controlling shareholder is found to have no significant relationship with Tobin’s q.

Investigating the effect of managerial ownership on Tobin’s q, Kalcheva and Lins (2008) find no evidence that managerial cash flow rights affect Tobin’s q. Disproportional ownership

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14 In a related study Cronqvist et al. (2008) provide evidence in support of the idea that entrenched CEOs pay higher wages to employees as to maintain and enjoy non-pecuniary benefits of control.

15 See Eklund and Desai (2008), for additional empirical investigation concerning the efficiency of capital allocation.
however, is found to have a significant and negative effect on Tobin’s $q$. A study by Cronqvist and Nilsson (2003) analyze the impact of controlling shareholders’ voting rights on Tobin’s $q$, for a panel of Swedish firms during 1991-1997. The results are generally supportive of the results in Classens et al. (2002), with a negative effect of controlling shareholder’s votes on Tobin’s $q$. However, the wedge between votes and cash flow rights comes out statistically insignificant. Studying a panel of 136 Finnish firms during 1993-2000, Maury and Pajuste (2004) find a negative effect of the ratio of voting rights to cash flow rights on Tobin’s $q$.

2.3 Institutional Owners and Dividends

In a world without taxes, transaction costs, and market imperfections, dividend policy is irrelevant for shareholder wealth (Miller and Modigliani, 1961). Assuming that this description of the world is too simplified, agency models of dividends try to explain how agency problems affect dividend policy. The argument according to La Porta et al. (2000b, p.4) is that:

“In a world with significant agency problems between corporate insiders and outsiders, dividends can play a useful role. By paying dividends, insiders return corporate earnings to investors and hence are no longer capable of using these earnings to benefit themselves.”

The fundamental idea behind this approach is that the firm’s investment policy cannot be assumed to be independent of its dividend policy in the presence of market frictions. Dividend payouts may in fact even reduce the inefficiency of marginal investments.

The role of dividends in an agency context can be classified according to two main views (La Porta et al. 2000b). The first type of agency models regards dividends policy as an outcome of agency problems and the legal protection of shareholders. The second type regards dividend policy as a substitute for legal protection of shareholders. La Porta et al. (2000b) find, in support of the ‘outcome’ model of dividend, that firms operating in countries with relatively low shareholder protection pay out lower dividends than firms in the UK and the US, where shareholder protection is considered to be higher. For European firms Faccio et al. (2001) show that the presence of another large shareholder mitigates agency conflicts. That dividend payout decreases with the voting power of the largest shareholder is shown on a sample of German listed firms by Gugler and Yurtoglu (2003). Conversely, the voting power of the second largest shareholder is found to have a positive effect on dividend payouts.

Based on the assumption that institutional investors are more likely to invest in dividend paying stocks (justified by prudence restrictions etc.), Allen et al. (2000) provide theoretical arguments for why firms pay dividends rather than repurchase shares. Furthermore, they argue that institutional owners, with large ownership stakes, play a more important role in overseeing the management than dispersed retail investors.

In line with an extensive body of research concerning shareholder clienteles based on taxed-induced preferences for dividends, Perez-Gonzales (2003) finds that changes in tax rates affect firm dividend policy in firms with dominant shareholders. Holmén et al. (2008), show a negative cross-sectional relationship between insiders’ effective tax rates and dividend payout. Looking also at the impact of large block trades on dividends, they show that large shareholders adjust dividends to suit their individual tax situations. Dahlquist et al. (2007)

16 The path breaking works in this body of research are the studies by Miller (1977), Miller and Scholes (1978) and Brennan and Thakor (1990) who examine the effect of taxes on an insider shareholder’s preferences for capital gains or dividends. The empirical evidence has shown that, ceteris paribus, the higher the tax rate paid on dividends, the lower the preferred dividend payout.
show that tax-neutral investors, such as institutional investors\(^\text{17}\), have significantly higher dividend yields on their portfolios than investors faced with higher effective tax rates on dividends than on capital. From a sample of Finnish firms, Kinkki (2008) supplies evidence that, in cases where the controlling shareholders do not have absolute control, minority shareholders collude to affect dividend policy. Regarding institutional ownership in particular, Del Guerico (1996) and Grinstein and Michaely (2005) find that institutions prefer dividend-paying stocks. In line with these results Michaely et al. (1995) and Dhaliwal et al. (1999) document changes in institutional ownership around dividend initiations and omissions.

By paying out dividends the firm will also be more dependent on the capital market. The capital market will thus supply monitoring at a low cost for outside shareholders (Easterbrook, 1984). In this way, the ‘substitute’ models of dividends rely on the need for firms to raise new capital through the capital market. To do so on attractive terms, the controlling shareholder or manager must establish a reputation for not expropriating outside shareholders (Maury, 2004). In a related paper, Myers (2000) proposes that managers can stay in control, only if outside shareholders believe that future dividend payments will be made. In line with this reasoning Gomes (2000) suggests that managers or controlling shareholders could reduce agency problems, by developing a reputation for treating outside shareholders well. Zwiebel (1996) argues that managers pay dividends in order to avert challenges for control. The treat of takeover is consequently disciplining managers and mitigating inefficient use of retained earnings. This proposition would also explain why managers seem reluctant to lower dividend payout ratios in response to declining profits.\(^\text{18}\) Looking at the payout ratio of the U.S. equity market portfolio, Arnott and Asness (2003) find that earnings growth is largest when current payout ratios are high and smallest when payout ratios are low. This evidence is in line with the view that managers use dividends to signal future earnings expectations, or engaging, at times, in inefficient empire building.

2.4 Performance and the Persistence of Profits

Tantamount to performance a key variable in economic analysis is profitability, not only as evidence of a firm’s productivity, but also as a foundation of the economic accumulation process. Since profits, for most firms, are generated in a process of competition, studies about the dynamics of company profits often start out by analyzing the process of competition. This branch of research was initiated by Mueller (1977, 1986) Connolly and Schwartz (1985), Levy (1987), Geroski and Jacuemin (1988). The question of the intertemporal pattern of profitability related to market structure had previously been raised by Brozen (1971a, b). For an excellent review of previous studies, see “The dynamics of company profits: an international comparison” (Mueller, 1990). Underlining these studies is the assumption that monopolistic attributes are present in many firms and industries, even under competition. As a result profits above the norm can be found in some firms and industries. Mueller (1986, p. 27) concludes that:

“Although the general pattern of results … is consistent with an overriding tendency for profits to regress back onto some normal, competitive level, the regression is not complete either in the sense that all firms exhibit such a regression, or that those that do experience a complete return to the competitive level.”

\(^{17}\) Based on the classification of investors according to tax preferences Dahlquist et al. (2007) also investigate ‘Swedish investment funds’, which is identical to closed-end investments funds. This group of investors, often pivotal as control instruments in the typical Swedish ownership spheres, is found to have preferences for retained earnings.

\(^{18}\) For discussion, see Short et al. (2002).
In particular, it has been shown that under monopolistic competition above-norm profits persist as a result of market power or in the form of new products or technologies (Mueller, 1990). Bourlakis (1997) test the competitive environment and persistence of profits hypothesis for a sample of Greek manufacturing firms between the years 1958 to 1984. The results show that high industry concentration and high barriers to entry lead to new firms entering the market, which indicate that disciplinary competitive forces are at work in the manufacturing industries.

As framework for the analysis of the competition process two basic models have been used in the literature. Within the first framework, concentration and profitability are directly correlated and the divergence between price and costs is greater in concentrated industries. Most empirical work based on this model is cross sectional in nature with a vector of factors determining the level of profitability. The major drawback in this type of analysis is that it takes little or no account of dynamic processes. These processes, i.e. entry and exits of firms in response to abnormal profits within industries, may naturally erode profits and render policy implications void. The other type of framework is based on a perspective of creative destruction. According to this view innovation creates monopolies; monopolies create profits, and this subsequently generates imitators until normal returns are restored within the industry. Roberts (2001) presents a theoretical framework for firm-level profit persistence that embraces product and competitor innovation, and, more importantly, the prospect that several product innovations may be materialized within a single firm.

The usual factors used to describe the determinants of long run profitability are; market structure (industry characteristics), market share, market share growth, productivity, firm concentration ratio, replacement value of capital stock, and growth of the firm. Other, less straightforward determinants are barriers to entry, minimum efficient size measures, stock of advertising, and the stock of research and development (R&D). Roberts and Dowling (2002) find that firms with a relatively good reputation are better able to sustain profits above the norm. Regarding R&D, it is likely that it is the ‘persistence’ in R&D investments rather than the absolute stock that influence the long run profitability.

In a study of firm-level profitability Yurtoglu (2004) show, using a sample of the 172 largest multinational firms in Turkey, that firm-level profits converge but that the convergence process is incomplete. Due to unavailability of data no tests are made regarding the effect of R&D on profitability. Studying industry aggregates for a sample of more than 12,000 US firms Waring (1996) however, finds that industry specificities such as R&D levels have a significant impact on the speed of convergence. Bentzen et al. (2005) confirm the result that industry aggregate returns persist, in a study of Danish firms and profitability. In a study based on a large panel of nearly 1600 Danish firms Smith et al. (2003) investigate how ownership affect the persistence of firm profits. The results indicate a positive relationship between the number of owners, the persistence of profits, and the permanent level of firm profits. Conversely, firms characterized by a highly concentrated ownership are found to have significantly higher rents. Although not discussed directly in the study, these results might be an indication of a non-linear relationship between ownership and performance (Morck, Shleifer, and Vishny, 1988).

Investigating Japanese manufacturing firms, Odagiri and Yamawaki (1990) also conclude that profits persist. In a recent study using fifteen years of additional data Maruyama and Odagiri (2002) show that this ‘persistence of profits’ persist. Furthermore, the firms’ profit performance is shown to be positively related to measures of market share.

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19 See Klepper and Graddy (1990) for a seminal study of the so-called “product life cycle”.

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2.5 Risk-Adjusted Performance Measures

Consumers would like the mutual funds’ they invest in to maximize risk-adjusted expected returns. Portfolio managers, however, are often motivated by their compensation, which is tied to the mutual fund companies’ assets under management. If the actions that maximize assets under management differ from the actions that maximize risk-adjusted expected returns, inefficiencies related to this conflict will arise. A seminal paper in this area is Lakonishok et al. (1991) “Window Dressing by Pension Fund Managers”; see also Chevalier and Ellison (1997). One can therefore characterize the relationship between retail investors, portfolio managers, and mutual fund companies’ as a double principle agency problem.20

Many researchers have questioned the rationality of investors who place money with active managers, despite their apparent inability to outperform passive strategies21. The relative performance of mutual fund managers also seems to be largely unpredictable from past relative performance (Berk and Green, 2004). Many researchers have regarded this as evidence for market efficiency (see e.g. Malkiel 1995, and Ross, Westerfield and Jaffe 2002). 22 This withstanding, considerable effort and resources are devoted to evaluating past performance of managers (Gruber 1996, and Daniel et al. 1997). The reason is that a strong relationship has been documented between the inflow of new investment into a mutual fund and the fund’s past performance (Patel et al. 1990, Ippolito, 1992, Sirri and Tufano, 1998, Agrawal et al. 2004, and Baquero et al. 2005). Since portfolio managers usually receive a fixed percentage of assets under management as compensation, they will have an incentive to take actions that increase the total assets of the fund.

Practitioners in the financial industry often put strong emphasis on evaluations based on total return, although more sophisticated measures exist. Academics on the other hand, often stress individual utility functions and measures of portfolio performance based on so-called prospect theory, which captures not only risk and return, but also reflects differences in the aversion to upside or downside risk (Gemmell et al. 2005). The most conventional risk-adjusted performance measures used by both practitioners and academics are; the Sharpe ratio; Jensen’s alpha; the Sortino ratio (Sortino and Van der Meer, 1991); and the Higher Moment measure (Hwang and Satchell, 1998), for reviews of performance measures see Chen and Knez (1996) and Amenc and Le Sourd (2007). Return-based style analysis, a method introduced by Sharpe (1988, 1992) has also become a popular tool when evaluating mutual fund returns (For more detailed discussion see, Van Campenhouw, 2002). The techniques and methods of evaluating the relative performance of mutual fund managers are thus a many as they are diverse.

There is however a consensus that a good performance measure for portfolio evaluation should reflect not only the return, but also the risk taken to achieve that return, relative to some

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20 Considering also that the mutual fund company has controlling owners one could describe it as a three folded agency problem; for an excellent review relevant to the Swedish mutual fund industry in particular, see Pålsson (2001). For a general discussion about mutual funds, see Haslem (2003).

21 A leading paper within this field is Jensen (1968), see also Carhart (1997) for an extended discussion as regards to the persistence in mutual fund returns.

22 The efficient market hypothesis states that security prices fully reflect all available information, assuming no costs associated with information or trading (Grossman and Stiglitz, 1980). In reality however, there are surely positive information and trading costs (Fama, 1961; 1991). Recognizing this Jensen (1978) reformulate the efficiency hypothesis as saying that security prices reflect all information to the point where the marginal benefits of acting on information do not exceed the marginal cost. Ambiguity regarding information and trading costs is not, however, the main impediment to inference about market efficiency. The joint-hypothesis problem, of testing the hypothesis together with some asset-pricing model, may be more serious (Fama, 1991). Although there might be disagreement about the implications for efficiency, most academics agree on the facts that emerge from test underlined by the assumption of market efficiency. The empirical work on market efficiency and asset-pricing models has fundamentally changed the views and practices of market professionals (Fama, 1991).
appropriate benchmark. An important issue relevant for most measures of portfolio performance is, that the evaluation method should be easy to understand and use. Without this feature many evaluation techniques and performance measures remain academic comments.

Modigliani and Modigliani (1997) therefore present a measure of portfolio performance which through a theoretical leveraging of the portfolio makes it risk-equivalent to the benchmark index. The measure, referred to as the M2-measure (from the two authors), is essentially an adaptation of the Sharpe-ratio (Sharpe, 1966). The two measures consequently rank portfolios identically. Compared to the Sharpe measure, which remains rather esoteric, the merit of the M2-measure is that it calculates the risk-adjusted performance in percentage points, like the original return of any portfolio or benchmark.

Common to all performance measures based on variance as a measure of risk, is the assumption of normality in Net Asset Value (NAV) returns. Most NAV returns however, demonstrate skewness and kurtosis (Gemmill et al. 2005). A continuing and widespread use of variance as measure of risk nevertheless speaks in favor of this assumption when evaluating portfolio performance.

In a recent study Kosowski et al. (2007) investigate whether it is possible to detect funds that outperform the market by dropping the assumption of normality associated with classic t tests. Using boot strapped errors they find that some managers are able to produce positive alphas. If such skills exist, they will most likely disappear as soon as they are discovered as investors would buy into those particular manager’s funds. This would then support Berk and Green’s (2004) hypothesis about fund returns in a competitive environment. Over the last decade there have been many more attempts to analyze returns from portfolios with asymmetries in investment returns (for overview, see Keating and Shadwick, 2002). This has resulted in the current fashion for style analysis (i.e., Lhabitant, 2002; Chan et al. 2002). In particular, much of the work has been devoted to “hedge” funds (Sirri and Tufano, 1998; Agrawal et al. 2004, and Baquero et al. 2005).

Part three of the review now follow with a discussion of some methodological and empirical issues that are relevant for all these fields of research. A short commentary on the differences between Tobin’s average q and Marginal q is included.

3. METHODOLOGICAL AND EMPIRICAL ISSUES

Most studies in the corporate governance literature normally use some proxy for the performance of the firm as dependent variable. Usual performance measures are net income/net worth, return on equity, and return on assets or Tobin’s average q. Furthermore, the majority of studies explore data of either US or UK large-firms (for overview, see Gugler, 2001). Based on these datasets the assumption of ‘one share-one vote’ prevails and little regard is paid to the difference between cash flow ownership and voting rights. The implicit assumption is consequently that the effect of a separation of votes from capital is immaterial. Other methodological issues relevant for investigations concerning corporate governance and performance are; omitted variables, firm and industry effects, and reverse causality. Although more research is generally warranted, some studies have tried to address these issues more in-depth. This section will try to summarize some of the findings.

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23 For a discussion about measures of mutual fund performance and benchmarks, see Lehmann and Modest (1987).
24 An alternative approach is to apply the so-called Euler equation model (Bond and Meghir, 1990), which basically considers optimal capital accumulation in the presence of convex adjustment costs. Using this methodology Kondi et al. (1994) find that, consistent with the literature on the effect of financial factors on company behaviour, ownership is related to the sensitivity of cash flows. State-owned firms are found to be more sensitive to cash flow than privately owned firms. The results also suggest that firm size is relevant for the availability of external capital.
3.1 Tobin’s q versus Marginal q

Although correct for estimating a firm’s expected future growth opportunities the usual Tobin’s q, market value of equity and debt over the replacement cost of capital, actually says very little about the past performance of the firm’s investments. A performance measure used in empirical investigations concerning corporate governance and firms’ performance should mirror how well the management succeeds in maximising shareholder value. Although Tobin’s q has this property theoretically, its true application in empirical studies fails to provide a proper evaluation. In fact Tobin’s q is an average measure of performance and as such it suffers from some serious drawbacks.” Apart from confusing inframarginal and marginal returns, the use of average measures of performance imply the need to ‘specify a fully structural model of the determinants of performance’ (Gugler and Yurtoglu, 2003). The problems of omitted variable, reverse causality, and/or endogeneity typically follow. An analysis of efficient resource allocation therefore has to be of a marginal character (Mueller, 2003). Mueller and Reardon (1993) derive a marginal q, which is essentially the marginal Tobin’s q. Assuming that the market is efficient, the problems associated with average returns and calculating firm-specific cost of capital can be circumvented.

The marginal q measures the ratio of the change in a firm’s market value to the cost of the change in total assets (investment) that caused it. The market efficiency assumption implies that the market makes an unbiased estimation of the firm’s future cash flows. A marginal q less (greater) than one, indicates that the investments at the margin had a return less (greater) than the cost of capital. Firm value is thus only maximized when marginal q is equal to one. The marginal q also allows for different levels of firm specific risk (firm specific cost of capital) by presupposing a correct market evaluation of the firms investments and value.

Another advantage with the marginal q is that it obviates the need to specify a fully structural model of the determinants of performance. A sufficient condition of inefficient investment decisions is that marginal q is below one (Gugler and Yurtoglu, 2003). Problems of reverse causality or endogeneity are also not likely when marginal returns are examined. Gugler and Yurtoglu (2003, p. 380) present an example:

“low average Tobin’s q for firms with a diffuse ownership structure might not indicate that the shareholders are poor monitors of managers, but rather that original large shareholders have diffused their holdings because investment opportunities were bound to decline or simply because they wanted to diversify their wealth. An estimated q<sub>m</sub> of less than one, on the other hand, must be interpreted as a management failure. If firm investment opportunities are low, and its management are maximizing shareholder wealth, they will invest little and the returns on this investment will (at least) equal the cost of capital.”

Marginal q thus has a straightforward interpretation, with a marginal return on investment below the cost of capital the shareholders would have been better off if the firm had distributed these funds directly to them instead. Conversely, marginal returns on investment greater than the cost of capital imply insufficient investment, or cash constraints facing the firms.

3.2 Measurement and Estimation Problems

A problem when studying the influence of ownership on firm performance is that performance may also influence ownership, that is, the relationship is endogenous. It may as a result be

25 Perfect and Wiles (1994) compare five alternative estimators of average q. Their results indicate that Tobin’s q, amongst other things, is highly sensitive to the estimation method.
difficult to identify the true effect of ownership. This problem is also referred to as reversed causality and it has a number of important consequences for the interpretation of the empirical results. In the previous section it was explained why this problem is unlikely when the marginal return on investment is examined.

Another indication of the direction of causality between corporate governance factors and performance can be the functional form of the relationship. Morck et al. (1988) investigate the relationship between management ownership and the valuation of firms, measured by Tobin's average $q$. They find that this relationship is nonmonotonic, meaning that Tobin’s average $q$ first increases, then fall, and finally rises again as management ownership rise. The results are thus in line with the so-called entrenchment hypothesis. A positive but diminishing effect of ownership has since been recorded in a number of studies, see amongst others McConnell and Servaes (1990), Gedajlovic and Shapiro (1998), Miguel et al. (2004), and Pindado and de la Torre (2006). Any study that attempts to assess the effect of ownership on performance should therefore control for this potential non-linearity in the relationship.

In a seminal paper by Himmelberg et al. (1999) a panel data methodology is used to control for both endogeneity and unobserved heterogeneity in the managerial ownership and performance relationship. The results are consistent with the predictions of the principal-agency models, and a large fraction of the cross-sectional variation in managerial ownership is found to be explained by unobserved heterogeneity. There are two main econometric motivations for using a panel data modelling. The first is the desire to control for unobserved time-invariant heterogeneity. The second is to study the dynamics of cross-sectional populations (Arellano, 2003). Particularly the possibility to control for firms or industry related heterogeneity has attracted attention within the corporate governance literature.

Reviewing the existing empirical evidence concerning control enhancing mechanism, Adams and Ferreira (2008) makes inquiries for studies, additional to Cronqvist and Nilsson (2003), which uses the firm-fixed effects methodology to control for heterogeneity. The term fixed effects refers to the sampling in which the same units are repeatedly sampled for a given period holding constant the effects. The researcher can thus control for firm or industry heterogeneity not directly observable in the sample of firms. Due to sometimes limited time variation in both the dependent and the explanatory variables, an alternative approach to panel data models is to use cross-section data for each year separately.

While ownership may differ significantly across firms Zhou (2001) shows that these changes in (managerial) ownership typically changes slowly over time within a company. By relying on within variation consequently, fixed effects estimators may not detect an effect of ownership on performance even if one exists. Other types of owners however, such as institutional owners, most likely alter their ownership stakes more often. Industry variation may also be substantial, making fixed effects models with industry effects viable as an alternative to firm effects.

Assuming that controlling owners may prefer low dividend payments, if private benefits of control are extracted, and that minority shareholders may prefer high dividends, Thomsen (2004) tries to distinguish between the incentive and entrenchment effects. Utilizing a GMM methodology, which accounts for potential endogeneity, a negative effect of blockholder

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26 Although Adams and Ferreira (2008) only mention Cronqvist and Nilsson (2003), recent studies are increasingly using panel data methodologies and fixed effects models for estimations, see i.e. Wiberg (2008).


28 For in-depth discussion of the estimation theory of generalized method of moments (GMM) and optimal instrumental variables, see Arellano and Bond (1998).
ownership on firm value (measured by Tobin’s q) is found in continental Europe. The same effect is not verified for firms in the US and UK. In addition, blockholder ownership is found to have a negative effect on dividend payout ratios. In a similar study Thomsen et al. (2006), use Granger tests to investigate the causal relationship between blockholder ownership and firm performance. Again the results support a negative association between blockholder ownership, over a certain level (>10%), and performance. Benfratello and Sembenelli (2006) also stress the importance of controlling for simultaneity of ownership variables in a study of the effects of foreign ownership on productivity. Applying a GMM methodology on a sample of Italian located firms, and controlling for input simultaneity, the results indicate that foreign ownership has no effect on productivity. However, when also controlling for simultaneity of ownership, they find that nationality matters and US firms tend to be more productive than firms under Italian ownership. Overall, the results from empirical investigations of endogeneity in the ownership and performance relationship give support for the findings in previous studies. That is, a positive but diminishing effect of ownership concentration, and aggravated agency conflicts between controlling shareholders and minority shareholders, due to incentive and entrenchment effects.

4. SUMMARY AND CONCLUSIONS

Basic theory of finance assumes that investment is the only fundamental factor explaining long-term changes in firm market values. Existing research suggests that investments represent a fundamental factor explaining how market values of firms change. During times of great market uncertainty however, such as in a stock price bubble, investors seem to be more prone to making systematic errors in their forecast of firms operating in certain novel industries. As these firms are operating in industries with limited historical data, information asymmetries will be more malignant than in industries where a large body of previous experience exists.

Regarding institutional owners influence on investment performance of firms empirical evidence indicate that both domestic and foreign institutional owners influence firm performance positively. By estimating firm performance with the marginal q methodology it is possible to estimate the firms’ actual performance in terms of investment efficiency. The empirical evidence is consistent with both the incentive effect of increasing ownership and the so-called entrenchment effect. That is, the relationship between institutional ownership and firm performance is found to be positive but marginally diminishing. When control instruments such as dual-class shares are used, the positive effect of institutional ownership is absent, most likely due to increased agency-problems related to the augmented separation of ownership from control. The use of this type of control instruments thus becomes an important determinant of firm performance which eradicates the otherwise positive incentive effect associated with increased ownership.

In line with La Porta et al. (2000b) it is argued that the presence of influential stakeholders, other than the controlling owner(s) or management, can influence the performance of firms. Studies investigating the link between institutional ownership and dividend payments have provided evidence in support of this claim. In particular it has been shown that institutional owners influence the firms to distribute a larger fraction of the profits to the shareholders, thus limiting the resources available for managerial discretion. Most studies on the relationship between ownership and dividends have been made on US or UK data, which do not take into consideration the particular governance attributes of the continental European corporate governance model with highly concentrated ownership structure related to control enhancing mechanisms.

Microeconomic theory predicts that the dynamic process of competition will restore profits
to a normal level. According to this point of view, profits in excess of the opportunity cost of capital are nothing more than a transitory disequilibrium phenomenon. Depending on the firm structure and concentration in a particular industry, profits will move towards the equilibrium profit level i.e. the industry average, during a certain amount of time, if the profits converge at all. Some firms however, can maintain profits above the industry average, even in the absence of significant barriers to entry and exit. By investing in R&D for instance firms can develop technique, goods and services that allow them to maintain a competitive edge, and thus sustain profits above the industry average.

A number of studies has investigated the proposition that firm specific above norm profits exist and that these profits persist over time. By applying dynamic panel data methodology which accounts for both time and firm effect's the role played by R&D investment in relation to profit persistence can be further explored. Many previous studies have applied a cross section methodology although a panel data approach allows a more accurate inference of the estimated parameters.

The empirical evidence show that profits converge over time, but this process of convergence is incomplete. Firms that had profits significantly higher (lower) than the industry average 20 years ago, still present profits above (below) the average. One explanation for this persistent profit divergence, and particularly for profits above the norm, is sustained investments in R&D. Not only do firms with sustained R&D investments exhibit higher profit levels, the relative level of R&D is also positively related to the persistence of the firms’ profits.

There is no consensus in the literature on a return measure appropriate for the evaluation of institutional investors and in particular on how to appraise mutual fund performance empirically. A measure developed by Modigliani and Modigliani (1997) may nevertheless be a good candidate to use as measure of risk-adjusted performance. The main advantage with this measure is that it appraises performance in basis points like the original return of any asset. When risk-adjusted in this way, empirical investigations show that the performance of many mutual funds improves noticeably, although most funds still underperform the benchmark index. The reason for this underperformance is generally attributed to a lower risk level in the mutual fund portfolios compared to the benchmark index.
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