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Abstract

This paper highlights some theoretical arguments and empirical results on whether legal-based minority protection affects information content of dividends in Finland. In Finland minority protection applies only in profitable years. I find, that minority protection (as in Finland) decreases information content of positive dividend changes and increases information content of negative dividend changes. When dividend cash flows exceed minority dividend (because minority shareholders have utilized minority protection), information content of dividend disappears concerning both positive and negative dividend changes. The result suggests that minority protection (as in Finland) decreases information content of dividends.

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1. Introduction

Signalling theory hypothesizes that someone inside a company signals to someone outside a company. In this study managers and largest shareholders are rated as insiders and minor shareholders as outsiders. Corporations with diversified shareholding are controlled by managers (Jensen, 2000) and, according to the basic hypothesis of the information content of dividends, managers use changes in cash dividends to convey information about future earnings changes (e.g. Miller and Modigliani, 1961, Bhattacharya 1979, Miller and Rock, 1985, John and Williams, 1985).[2] Corporations with concentrated shareholding are controlled by major shareholders and who can effectively determine the decisions of managers (Schleifer and Vishny, 1986, Ang *et al*., 2000, Maury, 2004) and also they have power to implement dividend policies that benefit themselves at the expense of minority shareholders (LaPorta *et al*., 2000, Claessens *et al*., 2000). In tightly owned corporations there is no asymmetric information between major shareholders and managers (Megginson, 1997) and there is no need to use dividends as signals. Corporate and other law, however, gives outside investors, including minority shareholders, certain powers to protect their investment against expropriation by insiders (La Porta *et al*., 2000). This may lower the informativeness of dividends since dividends are based on minority protection and not on information content. The goal of this study is to explore whether legal-based minority protection affects the information content of dividends.

The extent of legal protection of outside investors differs enormously across countries (La Porta *et al,.* 2000). In Finland minority protection also directly includes the right to demand so-called minority dividend and according to Company Act in Finland, minority protection depends on the amount and sign of the earnings, thereby allowing for the possibility to test the influence of minority protection on informativeness of cash-dividends in different situations.[3] According to La Porta *et al*. (2000) good shareholder protection causes higher dividend payouts. It also implies that other things equal, dividends are stickier and less sensitive to changes in current earnings (Lin, 2002). This would mean that in Finland for profitable years (when minority protection is in force) information content should be weaker compared with years when earnings are negative.

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[2] Empirical testing for dividend signalling broadly falls into two major types: (1) share price or share returns related to dividend announcements (eg.: Pettit (1972), Aharony and Swary (1980), Dann (1981), Healy and Palepu (1988), Dewenther and Warther (1998) and Koski and Scruggs (1988)), and (2) dividend changes related to firm's earnings. According to Tse (2005), in general, the price-dividend type empirical evidence supports the dividend signalling hypothesis but the empirical evidence from dividend-earnings tests is conflicting. In this study the focus is on the relation between dividends and future earnings.

[3] Company Act of Finland states that shareholders having at least one tenth of all shares have a possibility to demand so called minority dividend which is half of the profit of the fiscal year, however (since 1999) not more than 8 percent of the equity (5 percent 1973-1998). In Finland minority protection only affects profitable years (Kyläkallio, 1980), no minority protection exists when losses are incurred.

The goal of regulation is to attain efficient financial markets so as to improve the allocation of resources in the economy (Goshen and Parchomovsky, 2004). Outside investors and shareholders need more information on behaviour of managers and controlling shareholders. Also regulators in EU and EU accession countries need more information on consequences of regulation methods and the relation between regulations and behaviour of outside and controlling shareholders. In Europe minority protection is established on national basis (Kinkki, 2007) and this paper gives to regulators in EU and EU accession countries information on the relation between minority protection (in Finland) and behaviour of managers and minority and controlling shareholders concerning the information content of dividends.

It is not very clear in the finance literature why some firms use dividends to signal whilst some do not[4]. On the other hand minority protection differs across countries (La Porta *et al.*, 2000) and especially in Europe (Kinkki, 2007). Differences in legal regimes concerning minority protection could explain conflicting results concerning empirical dividend-earnings tests. The main contribution of this paper is to gives insights into how legal regimes (as in Finland) influence the information content of dividends. This paper continues discussion of dividend decisions related to legal regimes (LaPorta *et al.*, 2000) and ownership structures (Maury, 2004) but focuses on the information content of dividends. Minority protection in the USA is, however, based on common minority rights (La Porta *et al.*, 2000) and not minority dividend (as in Finland)[5].

I add to the existing evidence in several distinct dimensions. First the sample consists of listed companies (1,104 company years) on the Helsinki Stock Exchange for the period 1985-1999. I find that when there is no minority protection (as in Finland) or when minority shareholders are unable to utilise minority protection, positive dividend changes give information about future earnings changes. I also

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[4] Empirical studies supporting information content of dividend hypothesis (dividend-earnings studies) are for instance, Lintner (1956), Fama and Babiak (1968), Brickley (1983), Ofer and Siegel (1987), Healy and Palepu (1988), Aharony and Dotan (1994), Lee (1996), Ho and Wu (2001) Nissim and Ziv (2001). Opposite results have been reported for instance Watt's (1973), DeAngelo *et al.*, (1996), Benartzi *et al.*, (1997) and Grullon *et al.*, (2005). Empirical studies have provided mixed results with respect to the information content of dividends (Allen and Michaely, 1995). DeAngelo *et al.*, (2000, p.310) conclude that "the theoretical interest in signalling models on the other hand, with limited empirical support on the other, has made the relevance of dividend signalling an important unsolved issue in corporate finance".

[5] Minority protection on dividends can be divided into at least three distinct groups: 1) shareholders having general rights of voting directors and protecting wealth expropriation (La Porta *et al.*, 1998), 2) shareholders having specific rights to dividends (minority dividend) and 3) shareholders having mandatory dividends. In the USA minority protection is based on strong general rights. Neither European Company Law nor the Code, however, includes explicit statutes concerning minority protection. It concerns the relations between managers, shareholders (as a group) and the company. Minority protection is established on a national basis. The European Commission has not chosen the detail-oriented and rule-intensive approach that is taken in the Sarbanen-Oxley Act (USA) and which is difficult to use in a European context where problems, markets, traditions and cultures differ in several aspects from those in the USA. The EU has recommended that member states should establish their own national codes of practise which take into account specific national factors and reflect the diversity of corporate governance practises and systems within the EU.

find that the information content of dividends could be affected by managers, as Miller and Modigliani (1961) proposes. Respectively negative dividend changes do not give information about future (negative) earning changes as Lintner (1956) reports, because managers are reluctant to cut dividends, or, as Myers (2000) proposes, managers can continue in their current position only if outside equity investors believe that corporate insiders will pay future dividends. When there is no minority protection, ROE is also a predictor of future earning changes, as Nissim and Ziv (2001) propose. These results (as there is no minority protection) are also in accordance with US results.

Second I report that when minority protection is in force, both positive and negative dividend changes are informative about future earnings changes for the subsequent year. However, compared to the situation when minority protection is not in force, the information content of positive dividend changes is much weaker and the information content of negative dividend changes much stronger. The result contradicts the results of Watts (1973) and Gonedes (1978), who report the average estimated coefficient of current dividends to be positive, however, the average significance level was too small. The results also contradict those of Korhonen (1977), Wahlroos (1979) and Yli-Olli (1982) who (in Finland) tested Lintner's (1956) or Watt's (1973) model on the information content of dividends[6]. During their research, however, minority protection was not in place in Finland.

Third, the result indicates that negative dividend change is a stronger indicator than positive dividend change. The result is in accordance with Kinkki (2007) who reports that during positive earnings (when minority protection applies), the largest minority shareholders are able to form coalitions to reach minority protection to increase dividends. In that case dividends are determined according to minority protection and not the information content of dividends. Managers are reluctant to cut dividends (Lintner, 1956) but as minority protection exists and when dividends are determined according to minority dividend law and not on the information content of dividends, managers are not able to use positive dividend changes for the information content of dividends. In that case negative dividend changes are used for information purposes instead of positive dividend changes. That could explain why negative dividend change is a stronger indicator than positive dividend change. In Nissim and Ziv (2001) and Grullon *et al.* (2005) positive dividend change is a stronger indicator than negative dividend change indicating that minority protection (as in Finland) influences on the information content of dividends. Nissim and Ziv (2001) assumed that dividend decreases does not indicate future earning changes due to accounting conservatism. The result also suggests that controlling shareholders do not use dividend changes to convey information about future earning changes. The result is in accordance with Maury, (2004) who suggest that dominant shareholders enjoy private, non-pecuniary or pecuniary benefits from being in control and they often have more control rights than cash-flow rights.

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[6]   The Company Act in Finland was rewritten 1978.   Research mentioned here was carried out under conditions when the Company Act in Finland did not include a statute concerning minority dividends.

Megginson (1997) claims, that in tightly owned corporations there is no need to use dividends as signals. The result broadens the results of La Porta *et al*. (2000) on how expropriation of controlling shareholders works and how it affects the information content of dividends.

Fourth, when dividend cash flows exceed minority dividend (because minority shareholders have utilised minority protection), the information content of dividends disappears concerning both positive and negative dividend changes. Dividends are then determined according to minority protection and not the information content of dividends. Differences in legal regimes concerning minority protection can partly explain conflicting results concerning empirical dividend-earning tests. Minority protection differs across countries (La Porta *et al*., 2000) and especially in Europe (Kinkki, 2007). The results also show that changing the Finnish tax system (1990), industry and owners' type has only a small effect on the results.

As a conclusion the result suggests that minority protection (as in Finland) decreases the information content of positive dividend changes and increases the information content of negative dividend changes. When minority protection is used it decreases the information content of both positive and negative dividend changes. The result also indicates that minority protection may explain conflicting results concerning empirical dividend earning tests. The goal of regulation is to attain efficient markets so as to improve the allocation in the economy (Goshen and Parchomovsky, 2004) and at the same time, give minority shareholders certain powers to protect their investments (La Porta *et al*., 2000). Regulators need to balance between (1) how to assure efficient the information content of dividends and, at the same time (2) give minority shareholders powers against expropriation by insiders. For minority shareholders as investors, to avoid risks, it could be more valuable to have information on future earning decreases than increases. Minority protection, as in Finland, could therefore provide minority shareholders more benefits than disadvantages.

The study is organized as follows. Section two of the paper concludes the literature review, section three summarizes some of the theoretical arguments, section four describes the data and includes the empirical findings. Section five concludes.

2. Literature review

The information content of dividends has empirically been widely studied[7]. Most studies concern future cash flows and the economic situation. Dividends are seen to be an increasing function of expected cash flow (Brooks *et al.*, 1998, Koch and Shenoy, 1999), they signal of the stability of the firm's future cash flow (Kale and Noe, 1990) or dividend payout ratios (of German firms) are based cash flows rather than published earnings (Goergen *et al*., 2004). Negative net income, however, is clearly not sufficient for dividend reduction (DeAngelo *et al*., 1992). Dividend changes are signals of risk (Eades, 1982, Dyl and Weigard, 1998), differences in performance between otherwise comparable firms (Lipson *et al.*, 1998), associated with an increase/decrease in capital expenditures (Yoon and Starks, 1995), or provide information that is not otherwise available (Shefrin and Statman, 1984). There are also differences in dividend policy and dividend signalling across countries with different institutional structures. In Japan dividends are less sticky and are more responsive to changes in earnings than their US counterparts. This is because Japanese firms have less information asymmetry and fewer agency conflicts (Dewenter and Warther, 1998). In Germany dividends have less of a signalling role than dividends in the USA and the UK (Goergen *et al.*, 2005). In developing countries dividends are a less viable mechanism for signalling compared to US counterparts (Aivazian *et al*., 2003). Firms with more diversified shareholdings and lower concentrations of insider shareholdings are more likely to use dividends to signal (Tse, 2005).

Also dividend initiations and omissions signal (Healy and Palepu, 1988, Akhigbe and Madura, 1996, Ho and Wu, 2001) as well asspecial dividends (DeAngelo *et al.,* 2000)[8]. Managers omit dividends because earnings become inherently less predictable (Sant and Cowan, 1994). Dividends have a larger information effect in over-investing firms (Lang and Litzenberger, 1989), industries with high growth options pay fewer dividends (Smith and Watts, 1992, Gaver and Gaver, 1993) and are positively related to issuing firms (Loderer and Mauer, 1992).

Critical views concerning the information content of dividends has also presented (e.g. Gonedes, 1978, Asquith and Mullins, 1986, Karanjia, 1990, DeAngelo *et al*. 1996). Easterbrook (1984) claims that it is unclear what dividends signal, or if they do, why dividends are better signals than apparently cheaper

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[7] Baker and Powell (1999) revisited the views of corporate managers (NYSE firms) with respect to the dividend setting process and the various explanations for dividends. They noted that signalling theory generally obtained the highest level of agreement from the respondents. Baker *et al*.,(2002) found that the views and opinions of Nasdaq managers were generally the same as their NYSE counterparts.

[8] Repurchases are stronger signals than dividends (Persons, 1997, Grullon and Michaely, 2002). According to Vaughan and Williams (1998) dividends dominate repurchases as a vehicle for transmitting private information to the market. Dividends and Dutch auction repurchases are not independent of each other as signals (Forjan and Theis, 2000). The actual announcement, however, does not reduce information asymmetry among traders (Brooks, 1996) or they are paid to correct stock mispricing (Ofer and Thakor, 1987).

methods. According to Frankfurter and Lane (1992) and Benartzi *et al*. (1997) dividends are more a function of current and past earnings, not future earnings[9]. Brooks *et al.*, (1998) claims that signalling play a relatively minor role in corporate dividend policy. Brav *et al*., (2005) report that they find little evidence to support the traditional signalling hypothesis.

Bernheim and Wantz (1995) found evidence in support of signalling rather than agency explanations as to why dividends are paid. However, signalling could be one way of reducing agency costs. Baker and Powell (1999) interviewed 170 senior managers of US corporations listed on the New York Stock Exchange about several dividend policy issues. The signalling explanation received more support than other explanations[10].

In international studies the information content of dividends have empirically been studied from different views. The phenomenon has been found widely although with mixed results and critical opinions. Finnish data concerning the information content of dividends is not as encouraging. Korhonen (1977) and Wahlroos (1979) found poor results on Finnish data concerning the applicability of Lintner's model (1956)[11]. Yli-Olli (1980) tested models based on Lintner's (1956) and Watt's (1973) propositions but did not gain any empirical support in the Finnish stock market. Yli-Olli (1982) found this effect especially in some Japanese and Swedish firms but in Finnish firms this conclusion only gained weak support. Kasanen *et al*., (1992) suggests that thin capital markets and blocked ownership creates (in Finland) a need for companies to pay out a smooth stream of dividends for the owners. That would mean weak the information content of dividends.[12]

In conclusion, the information content of dividends has been found widely in international studies although with mixed and complex results and critical opinions. The conflicting results of empirical analyses are commonly blamed on differences in modelling, method of analysis, data type or sample period (Frankfurter and Wood, 2002). The choice of variables included in, or omitted from, a model (Watts 1976), the definition used in the estimation of important factors (Miller and Scholes, 1982), the

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[9] Frankfurter and Lane (1992) argues that the explanation of dividends through models of the wealth maximisation rationale is not the only avenue to follow. They suggest that it would be useful to look at the sociological/anthropologic aspects of dividend policy in the milieu of corporate culture. The recognition of the institutional, habitual and customary aspects of the "dividend rites" is solely needed to force the emergence of reformative thinking that will lead to a better understanding of the process.

[10] Baker *et al*. (1985) surveyed 318 corporate financial managers what factors they considered most important in determining their firm's dividend policy. According the results a firm should strive to maintain an interrupted record on dividend payments, a change in the existing dividend payout is more important than the actual amount of dividends.

[11] According to Wahlroos (1979, p.234) reasonable doubt concerning the "the information content of dividends" hypothesis may be expressed. Their studies were made under conditions when Company Act in Finland does not include statute concerning minority dividend.

[12] Kjellman and Hansen (1993) found that new share issues convey the information of a company's intention to survive, and that an increased dividend payment may be announced due to undervaluation of the firm. Their study is an inquiry research.

lack of adequate proxies can make a theoretical model unstable (Roll, 1977). As shown by Baker and Farrelly (1988), attempts to empirically validate theoretical dividend models are thus far inconclusive or in some cases even contradictory. In Finnish studies, the results are not very encouraging if they are based on cash dividends and Lintner's (1956) or Watt's (1973) models testing the relation between dividends and future earnings. Earlier studies, however, have concentrated on the relation between the information content of dividends and future earnings and characteristics of a company although dividends are also a consequence of decision making under legal regimes.

3. Minority protection, controlling shareholders and the information content of dividends

When managers convey information by dividend changes about future earnings changes we have three factors influencing the information content of dividends: (1) controlling shareholder(s) (concentrated shareholding), (2) minority shareholders (diversified shareholding) and (3) legal based minority protection. Controlling shareholder is determined as the largest shareholder alone or the coalition of the two largest shareholders having 30 percent of voting power[13]. According to the Company Act in Finland minority protection affects only the distribution of profits. During negative earnings minority protection rights do not exist. Minority protection is defined as the existence of a minority dividend. Minority dividend is determined as the amount of dividends which minority shareholders, according to the Company Act in Finland, are able to extract as cash dividends. Coalition costs are defined, as costs needed to form a coalition of shareholders having at least one tenth (minority) of all shares. Coalition costs are in proportion to the number of (minority) shareholders in a coalition. Table 1 describes how controlling shareholder, minority protection and coalition costs are supposed to be related to the information content of dividends.

In Table (1):
(1) Controlling shareholder(s) can generate private benefits of control that are not shared with minority shareholders. Control concentration is supposed to increase agency problems, decrease dividends (LaPorta *et al*., 1999; Ang *et al*., 2000; Maury and Pajuste, 2002) and also decrease the information content of dividends. On the other hand Kinkki (2007) reports that controlling shareholders seem to have a strategy where, during negative earnings, dividend omissions are used to balance 'excess' dividends, which are paid during positive earnings when minority protection comes into effect. That could increase the information content of dividends especially

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[13] We follow here Pohjola (1988). Minority protection is reached by shareholders having at least one tenth of all *shares*. Maury (2004) defines another large shareholder as the second largest shareholder holding 20% or more of the voting rights.

if managers are reluctant to cut dividends as Lintner (1956) concludes. I have two possible conditions: controlling shareholder(s) or no controlling shareholder(s)[14].

(2) Legal regimes (minority protection) may give minority shareholders the power to extract cash dividends. According to the Company Act in Finland, the existence of minority protection depends on the +/- sign of earnings. Minority protection should decrease agency problems (LaPorta *et al.*, 2000) and increase dividends. According to Kinkki (2007) minority protection (in Finland) has a stronger influence on managerial control than controlling shareholders having absolute voting power. The purpose of minority protection, however, is not to drive insiders to signal to outsiders but to protect outsiders' investment against expropriation by insiders. Therefore I suppose that minority protection decrease the information content of dividends (during positive earnings). I have two possible conditions: positive earnings (minority protection) or negative earnings (no minority protection).

(3) Minority protection depends on coalition costs. Coalition costs are related to the number of shareholders needed to obtain minority protection. High coalition costs prevent minority shareholders from forming coalitions and give managers the possibility of conveying information about future earnings changes by current dividend changes (as proposed by Miller and Modigliani, 1961). Thus high coalition costs increase the information content of dividends. Kinkki (2007) reports that during positive earnings (when minority protection comes into effect), the largest minority shareholders (low coalition costs) are able to form coalitions to reach minority protection to increase the dividend. I have two possible conditions: low coalition costs or high coalition costs.

Earlier in the introduction it was noted that in Finland for profitable years information content should be weaker compared with years when earnings are negative. Also I hypothesize that the existence of controlling shareholders and high coalition costs decrease the information content of dividends (Case 1). Also I suppose that lack of minority protection and the existence of controlling shareholders decrease the information content of dividends (Case 3). Furthermore, I suppose that minority protection and low coalition costs decrease the information content of dividends (Cases 2 and 5). Comparatively if there are no controlling shareholder(s), managers have control then according to Miller-Modigliani (1961) they convey information on future earnings via dividends (Case 4). However, if there does not exist a controlling shareholder, and no minority protection, managers have control and according to Miller and Modigliani (1961) managers convey information via dividend changes. The sign (in case 6) is suggested to be positive. On the other hand during negative earnings managers are reluctant to cut dividends (Lintner, 1956, DeAngelo *et al.*, 1992) that decreases the information content

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[14] Maury and Pajuste (2002) conclude that, in addition to the largest shareholder, the second largest shareholder might also collude in generating private benefits by paying lower dividends.

of dividends. As a conclusion the information content of dividends should exist[15] 1) when there is no controlling shareholder, minority protection exists and coalition costs are high and 2) when there is no controlling shareholder and no minority protection.

Table 1
Controlling shareholder, minority protection and coalition costs related to possible outcome of the information content of dividends (ICD).
This table shows possible outcomes of controlling shareholder (yes/no), minority protection (yes/no) and coalition costs (low/high) related to the outcome of the the information content of dividends. Also the supposed sign of the coefficient is presented. Minority protection rights are only enforceable when there are profits, minority shareholders ha no right when losses are reported. Case numbers are explained in more detail in the text.

Controlling shareholder	Minority protection	Coalition costs	Influence on information content of dividends (expected sign)	Case number
Controlling shareholder(s)	Minority protection	High coalition costs	Controlling shareholder(s) may extract private benefits, no need for ICD (sign 0)	(1)
		Low coalition costs	Minority shareholders utilise minority protection, low ICD (sign 0)	(2)
	No minority protection		Controlling shareholder(s) may extract private benefits, no need for ICD (sign 0)	(3)
No controlling shareholder(s)	Minority protection	High coalition costs	Managers convey information via dividends in the purpose of ICD (sign ++)	(4)
		Low coalition costs	Minority shareholders utilise minority protection, low ICD (sign 0)	(5)
	No minority Protection		Managers convey information via dividends in the purpose of ICD (sign ++)	(6)

4. Empirical findings

4.1. Sample data, empirical variables and research period

To test the hypotheses above, a sample of Finnish listed companies on the Helsinki Stock Exchange from 1985 to 1999 was collected. We examine only publicly traded firms because of their access to the equity market and because their ownership data is easily available. During the sample period first strong growth was experienced (1985-1990) and then deep depression (1990-1993) until the situation improved (1994-1999). From the point of dividend decision making the period is very appropriate.[16]

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[15] Tse (2005) identified two major groups of firms: potential dividend signallers and dividend non-signallers. He classified dividend payout patterns into five groups: smooth, follow earnings, always increase, irregular and pay nothing. He argued that dividend policy based on permanent earnings is the only factor consistent with a dividend signalling hypothesis. The firms that adopt permanent earnings policy will show smooth payout patterns. Tse also investigated the determinants to separate dividend signaller and non-signaller groups. Determinants are a percentage of insiders' share holdings, major shareholder's share holdings, market capitalisation and asset book values.

[16] Strong changes in economics better express changes in dividend policies. According to previous studies managers are very unwilling to reduce dividends (Lintner, 1956), or the longer the company has been paying dividends the stronger is the reluctance of managers to reduce dividends (DeAngelo and DeAngelo, 1990)

The sample initially consisted of a total of 1,358 observations (company years). Ten observations were omitted due to exceptional accounting periods and 144 because of missing information. This left a sample of 1,104. The descriptive statistics for the sample of Finnish listed companies on the Helsinki Stock Exchange from 1985-1999, are presented in Table 2[17]. Firms in the sample are listed in Appendix 2.

Table 2: Construction of the sample

1,358	Listed firms 1985-1999
- 144	Missing information
- 10	Exceptional accounting periods
1,104	Basic sample

Earnings are measured in two different ways: (1) profit (loss) of the fiscal year is the "bottom line" including the manipulation of net income allowed by Finnish accounting practice. The profit includes extraordinary items, which may increase or decrease payout possibilities. Minority dividend is determined according to profit in the fiscal year. (2) Earnings are specified as profit/loss before taxes and appropriations (profit/loss before extraordinary items)[18]. It indicates the company's ability to distribute dividend and its future investment potential. It includes extraordinary items, which may increase or decrease payout possibilities, but do not include the manipulation of net income allowed by Finnish accounting practice[19].

Dividends are defined as total cash dividends paid to shareholders. In companies with dual-class shares it includes dividend cash flows of both share series[20]. Dividends are measured as the rate of change in dividend per share. The numbers of shares are adjusted for stock splits and stock dividends. I do not examine share repurchases, which have been commonly taken as an alternative to paying

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[17]   The data was collected from annual reports of the firms and Kansallis-Osake-Pankki's Pörssiyhtiöt (Listed Companies in Finland) publications (1985-92), Kauppakaari-yhtymä Oy's Pörssiyhtiöt publications (1992-95), Gunnard Kock's Pörssitieto publications (1996-2000) and Arvopaperi publication Listatut yhtiöt 2000-2001.

[18]   I use this measure to make the results comparable to Benartzi *et al*., (1997) and Nissim and Ziv, (2001). Watts (1973) measured earnings as the final reported earnings, Wahlroos (1979) specified earnings as net income or net income plus depreciation, Yli-Olli (1980, 1982) criticises Wahlroos's choices and measured earnings by corrected net income plus the difference of write off reserves. According to Yli-Olli (1982) earnings variable including depreciation is not theoretically correct one, because it is not possible to pay out depreciation in the long run. Finnish accounting rules have provided the firms with exceptionally large opportunities to smooth income. According to Kallunki *et al.* (1997) the reported earnings of Finnish firms are typically close to zero and have low variability over time. This is because taxation is based on reported earnings figures and the tax rate has been higher than in many other western countries. As a result, Finnish firms have incentives to systematically reduce reported earnings figures to avoid taxes. Therefore, the reported earnings as such have little information content for investors.

[19]   The depreciation changes shown by the financial statement have been compared with the company's depreciation schedule, i.e. the budgeted depreciation requirement. If the depreciation changes actually made exceed the budgeted amount, the difference improves the company's profitability, while under-depreciation has a contrary effect. If the annual report contains no mention of the budgeted depreciation requirements, the depreciation changes are compared with the maximum changes permitted under the Business Income Tax Act.

[20]   According to Jensen and Ruback (1983) and Jensen and Warner (1988) the creation and issuance of limited voting power shares is a means to reduce the relative equity position of the controlling shareholder in the company without reducing control. In this paper we are interested in the voting power of major shareholders, not depending on share structure. Share structure is then just an instrument to have and keep power.

dividends[21]. I indicate that firms may be more focused on dividend levels (dividend/share) than dividend yields (dividend/price). In Finland dividends are paid only once a year, whereas in the USA and Canada they are paid quarterly and in the UK semi-annually[22]. Dividends are, however, set in response to annual rather than quarterly earnings (Watts, 1973, Nissim-Ziv, 2001). Major shareholder's voting power is measured at the end of the accounting period[23].

Controlling shareholder(s) is measured by largest shareholder alone or two largest shareholders together, having at least 10/30/50 percent of the voting power[24]. Coalition costs are measured by after largest/the two largest shareholders average number of shareholders needed to obtain 10% of shares[25]. The fewer the number of shareholders needed to obtain minority protection (10% of shares) the lower the less coalition costs. We must note that largest shareholder(s) is measured by voting power, minority shareholders by number of shares.

4.2. Descriptive results

Table 3 presents descriptive statistics for the sample. The sample selection criteria in a sample of 1,104 observations: 521 dividend increases, 287 dividend decreases and 296 no-change observations. Similar to DeAngelo and DeAngelo (1990), Nissim and Ziv (2001) and Grullon *et al.*, (2005), we observe that dividend increases are more frequent (see Panel A) and dividend decreases are larger in magnitude and that brings about a change in dividend/share but not dividend cash flows (see Panel B). According to Baker *et al.*, (1985) a change in the existing dividend payout is more important than the actual amount of dividends. Column 'no change' also includes dividend omissions, which explains the small mean and median numbers.

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[21]   According to Löyttyniemi (1991, 86) investors should slightly prefer changes in the dividends per share to stock dividends, and stock dividends to the dividend implications of rights issues. This is due to two facts. First, announcement of the dividend per share precedes the payment day by one or two months. The new shares from a stock dividend usually receive the dividends for the current fiscal year and are usually paid three to twelve months after the issue announcement. New shares from right issues usually receive half or none of the dividend paid for the current year. By discounting the same expected cash flows, the timing factor should make the expected present value of information on the change in dividend per share greater than information on an equal stock dividends, and information on a stock dividend greater than information on a rights issue. Second, the information on dividends per share is nearly certain. Normally the dividend per share proposal goes through in shareholders' meeting. The implications of stock dividends and rights issues are uncertain. According to Barchlay and Smith (1988) share repurchases may mean higher costs for the company than cash dividends, owing to increased insider trading and wider bid-ask spreads. Renneboog and Trojanowski (2005) concludes that the role of share repurchases is increasing, but dividends still constitute a vast proportion of the total payout.

[22] Look for more on differences between US and Finnish stock markets in Kinkki (2007).

[23]   Actual dividend decisions are made at shareholder's meeting 3-4 months after the accounting period.

[24]   10% is needed for minority protection, 30% is used by Pohjola (1987), 50% gives the majority of voting power. In addition to the largest shareholder, the second largest shareholder might also collude in generating private benefits by paying lower dividends (Maury, 2004, Renneboog and Trojanovski, 2007). Opposite to that, Gugler and Yortoglu (2003) report that (in Germany) payout levels decrease in the power of the largest shareholder but increase in the power of the second largest shareholder.

[25] After the largest shareholder the average number of shareholders needed to obtain 10% of shares is defined as follows: 10% *(total number of shares – largest shareholders' (by voting power) number of shares)/(number of shareholders −1).

Table 3

Description of the sample

This table summarises the number of observations for dividend decrease, no dividend change and dividend increase companies (Panel A). Panel B reports mean, median and standard deviation for different cash-dividend decision categories. Dividend Cash flows are measured in millions of FIM. 'No change' also includes dividend omissions. The sample consist of Finnish listed companies on the Helsinki Stock Exchange between 1985 and 1999. Variables are more fully defined in Appendix 1.

Panel A: Sample				
	Dividend decreases	No change	Dividend increases	Total
Number of observations	287	296	521	1,104
Percent	(26,0)	(26,8)	(47,2)	(100)

Panel B: Mean, Median and Standard deviation of Dividend/share, Dividend Cash flows and Rate of Dividend change/share (%)

	Dividend decreases	No change	Dividend increases	Total
Mean of change of Dividend/share	- 3.20	0.00	2.39	0.29
Median of change of Dividend/share	- 0.67	0.00	0.70	0.00
Stdev of change of Dividend/share	15.11	0.00	13.94	12.49
Mean of change of Dividend Cash flows	- 0.06	0.84	0.88	0.61
Median of change of Dividend Cash flows	- 0.22	0.42	0.42	
Stdev of change of Dividend Cash flows	1.27	0.36	2.96	2.11
Mean of rate of Dividend change/share	- 47.68	0.00	75.31	22.50
Median of rate of Dividend change/share	- 40.00	0.00	33.33	0.00
Stdev of rate of Dividend change/share	36.40	0.00	291.45	214.12

4.3. Preliminary results

Correlation coefficients

In Table 4 presents some preliminary results by showing Pearson correlation coefficients between some dividends and earning variables in different controlling shareholder, minority protection and coalition cost groups. I show that when there is no controlling shareholder (largest shareholder's voting power <10%), legal-based minority protection effects (profit after extraordinary items and taxes >0) and coalition costs are high (after largest shareholder average number of shareholders needed to obtain 10 % of shares >3,000), the relation between current dividend changes and future earning changes is positive and statistically significant (Pearson correlation .388**).

The result suggests that when there is no controlling shareholder, legal-based minority protection effects and coalition costs are high, managers convey information via dividends. The result is in accordance with Modigliani and Miller (1961). The preliminary result indicates that when coalition costs are low, minority shareholders use their legal-based minority protection to extract minority dividends causing low the information content of dividends.

Table 4
Pearson correlation coefficients between some dividend and earning variables in different controlling shareholder, minority protection and coalition cost groups.

This table summarises Pearson correlation coefficients of current dividend/share change (ΔD_t) related to future earnings/share (ΔE_{t+1}) change and current dividend cash flow change (ΔDCF_t) related to future earnings/share change in different shareholder concentration, minority protection and coalition costs groups. Grouping variables are defined as follows: Controlling shareholder: largest shareholder's voting power > 30 % (yes), largest shareholder's voting power < 10 % (no), Minority protection: profit after taxes and extraordinary items >0 (yes), profit after taxes and extraordinary items <0 (no), Coalition costs: After largest shareholder average number of shareholders needed to obtain 10 % of shares > 3,000 (high), after largest shareholder average number of shareholders needed to obtain 10 % of shares < 300 (low). The sample consists of Finnish listed companies on the Helsinki Stock Exchange from 1985 to 1999. Variables are more defined in Appendix 1. *, **, *** denote significance at the 10, 5 and 1% levels, respectively.

Controlling shareholder	Minority protection	Coalition costs	Expected strength of correlation	Pearson Correlation coefficients between variables	
				$(\Delta D_t)/$ (ΔE_{t+1})	$(\Delta DCF_t)/$ (ΔE_{t+1})
Yes	Yes	High	(low)	.005 (n=38)	.160 (35)
		Low	(very low)	.551*** (88)	.086 (80)
	No	-	(high)	.469*** (74)	.252** (73)
No	Yes	High	(high)	.388** (37)	.138 (38)
		Low	(low)	-.060 (30)	-.025 (29)
	No	-	(very high)	.193 (25)	.260 (23)

As a conclusion preliminary results give some support to the theory that minority protection rights influence on the information content of dividends. In the next section, I present the results from the regression analyses that control for different effects including industry and type of largest shareholder and the change of the Finnish tax system in 1990. Moreover, I test the robustness of the results.

4.4. Regressions on future earnings changes on the dividend change

A. Initial Analysis

In this section I investigate the relation between dividend changes and future earnings changes. Following Nissim and Ziv (2001) we examine the correlation between the rate of change in dividend per share in year zero and the earnings in years zero, one and two scaled by the book value of the common equity. The underlying assumption is that earnings follow a random walk, so the change in earnings measures unexpected profitability. Nissim and Ziv (2001) and Benartzi *et al.* (1997) used regression analysis and found that dividend increases (decreases) indicate that current year earnings will be higher

(lower) than previous year's earnings. To verify that Benartzi *et al.* (1997) and Nissim and Ziv (2001)[26] results hold in our sample, we regress

$$(E_{t+1} - E_t)/B_t = \alpha_0 + \alpha_1 \Delta D_t + \varepsilon_r, \tag{1}$$

for t = 0,1 and 2, where E_t denotes earnings in year t, B_t is book value of equity at the beginning of the dividend change year, and ΔD_t is a rate of change in dividend per share in year zero. I prefer book value of common equity rather than its market value[27]. To avoid any potential distortions from the deflation, I delete observations where the book value is less than 10 percent of total assets[28].

Models (1), (2) and (3) of Table 5 provides OLS estimation results. Consistent with the findings of Benartzi *et al.* (1997) and Nissim and Ziv (2001), for t = 0 α_1 is positive and significant, but opposite to their findings for t =1, α_1 is significant. Consistent with Nissim and Ziv (2001) for t = 0, R^2 is 0.031 (Nissim and Ziv, 0.020) and also for t = 1, R^2 is 0.031 (Nissim and Ziv, 0.000). As α_1 is statistically significant for t = 1 it is suggested that the information content of dividends is part of corporate dividend policy, as Brooks *et al.* (1998) concludes.

In Finland the influence of minority protection on the information content of dividends is not symmetric. The relation between dividend changes and earnings changes is not symmetric for dividend increases and decreases (Nissim and Ziv, 2001). I thus allow for different coefficients on dividend increases and decreases so that DPC_0 (DNC_0) is a dummy variable that equals one for dividend increases (decreases) and zero otherwise. Model (4) of Table 5 provides OLS estimation results. Results reported in Models (4) of Table 5 show that for t =1, α_{1n}, is positive and statistically significant at 1% level, whereas α_{1p}, is positive but coefficient is smaller and statistically significant at 5% or 10% level. Supporting partly the information content of dividend hypothesis, the results indicate that negative dividend change is a stronger indicator than positive dividend change[29]. Lintner (1956) concludes that

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[26] They sample included only positive earnings for companies that pay dividends. The aim is not to test the models of Nissim and Ziv (2001) or Benartzi *et al.* (1997) but to give insights into how legal regimes (as in Finland) influence the information content of dividends. According to Frankfurter and Wood (2002) no dividend model, either separately or jointly with other models, is supported invariably.

[27] An implicit assumption in specifying equation (1) is that the change in earnings in year τ is unrelated to the level of earnings in year t-1, and thus may serve a proxy for unexpected earnings in year t. This assumption may be appropriate for undeflated earnings. Instead of B Nissim and Ziv (2001) uses also market value of the equity at the beginning of the dividend change year, but concludes that since price reflects expectations about future earnings, the ratio of earnings to price is likely to be negatively related to the expected change in earnings and biases against finding the information content of dividends. Companies that increase (decrease) dividends usually have a high (low) ratio of current earnings to price (correlation of 0,84 for our sample); see also Nissim and Ziv, (2001), Benartzi *et al.* (1997). Also to be able to compare results to Nissim and Ziv (2001), earnings change is not measured by $(E_t / B_t) - (E_{t-1}/B_{t-1})$.

[28] In all regression models also outliers were checked to drop out outliers of more than two standard deviations. However, all observations were inside the limit.

[29] In Nissim and Ziv (2001) the coefficient on dividend increases is slightly larger than the coefficient for dividend

managers are reluctant to cut dividends. That should decrease information content of negative dividend changes. The results do not support Kasanen and Niskanen (1992) who claim that (in Finland) companies follow stable dividend behaviour which does not heavily depend on current earnings.

Table 5

Summary statistics from regression of future earnings change, deflated by book value, on the dividend change and control variables

E_r denotes earnings in year r relative to the dividend event year (year 0). ΔD_t is the rate of change in dividend per share. ROE_t is calculated as E_t/B_t, where B_t is the book value of common equity at the end of year r relative to the dividend year. ΔROE_{t-1} is defined as ($E_{t-1}/B_{t-1} - E_{t-2}/B_{t-2}$). MP is a dummy variable that equals one for $E_t > 0$, else 0. The sample consists of Finnish companies with a positive dividend cash flow and listed on the Helsinki Stock Exchange from 1985 to 1999. T-statistics are reported below the coefficient estimates. Collinearity of independent variables is measured by tolerance[30]. Variables are more defined in Appendix 1. *, **, *** denote significance at the 10, 5 and 1% levels, respectively.

Model	(1)	(2)	(3)	(4)	(5)	(6)	(7)
t	0	1	2	1	1	1	1
Rate of change in dividend per share	.004 (5.284)***	.004 (4.845)***	-.001 (-.478)		.004 (4.934)***		
The rate of positive dividend change				.002 (1.898)*		.002 (1.764)*	.001 (1.212)
The rate of negative dividend change				.010 (6.364)***		.010 (6.300)***	.009 (5.749)***
ROE					-.046 (-1.236)	-.011 (-.284)	-.154 (-2.931)***
Minority protection (dummy)							-.054 (1.657)*
$(E_{t-1} - E_{t-2})/B_{t-2}$					-1.18E-005 (-1.018)	-1.37E-005 (-1.196)	.274 (6.056)***
Intercept (α_0)	.053 (7.823)***	.019 (2.701)***	-.002 (-.099)	.021 (2.615)***	.031 (2.988)***	.029 (2.561)**	.084 (2.914)***
Adjusted R^2	0.031	0.031	-.001	.070	.032	.070	.131
Durbin-Watson				1.925	1.920	1.912	2.030
N	840	704	591	568	703	568	530

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decreases. Grullon *et al.* (2005) report the coefficient for positive dividend changes to be 0.027 when t =1 and 0.017 when t =2 and both coefficients are significantly different from zero. Coefficients for negative dividend changes are not statistically significant indicating that in their sample dividend decreases are not related to future changes in earnings. Nissim and Ziv (2001) did not find an association between dividend decreases and future profitability and they assumed that this result is possibly due to accounting conservatism.

[30] Collinearity is measured by estimating the tolerance of each independent variable. The tolerance of variable *i* is defined as $1-R_i^2$, where R_i is the multiple correlation coefficient when the ith independent variable is predicted from the independent variables. According to the results in Model (4) all tolerance coefficients are >0.998, in Model (5) >.951 and in Model (6) > .763, not indicative of a serious correlation between independent variables. Residual statistics are tested by the Durbin-Watson (D-W) test. In both panels residual coefficients show some, but not serious, related residuals (See Newbold, 1995, p. 844).

B. Regressions of future earnings change, deflated by book value, on the dividend change and additional control variables.

If one considers only earnings information, the expected change in earnings may be zero. However, in the presence of additional information, this property may not hold. According to Freeman *et al*., (1982) and Nissim and Ziv (2001) an important predictor of earnings changes is the ratio of earnings to the book value of equity (*ROE)*. They show that since *ROE* is mean reverting, high (low) *ROE* implies an expected decrease (increase) in earnings. To address this omitted correlated variable problem, In the next set of regressions, I include ROE_{t-1} as an additional explanatory variable where ROE_{t-1} is measured as E_{t-1}/B_{t-1} and *B* denotes the book value of common equity. To control the influence of minority protection I also include into formula also dummy variable *MP*, where *MP* = 0 when $E_t < 0$ (minority protection does not exist), else 1 (minority protection exists). I also follow Nissim and Ziv (2001) and account for heteroskedasticity and autocorrelation in the regression residual by using a refined Fama and Macbeth (1973) procedure. Dividend changes are correlated with contemporaneous earnings changes (see Benartzi *et al*. 1997). Therefore, a positive relation between dividend changes and earnings changes in the subsequent year may be due to autocorrelation in the earnings change. To examine whether dividend changes contain information on future earnings changes, incremental to the earnings change in the dividend change I include $(E_t - E_{t-1})/B_{t-1}$ as an additional control variable[31].

I regress the following models for t = 1:

$$(E_{t+1} - E_t)/B_t = \alpha_0 + \alpha_1 \Delta D_t + \alpha_2 \Delta ROE_{t-1} + \varepsilon_r, \tag{2}$$

$$(E_{t+1} - E_t)/B_t = \alpha_0 + \alpha_{1p} DPC_0 * \Delta D_t + \alpha_{1n} DNC_0 * \Delta D_t + \alpha_2 \Delta ROE_{t-1} + \alpha_3 (E_{t-1} - E_{t-2})/B_{t-2} + \varepsilon_r, \tag{3}$$

$$(E_t - E_{t-1})/B_{t-1} = \alpha_0 + \alpha_{1p} DPC_0 * R\Delta DIV_0 + \alpha_{1n} DNC_0 * R\Delta DIV_0 + \alpha_2 R\Delta ROE_{t-1} + \alpha_3 MP + \alpha_4 (E_{t-1} - E_{t-2})/B_{t-2} + \varepsilon_r, \tag{4}$$

The models are tested for the sample companies with positive dividend cash flows. Results are reported in Models (5) - (7) of Table 5.

In Models (5) and (6) of Table 5, α_2 *(ROE)* is negative (as expected by Lin, 2002) but not statistically significant. In Model (7) of Table 5, α_3 *(MP)* is negative and statistically significant. The results indicate that including $(E_{t-1} - E_{t-2})/B_{t-2}$ as an additional control variable has only a small effect on the results. Comparing the coefficients on dividend increases and decreases in Models (4) and (6) of Table is seen that they are the same. (For α_{1p} .002 for α_{1n} .010). T-statistics are even lower (For α_{1p}

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[31] Look for more on lagged dependent variables in Newbold 1995.

1.764 compared to 1.898 and for α_{ln} 6.300 compared to 6.364).[32] As a conclusion the result partly supports the information content of dividend hypothesis, indicating that negative dividend change is a stronger indicator than positive dividend change.

Minority protection gives minority shareholders certain powers to protect their investment against expropriation by managers and controlling shareholders. According to Kinkki (2007) in Finland legal-based minority protection is a greater influence on managers than controlling shareholders. In Table 6 I control coalition costs (minority shareholders possibility for utilizing minority protection) by dummy variable *CC* that equals one for *after two largest shareholders, average number of shareholders needed to obtain 10 percent of shares, having < 400*, else 0. Controlling shareholder is controlled by dummy variable CS that equals one for *largest shareholder having at least 10 percent voting power*, else 0. The main purpose of the regression is to show the relationship between independent (controlling) variables.

Figure (1) describes how Models (1) to (6) of Table 6 are related to earnings and minority dividend. Model (8) of Table 6 describes cash flows and is not presented in the figure 1.
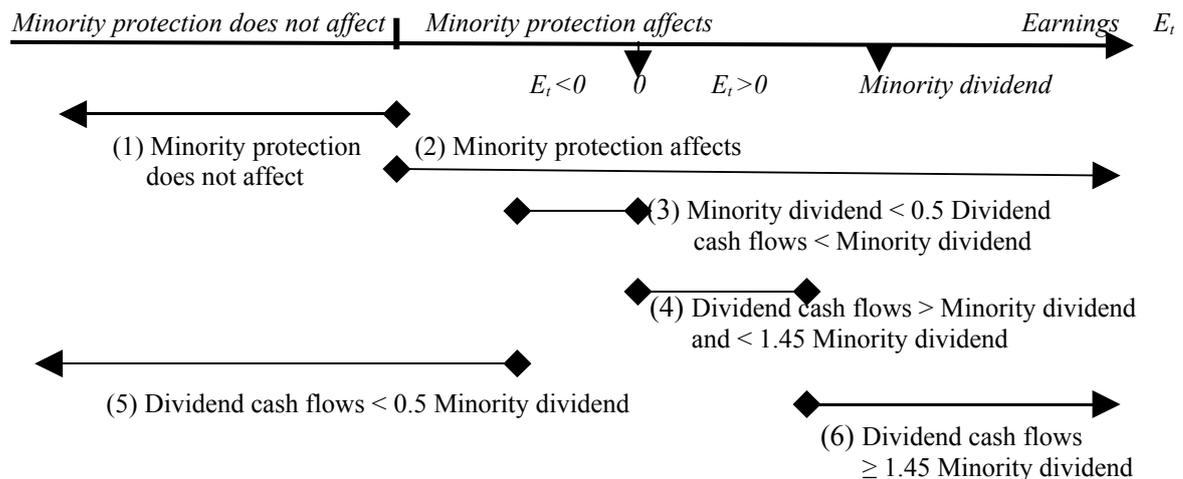
Figure 1: Models (1) to (6) of Table 6 related to earnings and minority dividend.

In Model (1) of Table 6 I present regression results when $E_t < 0$ (minority protection has no effect) and in Model (2) when $E_t > 0$ (minority protection affects). In Model (1) of Table 6 the coefficient for the ratio of positive dividend changes (α_{lp}) is .242** and in Model (2) respectively .0019**. In Model (1) of Table 6 (minority protection has no affect) the coefficient for the ratio of negative dividend changes (α_{ln}) is -.003 and not statistically significant whereas in Model (2) of Table 6 (minority protection exists) the coefficient for negative dividend changes (α_{ln}) is .105 and statistically significant

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[32] In Table 10 R^2 results are also presented. However, according to Newbold (1995, p. 543) the lagged dependent variables interpretation of R^2 is problematic and can lead to misleading conclusions.

at 1% level. In Model (2) of Table 6 the coefficient for coalition costs is .038 and significant at 5% level.

Table 6
Summary statistics from regression of future earnings change, deflated by book value, on the dividend change and control variables when minority protection does not exist (Model 1) and when it exists (Model 2), when dividend cash flows >0.5 minority dividend and dividend cash flows < minority dividend (Model 3), when dividend cash flows < 0,5 minority dividend (Model 4), when dividend cash flows > minority dividend and dividend cash flows < 1.455 minority dividend (Model 5), when dividend cash flows > 1.455 minority dividend (Model 6) and when dividend cash flows > 0 (Model 7)

E_t denotes earnings in year r relative to the dividend event year (year 0). $R\Delta DIV_0$ is the rate of change in dividend per share. *DPC (DNC)* is a dummy variable that equals one for dividend increases (decreases) and zero otherwise ROE_t is calculated a*s* E_t/B_t, where B_t is the book value of common equity at the end of year r relative to the dividend year. CS is a dummy variable that equals one for largest shareholder having at least 10 percent voting power, else 0. CC is a dummy variable that equals one for after two largest shareholders, average number of shareholders needed to obtain 10 percent of shares, having at least 400, else 0. Minority dividend is half of the profit of the fiscal year, however (since 1999) not more than 8 percent of the equity (5 percent 1973-1998). MP is a dummy variable that equals one for E_t >0, else 0. The sample consists of Finnish companies with a positive dividend cash flow and listed on the Helsinki Stock Exchange from 1985 to 1999. T-statistics are reported below the coefficient estimates. Collinearity of independent variables is measured by tolerance[33]. Variables are more defined in Appendix 1. *, **, *** denote significance at the 10, 5 and 1% levels, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dividend/share positive change	.242 (2.522)**	.0019 (1.941)**	-.003 (-.263)	-.010 (-.593)	.047 (2.272)**	.002 (1.433)	.263 (3.196)***
Dividend/share negative change	-.003 (-.118)	.0105 (6.702)***	.003 (.892)	-.003 (-.210)	-.001 (-.166)	.013 (5.889)***	-.035 (-1.420)
ROE (book value)	-.810 (-2.510)**	-.062 (-1.268)	-.021 (-.171)	.019 (.187)	-.618 (-3.652)***	-.037 (-.453)	-.024 (-.540)
Average shareholders to obtain 10% (dummy)	-.110 (1.231)	.038 (2.423)**	-.001 (-.234)	.027 (.979)	-.001 (-.521)	.051 (1.483)	
Largest shareholder's voting power (dummy)	-.037 (-.513)	.001 (.085)	-.008 (-.251)	.014 (.515)	-.024 (-.398)	-.006 (-.144)	
Dividend/share positive change * MP							-.261 (-3.172)***
Dividend/share negative change * MP							.045 (1.846)*
MP							.051 (1.237)
Intercept	.027 (.406)	.011 (.653)	.013 (.367)	-.005 (-.143)	.026 (.539)	.011 (.272)	.017 (1.421)
Adjusted R^2	.176	.087	-.027	-.021	.130	.187	.086
F	3.175**	11.573***	.195	.309	2.910	8.614***	9.536***
Durbin-Watson	2.213	1.964	1.758	1.775	2.568	1.950	1.882
Observations	51	557	153	165	64	165	545

The result indicates that minority protection and minority shareholders may influence the information content of dividends. Where minority protection does not exist (Model (1) of Table 6), the information content of dividends could be affected by managers (see Miller and Modigliani, 1961).

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[33] In Model (1), all tolerance coefficients are >0.920, in Models (2) – (6) respectively >0.850, indicating some, but not significant, correlation between independent variables. Residual statistics are tested by the Durbin-Watson (D-W) test. In all models residual coefficients show some, but not significant, related residuals (See Newbold, 1995, p. 844).

Respectively negative dividend changes do not give information about future (negative) earning changes as Lintner (1956) reports, because managers are reluctant to cut dividends, or, as Myers (2000) proposes, managers can continue in their current position only if outside equity investors believe that corporate insiders will pay future dividends. In Model (1) of Table 6 *ROE* also is statistically significant, as Nissim and Ziv (2001) propose, indicating that it is a predictor of future earning changes. The results in Model (1) of Table 6, when minority protection has no effect, are in accordance with US results. Minority protection in the USA is, however, based on common minority rights (La Porta *et al.*, 2000) and not on minority dividend (as in Finland).

As minority protection exists (Model 2), the results suggests, that positive dividend changes are determined according to minority protection and not on the information content of dividends. Minority shareholders having legal protection use that power to decrease agency costs, or, the board of a firm, or the largest shareholders, take into account the legal regimes when setting a dividend proposal. Respectively negative dividend changes turns out to be more informative about future earning changes. Where minority protection does not exist, managers are reluctant to cut dividends (Lintner, 1956). Where minority protection exists and when dividends are determined according to minority dividend and not on the information content of dividends, managers are not able to use positive dividend changes for the information content of dividends. In that case negative dividend changes are used for information purposes instead of positive dividend changes. In both Models (1) and (2) coefficients for CS (controlling shareholder) are small and t-statistics not statistically significant. The result suggests that controlling shareholders do not influence the information content of dividends. The result is in accordance with Maury (2004) who suggests that dominant shareholders enjoy private, non-pecuniary or pecuniary benefits from being in control and often have more control rights than cash flow rights. Renneboog and Trojanovski (2007) conclude that the presence of strong block holders or block holder coalitions weakens the relationship between the corporate earnings and the payout dynamics. Banerjee *et al*. (1997) suggests that all large shareholders are not willing and/or able to provide the degree of monitoring and control needed to create value. Megginson (1997) claims, that in tightly owned corporations there is no need to use dividends as signals. The controlling shareholders maybe trade off the agency problems of free cash flow against the risk of underinvestment and try to enforce payout policies that optimally balance these two costs as Renneboog and Trojanowski (2005) claims. In contrast to Nissim and Ziv (2001), *ROE* is not statically significant indicating that, as a whole, when minority protection applicable, *ROE* is not a predictor of future earning changes.

Model (5) of Table 6 presents regressions when dividend cash flows < minority dividend (minority protection has no effect or probably has not been used). The coefficient of positive dividend changes is .047 and statistically significant at 5% level and the coefficient of negative dividend changes is -.001 and not statistically significant. The coefficient of *ROE* is significant at 1% level. Compared

with Model (1) of Table 6 (minority protection has no effect) the coefficient of positive dividend changes is smaller (from .242 to .047) and the coefficient of negative dividend changes remains small and insignificant (from -.003 to -.001).

Model (3) of Table 6 presents regressions when (minority dividend < 0.5 dividend cash flows < minority dividend). The coefficients of both positive dividend changes (α_{lp}) and negative dividend changes (α_{ln}) are not statically significant and adjusted R^2 becomes -.027 and F = .195 indicating that coefficients of the model do not differ from 0. Coefficients of controlling variables also are insignificant. Models (4) and (6) of Table 6 present regressions when dividend cash flows > minority dividend. That sample is divided into two equal parts. In Model (4) of Table 6 the relation of dividend cash flows/minority dividend is 1.0 - 1.455 and in Model (6) of the table respectively > 1.455. In Model (4) (dividend cash flows exceeds minority dividend) both positive dividend changes and negative dividend changes become non-existent, adjusted R^2 = -.021 and F = .309, indicating that coefficients of the model do not differ from 0. The result suggests (as Kinkki (2007) concludes) that where minority protection exists and the largest minority shareholders are able to form coalitions to increase dividends to decrease agency costs. Dividends are determined according to minority protection and not according to the information content of dividends. As a conclusion minority dividend decreases the information content of dividends. In Model (6) of Table 6 the coefficient for negative dividend changes is .013 and statistically significant at 1% level. The results suggests that, as minority protection exists and when dividends are determined according to minority dividend and not on the information content of dividends, managers are not able to use positive dividend changes for the information content of dividends. In that case negative dividend changes are used for information purposes instead of positive dividend changes.

In Model (7) interaction between MP and positive and negative dividend changes is researched[34]. Coefficient for *Dividend/share positive change * MP* is -.261 and statistically significant at 1% level. Coefficient for *Dividend/share negative change * MP* is .045 and statistically significant at 10% level. As coefficients for interactive terms differ statistically from zero, the result indicates that minority protection affects both the positive and negative information content of dividends. Interestingly, however, the coefficient of *Dividend/share positive change* is .263 and almost opposite to the coefficient of *Dividend/share positive change * MP* (-.261) and respectively the coefficient of *Dividend/share negative change* is -.035 and also almost opposite to the coefficient of *Dividend/share negative change * MP* (.045).

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[34] Regression is as follows: $(E_t - E_{t-1})/B_{t-1} = \alpha_0 + \alpha_{lp}DPC_0 *R\Delta DIV_0 + \alpha_{ln}DNC_0 * R\Delta DIV_0 + \alpha_2 R\Delta ROE_{t-1} + \alpha_3 MP + \alpha_4 DPC_0 *R\Delta DIV_0 * MP + \alpha_5 DNC_0 *R\Delta DIV_0 *MP + \varepsilon_{r}$.

As a conclusion the results in Table 6 suggest that when minority protection is based on common rights (La Porta *et al*., 2000) or minority shareholders are not able to use minority protection, the information content of positive dividend changes could be affected by managers, as Miller and Modigliani (1961) propose. Respectively negative dividend changes do not give information about future earning changes (Lintner, 1956, Myers, 2000). *ROE* is a predictor of future earning changes as Nissim and Ziv (2001) suggest. When minority protection (as in Finland) exists and minority shareholders are able to use it, the information content of positive dividend changes decreases, because dividends are based on minority protection and not on the information content of dividends. Respectively when managers are unable to use positive dividend changes for information purposes (because of minority protection) they are obviously more inclined to use negative dividend changes for that purpose. In that case *ROE* is not a predictor of future earning changes.

C. Other controls

I check the robustness of the regression results by including dummy variables for different controlling owner types and industrial factors. Various owner categories could have different preferences for dividends for instance due to the agency problems of tax reasons (Maury and Pajuste, 2002). Therefore I test for the influence of different controlling owner types on the the information content of dividends. According to Tse (2005) it is a common perception that there is an industry norm for dividend policy. If dividend policy is influenced by industrial factors, the information content of dividends may also be influenced by industrial factors. Also I test the influence of different industries on the the information content of dividends. The results are presented in Appendix 3. The results indicate that including industry and owners' type as additional dummy variables has only a small effect on the results. The coefficient on the dividend increases and decreases are exactly the same in all three formula (for dividend increases .002 and for dividend decreases .010) and also changes in statistical significances are small (for α_{lp} 2.306 compared to 2.268 and 2.322 and for α_{ln} 6.291 compared to 6.309 and 6.216).

As a robust test I also included FIRST*AASS10 an explanatory variable to model (2) to check their joint (moderator) effect, when FIRST = *largest shareholder's voting power at the end of the accounting period* and AASS10 = *after two largest shareholders average number of shares needed to obtain 10% of shares*. Coefficient for the variable is .008 and t-statistics is not significant (.795) suggesting that controlling shareholder and coalitions costs do not have a joint effect. The the information content of dividends is not symmetric for dividend increases and decreases (Nissim and Ziv, 2001) in different coalition costs and controlling shareholder groups. I thus allow for different coefficients on *Largest shareholder's voting power at the end of the accounting period* and *After two largest shareholders average number of shares needed to obtain 10% of shares* so that DPC (DNC) is a

dummy variable that equals one for dividend increases (decreases) and zero otherwise. I included $\alpha_n DPC_0 * CS + \alpha_n DNC_0 * CS$ and $\alpha_n DPC_0 * CC + \alpha_n DNC_0 * CC$ as explanatory variables, but the results were not statistically significant.

The Model for t =1 of Table 6 also includes $MP*CC$ an as additional explanatory variable with and without MP and also with CS. In all models $MP*CC$ is statistically significant (at 5% level). Also CC was included into models with $MP*CC$, but in that case tolerance numbers (.045) indicate high multicollinearity between CC and $MP*CC$.

According to Kinkki (2007) changing the Finnish taxation system influenced dividends[35]. To control the influence of changing the tax system on the information content of dividends I include Tax as an additional explanatory (dummy) variable to formula (2) where $Tax=0$ from1985 to 1990 else $Tax=1$. The results indicate that including the Tax dummy as an additional control variable has some effects on the results. The coefficient on positive dividend changes (α_{lp}) increases (from .0019 to .0025, both significant at 5% level) and the coefficient on negative dividend changes (α_{ln}) decreases (from .0105 to .0095, both significant at 1% level). The coefficient of CC decreases (from .038 to .018) The Finnish tax system changed in 1990 but during the sample period (1985-99), the total tax rate was changed several times[36] and that could make more noise to research the influence of Tax -dummy on the information content of dividends.

5. Conclusions

This study of minority protection on the information content of dividends in Finnish listed firms provides several valuable insights on signalling theory. First, according to the literature review, empirical studies have provided mixed results with respect to the information content of dividends (concerning dividend earnings studies). Second, I find that where minority protection has no effect or when minority shareholders are unable to utilise minority protection, positive dividend changes give information about future earning changes and that the information content of dividend could be affected by managers as Miller and Modigliani (1961) propose. Respectively negative dividend changes do not give information about future (negative) earning changes as Lintner (1956) reports, because managers are reluctant to cut dividends, or, as Myers (2000) proposes, managers can continue in their current position only if outside equity investors believe that corporate insiders will pay future dividends. Where

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[35] Before 1990 the Finnish taxation system encouraged companies to use rights issues as a means of raising capital and paying out dividends. According to the legislation on taxation, for five years following the year of issue, companies could deduct 100 % of dividends paid to new capital from state taxation. Otherwise dividends were 60% or 40% tax deductible in state taxation. In 1990 the Finnish dividend taxation system changed. The avoir fiscal system came into effect in the fiscal year 1990, and the tax deductibility of dividends disappeared in 1993. For a more detailed description of tax reform in Finland in 1993 and the Finnish tax system, see Sorjonen (2000).

[36] Look for details of these changes in Kinkki (2007).

minority protection does not exist, *ROE* also is a predictor of future earning changes, as Nissim and Ziv (2001) proposes.

Third I report that when minority protection is applicable, both positive and negative dividend changes are informative about future earnings changes for the subsequent year. However, compared to the situation when minority protection has no affect, the information content of positive dividend changes is much weaker and information content of negative dividend changes much stronger. The result is opposite to results of Watts (1973) and Gonedes (1978), who reported average estimated coefficient of current dividends to be positive, however, the average significance level was too small. The results is also opposite to the results of Korhonen (1977), Wahlroos (1979) and Yli-Olli (1980) who (in Finland) tested Lintner's (1956) or Watt's (1973) model on the information content of dividends. During their research, however, minority protection was not in operation in Finland.

Fourth, the result indicates that negative dividend change is a stronger indicator than positive dividend change. The result is in accordance with Kinkki (2007) who reports that during positive earnings (when minority protection is in effect), the largest minority shareholders are able to form coalitions to increase dividend. In that case dividends are determined according to minority protection and not the information content of dividends. Managers are reluctant to cut dividends (Lintner, 1956). When minority protection (as in Finland) exists and minority shareholders are able to use it, the information content of positive dividend changes decreases, because dividends are based on minority protection and not on the information content of dividends. Respectively when managers are unable to use positive dividend changes for information purposes (because of minority protection) they are obviously more inclined to use negative dividend changes for that purpose. That could explain why negative dividend change is a stronger indicator than positive dividend change. In Nissim and Ziv (2001) and Grullon *et al.* (2005) positive dividend change is a stronger indicator than negative dividend change indicating that minority protection (as in Finland) influences the information content of dividends. Nissim and Ziv (2001) assumed that dividend decreases do not indicate future earning changes due to accounting conservatism. Benartzi *et al.*, (1997) and DeAngelo *et al.*, (1996) found no evidence to support the notion that changes in dividends have the power to predict changes in future earnings. Minority protection in the USA, however, differs from minority protection in Finland. The results also suggests, that the controlling shareholder does not use dividend changes to convey information about future earning changes. The result is in accordance with Maury (2004), who suggest that dominant shareholders enjoy private, non-pecuniary or pecuniary benefits from being in control and often have more control rights than cash-flow rights. Megginson (1997), claims that in tightly owned corporations there is no need to use dividends as signals. The result broadens the results of La Porta *et al.* (2000) on how expropriation of controlling shareholders works and how it affects the information content of dividends.

Fifth, when dividend cash flows exceed minority dividend (because minority shareholders have used minority protection), the information content of dividends disappears for both positive and negative dividend changes. Dividends are then determined according to minority protection and not the information content of dividends. Differences in legal regimes concerning minority protection can partly explain conflicting results with regard to empirical dividend-earning tests. Minority protection differs across countries (La Porta *et al.*, 2000) and especially in Europe (Kinkki, 2007). The goal of regulation is to attain efficient markets so as to improve the allocation in the economy (Goshen and Parchomovsky, 2004) and at the same time, give minority shareholders certain powers to protect their investments (La Porta *et al.*, 2000). Regulators need to balance between (1) how to assure the efficient information content of dividends and, at the same time (2) give minority shareholders powers against expropriation by insiders. The results suggest that minority protection (as in Finland) decreases the information content of positive dividend changes and increases the information content of negative dividend changes. When minority protection is in force, there are decreases in information content of both positive and negative dividend changes. For minority shareholders as investors, to avoid risks it could be more valuable to have information on future earning decreases than increases. Minority protection, as in Finland, could therefore provide for minority shareholders more benefits than disadvantages.

Some potential limitations may temper these conclusions. The independent variables that are presented here are, of course, subject to multiple interpretations. The results, however, are similar to different directions, indicating reasonable validity. Minority protection on dividends can be divided into at least three distinct groups (Kinkki, 2007): 1) shareholders having the general rights of voting directors and protesting wealth expropriation (La Porta *et al.*, 1998), 2) shareholders having specific rights to dividends (minority dividend) and 3) shareholders having mandatory dividends. In this paper the focus is on minority dividends. The influence of shareholders having specific rights and mandatory dividends on the information content of dividends is left for future research.

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Appendix 1 This table describes the variables used in the analysis.

Variable	Definition
Minority control	One tenth of number of shares at the end of accounting period
Largest shareholder's voting power	Largest shareholder's voting power at the end of the accounting period
Largest shareholder's voting power >50%	1 if largest shareholder's voting power >10/30/50 %, else 0
The sum of voting power of two largest shareholders (10/30/50%)	1 if the sum of voting power of two largest shareholders > 10/30/50%, else 0
Minority dividend	Lower of (1) 50 % of the profit of the fiscal year or (2) 5 % (1985-98) or 8 % (1999) of the total equity; = 0 if the result of the fiscal year < 0.
Dividend decision	1 if cash dividends of the fiscal year >0, else 0
Total tax-rate	60 (% in years 1985-86), 50 (1987-89), 42 (1990), 40 (1991) 36 (1992). 25 (1993-95), 28 (1997-99) and 29 (2000).
Tax reform	1 since 1990 for firms where largest shareholder (in votes) is individual, bank or insurance company, else 0.
Earnings	Profit/loss before taxes and appropriations (profit/loss before extraordinary items)
Dividend-to-earnings	Cash dividends divided by earnings in fiscal year
Controlling private person shareholder	1 if the largest controlling shareholder with $\geq$ 10% of votes is private person 0 otherwise
Controlling foundation shareholder	1 if the largest controlling shareholder with $\geq$ 10% of votes is foundation 0 otherwise
Controlling corporate shareholder	1 if the largest controlling shareholder with $\geq$ 10% of votes is another firm 0 otherwise
Controlling insurance company or bank shareholder	1 if the largest controlling shareholder with $\geq$ 10% of votes is an insurance company or bank; 0 otherwise
Controlling state shareholder	1 if the largest controlling shareholder with $\geq$ 10% of votes is state 0 otherwise
Controlling foreigner shareholder	1 if the largest controlling shareholder with $\geq$ 10% of votes is a foreigner 0 otherwise
Average percentage of shares/shareholder	(The amount of shares at the end of accounting period divided by number of shareholders at the end of accounting period)*(100/number of shares)
Average percentage of shares/shareholder after first shareholder	(The amount of all shares – the amount of largest shareholder's shares)/(Number of shareholders –1)*(100/number of all shares)

Average percentage of shares/shareholder after second largest shareholder (The amount of all shares – the amount of first and second largest shareholder's shares)/(Number of shareholders –2)*(100/number of all shares)

Minority protection   1 if $E_t > 0$, else 0

Appendix 2: Firms and years in the sample

Aamulehti-Yhtymä	1984-89
Alma Media Oyj	1997-99
Amer-Yhtymä Oy	1985-1994, 1996-1997, 1999
A-Rakennusmies Oyj	1997-1999
Asko Oy	1985-1994
Aspocomp Group Oyj	1998-1999
Aspoyhtymä Oy	1991-1994, 1998-1999
Atria Oy	1991-1999
Basware Oyj	1998-1999
Beltton	1999
Benefon	1993-1999
Biohit	1999
Biotie	1999
Birka Line AB	1985-1999
Castrum Oy	1988-1999
Chips Oy Ltd	1990-1999
Citycon Oy Kiinteistösijoitus	1989-1999
Componenta Oyj	1998-1999
Comptel Oyj	1998-1999
Conventum Oyj	1999
Corum Oy (Kuusinen Oy)	1985-1989
Cultor Oy	1985-1993
Danisco	1999
Effjohn Oy AB	1990-1994
Effoa	1985-1998
Eimo Oyj	1998-1999
Elcoteq Network Oyj	1997-1999
Elecster	1999
Enso-Gutzeit Oy	1985-1989, 1991-1994
EQ Online	1999
Espoon Sähkö Oy	1994-1999
Etteplan	1999
Exel	1999
Farmos-Yhtymä Oy	1985-1989
Fazer Musiikki Oy	1989
Finlandia Interface Oy	1990-1994
Finnair Oy	1985-1999
Finnlines Oy	1987-1999
Finnvest Oy	1987-1999
Fiskars Oy Ab	1985-1988, 1990-1999
Ford Oy	1985-1994
Fortum Oyj	1998-1999
F-Secure Oyj	1998-1999
Hackman Oy	1990-1991
Hartwall Oy	1990-1999
Helsingin Puhelin Elisa	1997-1999
HK Ruokatalo Oyj	1996-1999
Honkarakenne Oy	1990-1999
Huhtamäki Oy	1985-1999
Hämeen Sähkö Oy	1994
Ilkka-Yhtymä	1999
Incap Oyj	1996-1999
Instrumentarium Oy	1985-1999

Interavanti Oy	1988-1999
Interbank Osakepankki	1990-1994
Investa Oy Ab	1988-1989
Iocore	1999
Itikka-Lihapolar Oy	1988-1989
Jaakko Pöyry Group Oyj	1997-1999
Janton Oyj	1998-1999
Jippii Group	1999
JOT Automation Group Oyj	1997-1999
Julius Tallberg-Kiinteistöt Oy	1988-1999
Kansallis-Osake-Pankki	1985-1994
Kasola	1995-1998
KCI Konecranes	1995-1999
Kekkilä	1999
Kemira Oy	1994-1999
Keskisuomalainen Oyj	1998-1999
Kesko Oy	1985-1999
Kesla Oyj	1995-1999
Kone Oy	1985-1999
Kontram-Yhtiöt Oyj	1998-1999
KSP Yhtiöt	1999
Kylpyläkasino	1999
Kymmene Oy	1985-1994
Kyro Oyj Abp	1996-1999
Larox Oy	1995-1999
Lassila&Tikanoja Oy	1985-1999
Leipurien Tukku Oy	1985-1989
Lemminkäinen Oy	1990-1993, 1995-1999
Leo-Longlife	1990-1999
Liinos Oyj	1998-1999
Lohja Oy	1985-1989
Lounais-Suomen Sähkö Oy	1990-1994
Lännen Tehtaat Oy	1985-1999
Mandatum Pankki Oyj	1997-1999
Marimekko	1999
Martela	1995-1999
Medical Investment Trust Oy	1985-1989
Menire	1999
Metra Oy Ab	1990-1994
Metso Oyj	1998-1999
Metsä-Serla OYJ	1985-1999
Metsä-Tissue Oyj	1997-1999
Nedecon Network	1999
Neomarkka Oyj	1998-1999
Nobiscum Oy	1989
Nokian renkaat	1995-1999
Nokia yhtymä	1985-1999
Nordic Aluminium Oyj	1996-1999
Nordic Baltic Merita	1998-1999
Norvestia	1995-1999
Novo-Group Oyj	1996-1999
Okmetic	1999
OKO	1999

Olvi Oy	1990-1999
OP-Rahoituskeskus Oy	1985-1989
OP-Sijoitus Oy	1988-1994
Orion-Yhtymä Oy	1990-1999
Osuuspankkien keskuspankki Oy	1990-1999
Otava	1985-1989
Outokumpu Oy	1988-1999
Panostaja	1999
Partek	1985-1999
Perlos Oyj	1998-1999
Pl-Consultaing	1999
PKC Group Oyj	1996-1999
Plandent	1999
PMJ Automec Oyj	1997-1999
Pohjois-Karjalan Kirjapaino	1995-1999
Pohjola Oy	1985-1999
Polar-Yhtymä Oy	1985-1999
Ponsse	1995-1999
Proha	1999
Raision Margariini Oy	1985-1989
Raision Tehtaat Oy Ab	1986-1999
Rakentajain Konevuokraamo	1995-1999
Rapala Normark Oyj	1998-1999
Rauma-Repola Oy	1985-1989
Rautakirja Oy	1985-1999
Rautaruukki Oy	1988-1999
Raute Oy	1994-1999
Repola Yhtymä	1990-1994
Rocla Oyj	1996-1999
Sampo	1985-1999
Sanitec Oyj	1998-1999
SanomaWSOY Oyj	1998-1999
Santasalo-JOT Oy	1990-1994
Satama Interactive O	1998-1999
Saunatec	1995-1999
Sentra Oy	1990-1994
Servi Systems Oy	1989
Silja	1995-1996, 1999
SKOP	1985-1994
SKOP-Rahoitus Oy	1985-1989
SKOP-Yrityspankki	1995-1999
Sonera-Yhtymä Oyj	1997-1999
Sponda Oyj	1997-1999
Sponsor Oy	1985-1989
Spontel Oy	1985-1989
Sp-Sijoitus Oy	1985-1989
Starckjohann Oy	1985-1994
Stockmann	1985-1999
Stonesoft Oyj	1998-1999
Stora Enso Oyj	1997-1999
Stromsdal Oy	1989-1999
STS-Invest Oy	1987-1989
Suomen Helasto	1999
Suomen Kiinteistöinvestointi Oy	1988-1989
Starckjohann Oy	1985-1994
Stockmann	1985-1999
Stonesoft Oyj	1998-1999
Stora Enso Oyj	1997-1999
Stromsdal Oy	1989-1999
STS-Invest Oy	1987-1989
Suomen Helasto	1999
Suomen Kiinteistöinvestointi Oy	1988-1989
Suomen Spar Oyj	1997-1999
Suomen säästäjien kiinteistöt	1999
Suomen Trikoo Oy Ab	1985-1989
Suomen Yhdyspankki Oy	1985-1994
SYP-Invest Oy	1985-1994
Sysopen Oyj	1998-1999
Säkkiväline Oy	1986-1989
Talentum	1995-1999
Talous-Osakekauppa	1985-1989
Tamfelt Oy Ab	1985-1999
Tampella	1985-1994
Tampereen Puhelin Oyj	1997-1999
Tamro-Yhtymä	1990-1999
Technopolis Oyj	1998-1999
Tecnomen	1999
Tekla	1999
Teleste Oyj	1998-1999
Tervakosken Puuhamaa	1999
TH Tiedonhallinta	1999
Tietoenator	1985-1999
Tieto-X	1999
TJ Group Oyj	1998-1999
Tulikivi Oy	1990-1999
Turkistuottajat Oy	1990-1999
Turun Arvokiinteistöt	1999
UPM-Kymmene	1995-1999
Uponor Oyj	1998-1999
Vaahto Group PLC Oyj	1996-1999
Vaisala Oy	1990-1999
Valmet Oy	1988-1994
Valtameri Oy	1990-1994
Viking Line	1995-1999
Virke Oy	1985-1989
WSOY	1986-1994
Wärtsilä	1985-1989, 1999
Yhtyneet Paperitehtaat Oy	1985-1989
YIT-Kiinteistöt Oy	1987-1989
YIT-Yhtymä	1990-1994, 1996-1999
Yleiselektroniikka	1999
Ålandsbanken Ab	1985-1999

Appendix 3

Summary statistics from regression of future earnings change, deflated by book value, on the dividend change and control variables concerning industry and owners' type.

ROE$_r$ is calculated a*s* E_r/B_r , where B_r is the book value of common equity at the end of year r relative to the dividend year. CS is a dummy variable that equals one for largest shareholder having at least 10 percent voting power, else 0. CC is a dummy variable that equals one for after two largest shareholders, average number of shareholders needed to obtain 10 percent of shares, having at least 400, else 0. *DPC (DNC)* is a dummy variable that equals one for dividend increases (decreases). Industry and owners' type are dummy variables. The sample consists of Finnish companies with a positive dividend cash flow and listed on the Helsinki Stock Exchange from 1985 to 1999. Variables are more defined in Appendix 1. *, **, *** denote significance at the 10, 5 and 1% levels, respectively.

	(1)	(2)	(3)
ROE	-.110	-.127	-.124
	(-2.515)**	(-2.849)***	(-2.790)***
Controlling	-.005	-.006	-.003
shareholder	(-.272)	(-.291)	(-.137)
Coalition costs	.029	.024	.033
	(1.870)*	(1.545)	(1.975)**
Dividend increases	.002	.002	.002
(dummy)	(2.306)**	(2.268)**	(2.322)**
Dividend decreases	.010	.010	.010
(dummy)	(6.291)***	(6.309)***	(6.216)***
Controlling banks		-.070	
(dummy)		(-2.109)**	
Controlling insurance		-.048	
companies (dummy)		(-1.711)*	
Controlling metalindustry		-.035	
(dummy)		(-1.445)	
Controlling forestindustry		-.004	
(dummy)		(-.108)	
Controlling multibrach		-.001	
companies (dummy)		(-.053)	
Controlling other industry		-.013	
companies (dummy)		-673	
Controlling private owned			-.039
companies (dummy)			(1.297)
Controlling foundation owned			-.003
companies (dummy)			(-.123)
Controlling bank owned			.011
companies (dummy)			(.469)
Controlling state owned			-.037
companies (dummy)			(-1.361)
Controlling foreigner owned			.076
companies (dummy)			(2.098)**
Intercept	.033	.055	.034
	(1.795)*	(2.207)**	(1.843)*
R^2	.083	.094	.097
Adjusted R^2	.075	.078	.082
F	11.328***	5.899***	6.695***
Durbin-Watson	1.863	1.859	1.882
Observations	634	634	634