LAPPEENRANTA UNIVERSITY OF TECHNOLOGY
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Finance

ABNORMAL RETURNS OF DIVIDEND ANNOUNCEMENTS DURING A BOOM AND A RECESSION

Empirical evidence from U.S. from the years of 2000 – 2002 and 2005-2007, including Finnish extra dividends.

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Abstract

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This study examines the short time price effect of dividend announcements during a boom and a recession. The data being used here is gathered from the years of 2000 - 2002 when it was a recession after the techno bubble burst and from the years 2005 - 2007 when investors experienced large capital gains all around the world. The data consists of dividend increases and intact observations.

The aim is to find out differences in abnormal returns between a boom and a recession. Second, the study examines differences between different dividend yield brackets. Third, Finnish extra dividends, mainly being delivered to shareholders in 2004 are included to the empirical test. Generally stated, the aim is to find out do investors respect dividends more during a recession than a boom and can this be proved by using dividend yield brackets.

The empirical results from U.S shows that the abnormal returns of dividend increase announcements during the recession in the beginning of this decade were larger than during the boom. Thus, investors seem to respect dividend increases more when stock prices are falling. Substantial abnormal returns of dividend increases during the time period of 2005 - 2007 could not be found. The results from the overall samples state that the abnormal returns during the recession were positively slightly higher than during the boom. No clear and strong evidence was found between different dividend yield brackets.

In Finland, there were substantial abnormal returns on the announcement day of the extra dividends. Thus, indicating that investors saw the extra dividends as a good thing for shareholders' value.

This paper is mostly in line with the theory that investors respect dividends more during bad times than good times.

Tiivistelmä

Tekijä:	*Joni Salminen*
Otsikko:	*Osinkoilmoituspäivän epänormaalit tuotot nousu- ja laskukauden aikana: empiiristä evidenssiä Yhdysvaltojen markkinoilta vuosilta 2000 - 2002 ja 2005 - 2007, mukaan lukien Suomessa jaetut ylimääräiset osingot.*
Tiedekunta	Kauppatieteellinen tiedekunta
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Tutkimuksen tavoitteena on tutkia epänormaalien tuottojen esiintymistä nousu- ja laskusuhdanteen aikana osingonilmoituspäivän ympärillä. Osinkoilmoitukset ovat kerätty Yhdysvaltojen markkinalta (NYSE) ajanjaksoilta 2000 - 2002, jolloin pörssit laskivat teknokuplan jälkeen ja 2005 - 2007, jolloin sijoittajat kokivat suuria kurssivoittoja. Osinkoilmoitushavainnot koostuvat yhtiöistä, jotka nostivat tai pitivät osinko per osake paikallaan.

Tavoitteena on tutkia eroja epänormaaleissa tuotoissa näiden kahden ajanjakson välillä. Toiseksi, tavoitteena on tutkia miten epänormaalit tuotot poikkeavat toisistaan eri osinkotuottoluokissa. Kolmanneksi, tavoitteena on tutkia esiintyikö markkinoilla epänormaaleja tuottoja kun suomalaiset yritykset ilmoittivat ylimääräisistä osingoista, pääasiassa vuonna 2004.

Yksinkertaisesti ja lyhyesti sanottuna tavoitteena on tutkia arvostavatko sijoittajat osinkoja enemmän laskukauden vai nousukauden aikana. Rahoitusteorian mukaan sijoittajien tulisi arvostaa laskukauden aikana enemmän yhtiöitä, jotka pystyvät maksamaan huonosta taloustilanteesta huolimatta hyvää osinkoa.

Empiiriset testit Yhdysvalloista osoittavat, että osingon nostamisesta johtuvat epänormaalit tuotot olivat suuremmat laskusuhdanteen aikana kuin noususuhdanteen aikana. Tämä on linjassa teorian kanssa. Osingon-nostot aiheuttivat nousukauden aikana vähäisiä epänormaaleja tuottoja. Selviä eroja eri osingontuottoluokkien välillä ei pystytty havaitsemaan. Tulokset yhdistetystä aineistosta osoittavat, että sijoittajat kokivat vähäisiä positiivisia epänormaaleja tuottoja laskukauden aikana. Nousukautena tuotot olivat lähellä nollaa. Suomen markkinoilla havaittiin selvä epänormaalituotto osingonilmoituspäivänä.

Tulokset ovat pääpiirteittäin linjassa teorian kanssa. Sijoittajat arvostavat osinkoja hieman enemmän lasku- kuin noususuhdanteen aikana.

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Lappeenranta 13. toukokuuta 2008
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1.   INTRODUCTION

Investors have experienced superior gains from stock markets all around the world during the last four years (see p. 37), starting from 2003/2004 to this day. Now these "golden years" have come to the end and stock markets are shaking without a direction to go. The beginning of this decade was bad time for investors, after techno bubble burst, lots of money was lost. Regardless of economic fluctuations, the main point of investing is to make money yield. If shares are not yielding on the best percent, may dividends have an offsetting impact.

Investors have two ways to make profits with stocks: capital gains or dividends. When stock markets are falling, one way to gain profits is dividends; this was the case between the years of 2000 – 2002 after the techno bubble burst. During the last years from 2003 investors all around the world have enjoyed enormous profits and dividends have got smaller attention. Investors are assumed to consider dividends more important when it is a recession; especially high dividends companies are assumed to be valued higher during a falling GDP period. This paper investigates differences in abnormal returns of dividend announcements during a recession and a boom.

Dividends being delivered by a company to shareholders are one of the tools when executives want to communicate with shareholders. A dividend is another of two ways to make money with stock, another is to sell them and make capital gains. Dividends get lots of attention and number of dividend investing strategy articles have published. Large number of individual investors and fund managers consider them as important.

The information content of dividends hypothesis asserts that managers use dividend announcements to signal changes in their expectations about the futures prospects of the firm. Miller and Modigliani (1961) have

regardless of that showed that in the perfect capital markets dividend policy of the firm is irrelevant to its value. It does not seem to be the case according to the research examinations[1]. Researchers have noticed large abnormal returns before and after dividend announcements. Dividend policy seems to have some importance to some investors, partly due to taxation on capital gains. The results of studies on dividend policies are controversial as well.

Dividends have a special character from the viewpoint of executives. Whether the management of the company should deliver free cash to shareholder in order to they could reinvest the money forward or is the management able to make higher profits to a shareholder by holding cash in the company? What conclusions can be made from lowering or raising dividends?

A special character in dividends has extra-dividends. In United States dividends are delivered four times in a year but in Finland only once. If the management sees reasons, they can announce an extra dividend. This was the case 2004 in Finland when the government changed taxation on dividends. It was favourable to companies with a large amount of cash to deliver a part of it to shareholders, next year investors paid 19, 6 % tax on dividends. Plenty of extra dividends were announced by listed companies, and abnormal returns around those announcements will be discussed in this paper.

In perfect markets all information should be in a stock price. Investors should have equal chances to get information from listed companies. Abnormal returns should not exist for a long time. This is not the case in the real world. Some investors have specific information about particular companies and they are able to get this before other.

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[1] For example: Van Eaton (1999).

Any information announced by a company should be included in the stock price straight after the announcement in an efficient market. If one can observe slowness, a conclusion can be made that the market is not working efficiently.

1.1 Objectives and methodology

The main purpose of the study is to investigate differences between abnormal returns of dividend announcement during a boom and a recession. Secondly, the purpose is to examine differences between different dividend yield brackets. Third part concentrates on abnormal returns of Finnish extra dividends. The aim is to find out do investors respect dividends more during economically bad times than good times. All the research questions are related to the theoretical part where the aim is to highlight questions about dividends and answer the question why companies pay dividends. Investors' behaviour and other psychological aspects about the rational theory are also taken into consideration.

The reader is highly recommended to pay attention on the chapter "research question and hypothesis" where deeper insights concerning dividend hypotheses are reviewed. Although, there are an abundant amount of articles of dividend announcements, no one has precisely examined abnormal returns during different economic fluctuations. All the parts are naturally related to the market efficient hypothesis and are discussed across the paper. The empirical part of this study will be made by using the event study methodology. The procedure how results have been gained is introduced in the chapter 5.

The research questions of this study are presented as follows:

Empirical part:

Q1   How abnormal returns of dividend announcements differ during a recession and a boom?

Q2   How abnormal returns of dividend announcements differ between different yield brackets (thereby between a recession and a boom)?

Q3   How market reacted to the extra dividends in Finland, being delivered especially in 2004 due to the taxation provision?

Theoretical part:

Q1   Why companies pay dividends and extra dividends?

Q2   How dividends are seen from the viewpoint of shareholders and managements?

Along with these research questions, the aim is find out how efficiently the markets work in U.S. and Finland. The statistical null hypothesis says that there are not any abnormal returns. If abnormal returns will be found, particular conclusions about the market efficiency will be made.

1.2   Limitations

This paper concentrates on abnormal returns which exist during the time period of 21 days around the dividend announcement day. Despite the fact that some authors e.g. Van Eaton (1999) have noticed large abnormal returns long before and after the dividend announcement day, the author

of this paper does not see it useful to extend the time scale, even though these aspects would be interesting.

Dividend announcements being used in this paper cover only dividend increases and intact announcements (i.e. no change). Due to lack of dividend decreases, they are not included. Most of the companies aim to keep a steady flow of dividends, so finding an adequate number of dividend decrease announcement is troublesome. The Finnish data of extra dividends also sets some questions about their statistically functioning. Some of the Finnish companies are infrequently traded.

1.3   Structure of the thesis

This paper is organized as follows. Chapter 2 concentrates on dividend policies and the aim is to make the reader more aware of different theories. Chapter 3 is for the research questions and different hypotheses. Here the aim is to clarify what are underlying assumptions and the main purposes of the empirical part. Chapter 5 is for introduction of the event study. Chapter 6 is for results and the conclusions of the empirical part can be found from the chapter 7.

2. THEORETICAL FRAMEWORK

2.1 The role of the information in capital markets

Market efficiency, transparency and the speed of flow of information have been issues of interest in a field of finance for many years. Economist, statisticians and professors have been interested in developing different kind of models of stock price behaviour, so far with unstable results. When we talk about market efficiency, we can not pass a classic paper on market efficient theory by Eugene Fama (1969 and 1974). In these papers hi has created a framework for market efficiency and is cited by a number of colleagues. Event study, also used in this paper, was partly introduced by Fama in 1969. A procedure which captures market movements due to release of new information.

The main idea of the theory is that stock markets i.e. investors react to new information released by a company immediately. If there is any lag in the response of prices to an event, it is short-lived. The reason for this is that investors notice these "anomalies" and buy or sell stocks and it disappears. Shiller (2003) says that "*The efficient market theory, as it is commonly expressed, asserts that when irrational optimists buy a stock, smart money sells, and when irrational pessimists sell a stock, smart money buys, thereby eliminating the effect of the irrational traders on market price.* But this smart-money-system doesn't work so well all the time. During the history we have seen asset bubbles all around the world and the "system" has failed.

A classic paper of over- and under-reactions by De Bondt & Thaler (1985) states that stock markets do not work efficiently; substantial weak form market inefficiencies are discovered. An over-reaction means that investors react too strongly to new information. This kind of behaviour is typical when volatility is high and investors are nervous. Fama (1991) says

that in an efficient market underreactions are as frequent as overreactions, so they neutralize each other.

The term over- or underreaction carries an explicit assumption that to some degree investors had a consensus expectation about the upcoming event. Could we then assume that blue-chip companies which are followed by a number of analysts do not surprise markets as often as companies with less analyst following. According to De Bondt & Thaler (1985) individuals tend to overweight recent information and underweight prior information. Kahneman & Tversky (1982) say that people seem to make predictions according to a simple way: "*The predicted value is selected so that standing of the case in the distribution of outcomes matches its standing in the distribution of impression*".

Shleifer (2000) has formed three conditions which will lead to efficiency: 1) rationality 2) independent deviations from rationality and 3) arbitrage. If all investors were rational and a company would release a press release, the stock price should rise or lower immediately and consistently with the value of this press release, since rational investors would not see sense to wait and to trade probably at a worse price later. How it can be estimated the value of one press release? The simple answer is that it can only be guessed. The second statement tells us that investors (human beings) are not rational all the time. Due to emotional resistance, investors can as easily react to new information in a pessimistic or an optimistic manner. Business history tells us examples of investors who were initially quite sceptical about mobile phones, copiers and fax machines. As time goes by, this kind of behaviour has a tendency to vanish. The third statement refers to mispriced assets. If there are anomalies or systematic ways or procedures to make higher profits than on average, some investors will eventually notice this and tap the situation and the arbitrage disappears.

Shiller (2003) says that there is a clear sense that to some extent volatility can be predictable but generally, attempts to capture overall volatility of

overall stock markets is impossible. The history has showed that different kinds of discount of future returns models have failed to explain variance. Maybe someday there will be a definition of discount rates that produces present value series that takes into account the actual price better than any of the previous models. After a number of articles which try to defend or smash the efficient market theory, there is still evidence to think that, event though markets are not totally absurd all the time, there is some degree which can be explained by a mathematical model. The efficient market theory, for the overall stock markets, has never been supported by any paper which would be effectively linked to stock market fluctuations with subsequent fundamentals. Finding no solutions, researchers have turned their faces to other theories.

In the 1990s, after a number of attempts to explain stock markets behaviour by econometric analyses of time series on prices, attention shifted to developing models of human psychology. Too many anomalies and price bubbles had been seen without answers to explain why. Lots of books have been written on psychological acpects[2].

Feedback models
One famous theory is so called a "price-to-price" feedback theory. When speculative prices go up, creating wealth for some investors, this will eventually attract other investors, create word-of-mount enthusiasm and raise expectations for further price increases. This happened exactly in the techno bubble a couple of years ago. Talks about "an economy without fluctuations" and "continuous golden ages" are often related to bubble times.

The feedback model is supported by psychologists Andersen & Kraus (1988). They found that when people are shown historical stock prices in a

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[2] To mention some books on behavioural finance; Hersh Shefrin (2000): *Beyond Greed and Fear.* Richard Thaler (2003): *Advances in Behavioral Finance* and Burton G. Malkiel (2003): *A Random Walk Down Wall Street*

sequence and asked to trade in an artificial market that displays these prices, people have a tendency to behave as if they extrapolate the past prices changes when prices appear to behave a trend relative to period-to-period diversity.

Also Tversky & Kahneman (1974) have proved people to use heuristic conclusions when they make decisions. People have a tendency to predict by seeking the closest match to past patterns, even though the proved probability of the pattern would be low. When people are asked to guess the occupations of people whose personality and interest are known, people tend to guess the occupation that seem to match the descriptions as closely as possible regardless of the rarity of the occupations. A rational human being would have chosen normal and unexceptional occupations since the probability is higher. In stock markets, this can be related to long downward and upward trends. According to the past price movements in stock markets, investors buy or sell stocks.

Smart money versus ordinary investors

Goetzmann & Massa (1999) have classed investors into two groups: feedback traders who follow trends and smart money which move the other way. They made an examination in which they divided investors into groups based on how they react to daily price changes. Both groups consisted of momentum investors. Ordinary investors who normally bought more after a price increase and contrarian investors (smart money) who normally sold after prices were rising. What was interesting is that investors tended to stay in a group they had "chosen" in the first place, rarely shifting between groups. This emphasises the hedonistic view that people tend to behave according what they have experienced earlier and what are the best ways of action, even though it would not be the best way to use in a particular situation. Finance theory does not simply imply that the smart money succeeds in fully offsetting the impact of ordinary investors; actually it is far from clear that the smart money has the power to drive market prices to fundamental values.

Miller (1977) pointed out an important obstacle to smart money's offsetting impact of irrational investors. He says that smart money can always buy stocks but can not always sell stocks. It might be the case that smart investors have already sold the stock and fanatic investors (ordinary) keep buying until the company is owned only by the fanatic investors. The smart investors may, of course use all the shortable shares and profit from they knowledge. However, this is not so simple.

Random Walks

Random walks theory says that no one can know which direction stock markets will go to in the future. In addition to behavioural finance, investors can not predict futures' values by technical theories or fundamental (intrinsic) value analysis. The underlying assumption of the all technical theories is that history tends to repeat itself, i.e. the past behaviour of prices tends to happen again in the future. By creating a mathematical equation and charts some investors try to predict stocks' values of tomorrow. The main idea of the fundamental analyses is that at any point in time an individual security has an intrinsic value (equilibrium price). This intrinsic value reflects earnings potential of the company. These fundamental factors can be for example, the management or an outlook for the branch etc. Through the fundamental factors, an investor should be able to determine the right value of the company. In an efficient market, tight competition among investors drives stock markets into a situation where market prices are the "real prices" or "intrinsic prices".

Fama (1995) says that there are always instances where investors disagree with each other about the intrinsic values and these disagreements cause that the stock price wanders randomly around its intrinsic value. If discrepancies between actual prices and intrinsic value are systematic rather than random, then knowing this should help investors to better predict the way actual prices will go to. When many investors try to take an advantage of this, it will eventually neutralize such systematic behaviour in price series.

2.2 Dividends as a tool of communication from a managerial and a shareholder perspective

Agent theory

The principal-agent problem or the agency dilemma handles the difficulties that arise under conditions of incomplete and asymmetric information when a principal (i.e. manager) has more information than an agent (i.e. shareholder). This causes that the shareholder of the company can not totally trust on the management. Feldstein & Green (1983) say that an explanation for dividends is the separation of ownership and management. Dividends are selected according to a signal of a sustainable income of the company: the management selects a dividend policy to communicate with shareholders since conventional accounting reports are not enough. The signalling idea here is that shareholders distrust the management and fear that the retained earnings will be wasted in poor investments, higher management compensation etc. This kind of phenomenon is called "*bird in hand*" and is strong enough to pressure the management to make dividend payments even when this involves a tax penalty. But as known, companies do not pay all the retained money out to shareholders and they do not demand this to happen. A legend investor, Warren Buffet has never paid dividends through his company Berkshire Hathaway since hi thinks he can gain better profits with retained money than shareholders, and the shareholders have never complained.

Jensen & Meckling (1976) say that agency problems in corporations are due to an external debt and an external equity. They examined how a firm's value is affected by the distribution of ownership between inside shareholders (management) who are able to use perquisites and outside shareholders who can not. They found that higher managerial ownership abates the agency difficulties by reducing temptations to use perquisites and raise a company's value. The agency costs are lower in firms with larger propositions of inside ownership. Thus, the management's interest are same than shareholders' interest. They divide the agency costs into

three different groups: monitoring expenditures by the principal (shaholder), bonding expenditures by the agent and residual loss. Monitoring expenditures by the principal mean costs of control the behaviour of the agent through budget restrictions, compensation policies, operating rules etc.

Easterbook (1984) lists that one source of the agency costs is risk aversion on the part of managers. Investors have diversified portfolios of stock (at least in theory); they are only concerned about any nondiversifiable risk with respect to firms' projects, while managers have a substantial part of their wealth tied up in the firm. If the firm is doing badly, managers will probably lose everything. Thus, the risk-averse managers will choose projects that are safe but have a lower expected return than riskier projects. Shareholders have the opposite preferences.

Crutchley & Hansen (1989) stated that the agency costs can be controlled by three financial variables: manager's personal equity ownership, corporate leverage and a corporate dividend payment. Firms should use common stock ownership and personal equity when costs of dividends are used as a mean for lowering agency costs are high. When the situation is opposite, managers should use dividends to lower the agency costs. Managers try to choose the best combination of the three variables when minimizing the agency costs.

Bray, Graham, Harvey & Michaely (2004) interviewed 384 financial executives to determine the factors that drive dividend and share purchases decisions. They noticed that most executives do not view payout policy as a means of self-imposing discipline. Almost 87 percent of the executives think that the discipline imposed by dividends is not an important factor which affects dividend policy. The executives stated that managements' integrity or discipline imposed by the "bottom line" (i.e. a minimum payout rate) ensures that the free cash flow is not wasted in negative NPV projects. Some of the executives admitted that "money can

burn a hole in their pocket". These executives agreed that committing to pay dividends can reduce this excess free cash flow problem. Anyway, they said also that dividends are not better to imposing discipline than are repurchases.

Amihud & Kefei (2003) argued that agency costs and information content of dividends have declined since large institutions have raised their proportions in companies. These investment institutions are more sophisticated and informed than ordinary investors. Across firms, cumulative abnormal return of dividend announcements is a decreasing function of institutional holdings and dividends are less likely to arise in firms with high institutional holdings.

2.3 Dividend policy

When a firm announces a payment of a cash dividend, or reduces a cash dividend, the firm is making an extremely visible qualitative change in corporate policy. What effects do such events have on returns? The topic of corporate payout policy is extremely controversial in finance literature. It has been argued whether dividend changes or payout changes contain information about the futures earnings, profitability, stock returns or futures prospects from a managerial perspective. A classic paper from Modigliani & Miller (1961) states that, under the assumptions of perfect markets, rational behaviour and zero taxes, the value of the firm does not depend on the firm's dividend payout rate.

But the world is not perfect in many ways and when we enter the real world, the issue of dividend irrelevance becomes more debatable. Such market imperfections as differential tax rates, information asymmetries between insiders and outsiders, conflicts of interest between managers and shareholders, transaction costs, emission costs, and irrational investor behaviour might make the dividend decisions difficult but noteworthy.

A number of researchers have devoted lots of time to solve the problem of dividend puzzle. Researchers have responded to the M&M dividend policy theory by offering many competing theories about why companies pay dividends and why investors should take dividends into account. Assessing the dividend irrelevance, Black & Scholes (1974) stated, "*The harder we look at the dividend picture, the more it seems like a puzzle, with pieces that don't fit together*". Years after this, Feldstein & Green (1983) stated, "*The nearly universal policy of paying substantial dividends is the primary puzzle in the economics of corporate finance*".

Typically U.S. corporations have paid out about 40 percent of their net income as cash dividends. A large number of companies pay no cash dividends whereas many pay dividends in excess of their income. (Ross, Westerfield & Jaffe 2004). Particularly techno, medicine and airline companies have not paid dividends, but they have invested this money in business. Corporations consider dividend decisions as a quite important because it determines what funds are delivered to investors and what funds are retained in the firm for reinvestments. One of the biggest an American airline company writes about their dividend policies as follows:

> "*US Airways Group has not historically paid cash dividends on common stocks, but rather reinvested any profits into the company.*"

In this case the management of US Airways Group believes they can gain better profits by investing available cash back into the company than investors would get by making individual choices. The management is expected to make profits above risk-free rate plus premium which reflects the risk of the company.

Dividends are not viewed in isolation. Some companies nowadays devote about 40 percent of net income to share purchases. The amount of companies doing purchases has risen during the recent years. Dividends

and repurchases must be seen as alternative payout competing for corporate cash flows.

The dollar amount of share repurchases and dividends for US companies were studied by Allen & Michaely (2002) between 1972 and 2000 and the results showed that the dollar amount of share repurchases were only a small fraction of that of dividends in the early years. Share purchases have risen over time and in the years 1999 and 2000 repurchases exceeded dividends. The main point of repurchases is that the management buys share back in order to lower the number of total shares. Thus, earnings per share rises and fundamental figures indicate the company to be cheaper and more attractive to buy. In a perfect market a shareholder can sell stocks hi owns and make "homemade dividends". This hypothesis requires a perfect market with no taxes and transactions costs. However, the current income argument does not have that much relevance in a real world. The sale of stocks involves brokerage fees and other expenses.

Brealey & Myers (2002) say that if a firm cut dividends completely and start to repurchase stocks they would find Internal Revenue Service recognize the repurchase program for what it is and start to tax the payments accordingly.

Several surveys provide evidence on the motivations behind repurchases. Baker, Gallagher & Morgan (1981) examined CFOs attitude towards repurchases during the late 1970s. Their results suggest that the two major reasons for repurchasing stocks are "a good investment of excess cash" and "a use in employee bonuses or in stock option plans". In line with theory, repurchases should be considered more favourable when the company's stock price is low and the management does not see good investment opportunities. The same principles apply to dividends.

Ross, Westerfield & Jaffe (2004) bring out a psychological aspect why companies pay dividends. Investors have two choices to obtain money

regularly: whether they sell a slide of stocks every year or invest in high-dividend companies. A human being is not nevertheless very rational and self-discipline can fail and the investor sells too many shares one year. If the investor receives this regular payment as a form of dividends, he or she does not have a lure to touch to the initial invested capital. While behaviourists do not claim that this approach is for everyone, they argue that enough people think this way may explain why firms pay dividends.

In United States dividends and capital gains are taxed on a maximum rate of 15 percent. In Finland rates are 19,6 percent and 28 percent, respectively. Since dividends are taxed when distributed whereas capital gains are taxed when an investor converts them into money, the tax rate on dividends is greater in United Stated than capital gains. In a case of capital gains investors do not have to give a slide of the initial invested capital to government every year until they sell them which is the case of dividends. By not selling, investors avoid realizing the capital gain and incurring transaction costs and the initial money being invested can yield all the time. (Ross, Westerfield & Jaffe, 2004).

In Finland the situation is almost reverse since dividends are taxed on a lower rate. In Finland it could be imagined firms to distribute all available cash as dividends and if needed the firm could issue new equity via financial markets. Of course, this is not optimal since the equity issue costs are high.

Investors may face different taxations on capital gains and dividends. There are obviously differences between countries. This argument is one of the earliest explanations for paying dividends. Investors who receive a more favourable tax treatment on capital gains may prefer stocks with low dividend payouts. Brennan (1970) developed a version of the capital assets pricing model with an additional premium based on a dividend yield. Hi found that investors require higher returns on stocks with higher dividend yields to compensate for the tax disadvantages of these results.

One way to examine these tax-preference hypotheses is to examine stocks behaviour in the ex-dividend date. More favourable capital gains should cause the price drop less than the amount of dividend. With the same argument, we could suppose investors prefer stocks that do not pay dividends. Michaely (1991) found that an ex-dividend day price drop equal to the dividend payment.

Feldstein & Green (1983) have found five possible answers to the dividend puzzle. They think there is a piece of truth in every dividend model but none of them have succeeded to tell collectively. First, there are small investors and non-profits organizations that try to achieve a steady stream of dividends as an aim to finance consumption. Although these investors could finance this consumption on a more favourably taxed basis by periodically selling share, as was discussed earlier, they have a lure to sell too many shares one year and they are faced transaction costs. Some of the non-profits organizations may are required to spend only incomes and not to touch to the principal. A more plausible explanation would be that dividends are required because of the separation of ownership and management. According to the argument, dividends are a signal of a continuous income of the company. Management selects a level for dividends to communicate with shareholders since conventional accounting reports are inadequate to guide current earnings and futures prospects. About the agency problem the reader can get further information from the previous chapter.

Feldstein & Green point out the difference between after-tax profits and the retained earnings that should be consistent with a steady-state growth and an optimal debt-equity ratio. These limits aggregate retained earnings and implies positive aggregate dividends. However, the model does not tell why each firm will choose to pay positive dividends rather than to grow faster than the economy's average rate. They suggest that each firm is limited by the fact that when the firm invests too much they will finally face

some problems due to an uncontrolled growth, thereby making the firm riskier and reducing the market price.

Another explanation Feldstein & Green introduced is the idea of shareholder risk aversion. Investors on average are risk-neutral and they hate uncertainty. This limits a firm's growth and the existence of diverse tax brackets are the two major reasons why companies pay dividends. There are two kinds of investors: taxable individuals and untaxed institutions (funds). The management goal is to attract investors to buy company's shares. According to a theory of finance investors should diversify their portfolio by buying different kind of stocks. The management can maximize its share price by attracting both types of investors. So, this can be done by distributing some fraction of earnings as dividends. The combination of the conflicting preferences of shareholders in the different tax brackets and shareholders' wish for portfolio diversification are the two major reasons why firms to pay dividends in their model.

Dividend theories

One of the most commonly used models is so-called a dividend model of share prices, being based on earnings an investor gains on his share. The model is based on discounted dividend earnings when the shareholder return is changing. The model can be expressed as follows:

(1)
$$V_0 = \sum_{t=1}^{\infty} \frac{D_t}{(1+r_t)^t}$$

where

$D_t =$ the dividends paid by the firm at the end of period t

$r_t =$ the investors' opportunity cost of capital for period t

This formula is a very classical way to determine the value of the company. The future's dividends are discounted to present. One could go further and add a perpetual yield formula to the end.

Gordon (1959) said that an investor's required rate of return r_t would increase with retention of earnings and increased investment. Although the remote future's dividend stream would presumably be larger as a result of increase in investment, a higher required rate of return would overshadow this effect. The reason for the increase in r_t would be the greater uncertainty associated with the increased investment relative to the safety of dividends.

Modigliani & Miller (1961) brought out that this view of dividend policy was incomplete and they presented a rigorous framework for analyzing payout policy. As long as the investment policy does not change, varying the mix of retained earnings and payout will not affect firm's value. Their framework has formed the foundation of a subsequent work on dividends and payout policy in general. Their model takes into account both dividends and repurchases, as the only determinant of a firm's value is its investment policy.

In a classic study, Lintner (1956) showed first time that firms are not willing to reduce dividends per share and this "dividend - smoothing" behaviour was widespread. He picked over 600 companies and chose 28 to survey. He tried to choose companied with a very different background. Lintner made several new findings concerning the dividend policies of these firms. First, hi noticed that firms are primarily concerned for the stability of dividends. Firms do not select dividends differently each quarter. Instead, they first think about futures earnings prospects and make dividend decisions based on this information. Firms are reluctant to reduce dividends and investors know this. Managers believe strongly that the market puts a premium on firms with a stable dividend policy. Lintner suggested that the following model would capture the most important components of firms' dividend policies. For firm I,

(2) $$D*_{it} = \alpha_i E_{it,}$$

(3)
$$D_t - D_{t-1} = a_i + c_i (D^*_{it} - Di_{(t-1)} + u_{it,}$$

where for firm i

$D^*_{it} = $ desired dividend payment during period t

$D_{it} = $ actual dividend payment during period t

$\alpha_i = $ target payout ratio

$E_{it} = $ earnings of the firm during period t

$a_i = $ a constant relating to dividend growth

$c_i = $ partial adjustment factor

$u_{it} = $ error term

Based on Lintner's survey of 28 companies, he reported a median target payout ratio of 50 %. The payout policy model presented above was able to explain 85 % of the dividend changes in his sample of the companies. Lintner found out that the current earnings were the most important determinant of change in dividends. Executives are expected to explain to shareholders reasons for specific acts and this should be done by using simple and observable indicators. He manifested that many companies had a target payout ratio. If there was a change in firm's earnings, the firm adjusted their dividends slowly. The third observation was that the management set dividend policy first. Other decisions were implemented later and were based on the particular dividend policy.

It should borne in mind that although Lintner's study is one of the most bathbreaking in the field of dividends, it is quite old. Executives today have various ways to deliver money out, for example repurchases, extra dividends and amortize shares (which is the idea of purchases in most cases). Financial markets work better and to issue equity and raise dept is easier. On the other hand, the main idea of Lintner's study still holds. Firms still do not want to reduce dividends although their earnings would fall temporarily. The researcher of this paper found only a couple of

dividend reductions in this decade, though we have seen the techno bubble burst and the recession in the beginning of the decade. Many of famous investors tell about the importance of dividends in investment books, like a Finnish legend investor Seppo Saario (2001), as hi states in his book:

"*My strategy bases on an idea that companies grow, they are profitable and pay dividends. If a company doesn't pay dividends, there must be something wrong with the company. The value of the company is futures' dividends discounted to present.*"

John Bogle (1999), a famous American investor and the founder of The Vanguard Group:

"*I'm concerned that we've moved to a society where everything can be counted and nothing can be trusted. We think earnings produced by corporations are the gospel truth, but they are anything but that. Earnings are whatever they are, but dividends are reality.*"

Baker, Veit & Powell (2001) found 22 different factors which affect to dividends policy and the answers they got from a questionnaire to managers of NASDAQ firms are consistent with Lintner's idea. Their objective was to identify the most important factors which have an influence on dividends, being used by U.S. companies that were traded on NASDAQ 1999 and compare what managers say about dividend policy and how the academic says they should make such decisions. They found as Lintner that the most important factors of defining dividend policies are the level of current and expected earnings and the pattern of past dividends. Significant differences were also found between managers from profits and non-profits companies. They also examined how often and how accurately CFO or CEO pays attention on their dividend policy. 51 % responded that they have an explicit dividend policy and 49 % said they do not have. Almost all the respondents reported that they re-examine

dividend policy at least once a year. The main reason why they checked dividend policy was a concern about the stock price.

Clientele effects

Clientele effects indicate that to a certain degree investors may prefer different level of dividends due to their different levels of taxation. For example Lease, Lewellen & Schlarbaum (1978) state that private investors prefer long-term capital gains, then dividend income and thirdly short-term capital gains. Elton & Gruber (1970) showed that the price drop on ex-dividend day depends on a marginal stockholder tax rate. The tax rates can change time after time and results from ten years ago are not evident anymore. Ex-dividend day is a widely used procedure to investigate clientele effects. The results change from country to country. For example, Boot & Johnston (1984) studied ex-dividend day behaviour in Canada and they could not find any evidence to support the clientele effects.

Six empirical observations & suggestions in dividend policies

Allen & Michaely (2002) have listed in their comprehensive dividend study six empirical observations which play an important role in dividend policy. First, large corporations normally pay out a significant share of their earnings in the form of dividends and repurchases. Second, historically dividends have played the main form of payouts. Repurchases have got smaller attention until the mid-1980s but then repurchases have become more important. Third, as referred in second, the proportion of dividend-paying firms has been steadily declining. The reason for this was discussed earlier in this chapter. Fourth, investors in high tax brackets receive large amounts of money as a form of cash dividends and pay substantial amounts of taxes on these dividends. Fifth, firms do not want to change dividends year after year, but they try to smooth dividend flows. Repurchases are instead more volatile than dividends. Sixth, there are positive returns[3] around the announcements of dividend and repurchase

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[3] Here are referred to normal positive stock market changes, not abnormal returns

increases and the negative returns due to the announcements of decreases. The biggest problem to financial executives has been to create a model which maximizes owners' wealth and investors maximize their utility. This theoretical framework is meant to be consistent with these all six observations and not be rejected by empirical tests. Allen & Michaely conclude that they can not recommend any optimal policy payout. Despite the findings, they make six general suggestions to take into account in general.

Attempts to create a model for dividend policy seem to be trivial in some extent. Ownership of listed companies has spread around the world and capital gains and dividends are taxed differently. Legislation differs from country to country. Investors prefer high dividend companies at the time of a recession and reversed when it is a boom. Agency principles problems, investment opportunities and managements' own interest formulate so problematical equation that the optimal dividend policy will be never solved out. Generally we can say that the main purpose of dividend policy is to fascinate investors as much as possible from different tax brackets to buy company's stocks and so lift the value.

2.4   Dividends as a sign of futures prospects

Signalling effects

The signalling effect of dividends assumes that dividends convey information about future earnings.[4] An underlying assumption here is that dividends and future earnings are in relation to each other.

Ofer & Siegel (1978) documented a relationship between announcements of unexpected changes in financial policy and unexpected changes

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[4] There is no a common answer what kind of signals dividends convey. Asquint & Mullins (1986) have stated "improved prospects", whereas Easterbook (1984) stated dividend increases to be "ambiguous". It is also worth to know that some researchers may use "signalling effect" when they refer agency dilemma.

firm's performance. The authors provide evidence that analysts revise their earnings forecasts following the announcement of an unexpected dividend change by an amount positively related to the size of the unexpected dividend change. They also provide evidence that these revisions are positively related to the change in equity value surrounding the announcement. Further, they find that these revisions are consistent with rationality. Their results support the theory that unexpected dividend changes signal information about a firm's performance to market participants.

Healy & Palepu (1988) noticed that dividend-initiating firms experience earnings growth in the year of a dividend announcement and for two subsequent years but not thereafter. Also Asquint & Mullins (1983) argued that the abnormal returns are the biggest in initiations since these events are more likely to be unexpected than subsequent regular dividend announcements. They find the average two-day abnormal return on cash dividend initiations to be much higher than for the largest subsequent increase in dividends.

Garrent & Priestly (2000) showed that at least on an aggregate level, information about the expected future earnings is incorporated to the lagged price development. In the light of that, dividends do not signal the future level of earnings of the firm. However, they found results which support the theory that dividends convey information about the current unexpected permanent earnings. On the other hand, it seems that only positive changes to the unexpected permanent earnings affect the current dividend. Dividends tend to rise 30 % of the earnings increase if the increase was unexpected. In their survey the authors did not accurately separate how they defined was a dividend announcement expected or unexpected.

Benartzi, Michaely & Thaler (1997) have made a large survey of information content of dividends and the future earnings of firms. The

results show that companies that increased dividends in year 0[5] experienced significant earnings increases in years -1 and 0 but show no subsequent unexpected earnings growth. The amount of dividend did not reflect to future earnings. Firms which cut dividends in year 0 experienced a reduction in earnings in year 0 and in year -1. These firms announced substantial increases in earnings a year after the announcement. They noticed that firms which raised dividends were less likely to cut dividends in the future; this is consistent with Lintner's model of dividend policy.

2.5 Empirical results from previous studies

The aim of this section is to gather together all the relevant studies somehow similar with this paper. Even though, the event study methodology is quite popular and often used by researchers, there is lack of pure studies which concentrate only on the effects of dividend announcements. The most comprehensive studies on the effects of dividend changes on stock prices made so far are Michaely, Thaler & Womack in 1995, Van De Eaton in 1999, Aharony & Swary 1980, Asquint & Mullins in 1986 Jin 2000 and the latest one from Dasilas 2007.

Most of the studies associated with dividends deal with the relationship between earnings and dividends[6], intraindustry firms' valuations[7] or some other aspects of dividend annoucements[8]

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[5] 0 = the year the dividend was announced, -1 = year before the announcement etc.
[6] For example: Pettit (1986): The impact of Dividend and Earnings Announcements: A reconciliation and Dyl & Wigand (1998): The Information Content of Dividend Initiations: Additional Evidence.
[7] Firth (1996): Dividend Changes, Abnormal Returns, and Intra-industry Firm Valuations. Howe & Shen (1998): Information Associated with Dividend Initiations: Firm-Spesific or Industry-Wide?
[8] Grinstein & Michaely (2004): Institutional holdings and Payout Policy. Amihud & Li (2005): Declining Information Content of Dividend Announcements and the Effects of Institutional Holdings.

Table 1

An overview of relevant studies concentrated on the market reaction of dividend announcements. Studies are presented in chronological order and the results are cumulative abnormal returns. Event window is presented in days, so that the day 0 is the announcement day. Symbols * (**, ***) indicate significance at the .10 (.05, .01) level

Author(s)	Dividend chages			
		Days **-1, 0 ja +1**	**Post-Announcement**	
Petit (1972)	Initiation	8.3%***	5.8%***	(3 mos.)
	Increase > 25%	0.0%	4.0%***	(3 mos.)
	Decrease	-6.2%***	-0.5%	(3 mos.)
	Omission	-3.0%***	-4.8%***	(3 mos.)
		(t = 0)		
Dielman &	Resumption	4.4%**	1.3%	(+2, +6)
Oppenheimer	Increase >25%	4.6%***	-0.8%	(+2, +6)
(1984)	Decrease >25%	-5.7%***	-1.1%	(+2, +6)
	Omission	-6.6%***	0.3%	(+2, +6)
Asquint & Mullins (1986)	All initiation (-1,0)	3.7%***		
	No other events +-10	4.7%***		
	Earnings ann.+-10	2.5%***		
Bajaj & Vijh (1995)	All announcements	0.2%***		
Michaely,	Initiation	3.4%***	7.5%***	(+2,+254)
Thaler & Womack	Omission	-7.0%***	11.0%***	(+2,+254)
(1995)			15.6%***	(+2,+506)
			-15.0%***	(+2,+506)
Van Eaton (1999)	Resumption	3.3%***	-0.4%	(1year)
	Increase	1.9%***	-0.5%	(1year)
	Decrease	-6.0%***	-11.2%*	(1year)
	Omission	-6.5%***	-17.1%*	(1year)
	Resumption		-5.1%***	(2years)
	Increase		-3.0%***	(2years)
	Decrease		-3.9%	(2years)
	Omission		-6.6%***	(2years)
		(t=[-1],[0])		
Jin (2000)	Initiation (positive effect)	6.16%		
	Initiation (negative effect)	-2.88%*		
			Ann.day	
Dasilas (2007)	Increases	1.1%***	0.48%*	
	Decrease	0.3%		
	Intact obs.	0.0%		

Pettit (1972) found clearly that dividend changes convey information to investors when they assess value of securities. Petit supports Lintner's found that management fear of reducing or omitting dividends seems well founded and leads to a situation where the management wants to wait until cash flow can be estimated with little uncertainty. Two conclusions were also drawn: first, if the information implicit in the announcement could be conveyed to the market in a different way, firms should think about these options. Second, although dividends convey some information, they are not the best choice to convey information to shareholders since it is an imperfect means of describing the firms' future prospects. Letting the management to communicate more with investors would be better than convey information through dividend changes.

Dielman & Oppenheimer (1984) noticed abnormal returns before and after the dividend announcement day. Second, on the announcement day, all four dividend groups experienced large and significant abnormal returns. Third, after the announcement each group except the omission group, continues to have some abnormal returns for a month. Fourth, beta ration decreased for the companies which increased or took back dividends, thus the risk related these companies lowered by investors' viewpoint. Fifth, when it is used two different methods to calculate abnormal returns, the results differ significantly. Thus, it can not say that the results are homogenous across firms. Dielman & Oppenheimer state that "*We believe that these results provide strong support for the information content of dividend hypothesis.*" Each firm they included was listed on the NYSE during years of 1969 - 1977 and had announced a large dividend change.

Asquint & Mullins (1986) analyzed a sample of 168 firms that initiate a dividend to common shareholders. The dividend is either the first dividend in a firm's corporate history or a resumption of dividend after a pause of 10 years. The time interval being used was 1954 - 1963. Their study represented the largest positive abnormal returns than any previous study on dividends earlier. Their results clearly indicate that other studies have

may underestimated the effects of dividend increases. Their analysis supports the view that dividends convey valuable information to investors in addition to that which is already contained in the contemporaneous information sources. Also, the benefits of this information appear to outweigh any costs being related to paying dividends to shareholders. In they survey one of the target was to find out are abnormal reactions a consequence of some other events near the dividend announcement day. The results suggest that market's positive reaction to the dividend announcement is not due to other events.

Bajaj & Vijh (1995) used a sample of 67 592 dividend announcement. This is the most comprehensive sample anyone has used as far as the author of this paper knows. The time interval they used was 1962 - 1987. They used an equally weighted portfolio of CRSP (Centre for Research in Security Prices). They documented an average positive excess returns for all the dividend increase announcements as the firm size and stock price decrease. They also detected that abnormal return, price volatility and trading volume are all positively correlated, thus exposing more information to investors, and on other hand, exposing more information about investors' expectations.

Michaely, Thaler & Womack (1995) investigated market reactions to initiations and omissions of cash dividend payments. Their sample consist of 561 cash dividend initiation events from the years of 1964 - 1988 and 1500 omission events from the years of 1964 - 1988. The firms that initiated dividends gained significantly better abnormal returns than the benchmark portfolios in the year prior to initiation. The initiation portfolio abnormal return in the prior year was +15.1%. During the three-day period abnormal returns was 3.4% (t = 11.08). The firms omitting dividends performed quite poorly in the year before the omission declaration. This highly significant drop in the price is a response to a major change in dividend policy says the researchers. They divided dividend announcements into three different dividend yield brackets and noticed

that market's response to the omissions were stronger in every brackets. They say: "*Perhaps it is omissions that are more informative".* As far as the author have detected, this study was the only one in which researchers divided the announcements into different yield brackets. Their results show that the market reaction to the dividend change is significantly related to the magnitude of the change. When the announcements are not divided into yield bracket, no substantial differences are detected between initiations and omissions. They tried to find out does the risk arise after omissions or initiations but they could not show any reasonable results.

The main results of their study were, consistent with other studies that the NYSE market reacted positively to initiations and negatively to omissions. Initiations' reactions are about one-half of the market reaction to omission announcements. The abnormal returns differences between omissions and initiations are explained by the magnitude of the yield change between these two types of events. They can not find any explanations for the long-term differences in price behaviour between initiations and omissions. Maybe the answers for these dilemmas could be found from the psychological aspects.

Van Eaton (1999) studied abnormal stock returns in the three years surrounding relatively large changes in dividends announced during the 1971 to 1990 period. He used firms from NYSE and AMEX exchanges. The main results in their study were that the price reaction is greatest for firms announcing dividend decreases or omissions. This is line with other studies. Over the post-announcement year these dividend decrease and dividend omission firms had average abnormal returns of approximately -11% and -17%. In contrast, dividend resumption firms and dividend increase firms do not exhibit significant abnormal returns over the after the announcement. Van Eaton says that managers of diversified portfolios could gain better profits by replacing the negative dividend change firms with size firms which did not have negative dividend change announcements.

Jin (2000) used a time period of 1973 to 1993 and studied how markets react to dividend initiations. He found negative abnormal returns to dividend initiations. The results are in a large extent different to other studies. Normally initiations are seen a good thing to shareholders' value. He says that observed negative reactions reflect the market's economic assessment of the impact of the event and it is not caused by anticipation or confounding events. He also found that negative abnormal return rises as dividend yield rises. This study clearly supports the claim that investors do not want to receive cash as a form of dividend in U.S.

Probably the most similar and the newest study on dividend announcements is made by Dasilas in 2007. He studied how market reacted to dividend announcements in Athens Stock Exchange (ASE) for the time period of 2000 - 2004. The period being used in his study is partly same compared to the study of this paper. The mean abnormal return for the 118 announced dividend increases on the announcement day is 0.48%, significant at the 10% level and 0.707% on day -1, significant at the 1% level. On day +1, abnormal return was negative. For the dividend decreases abnormal returns were slightly negative for all three days (-1, 0+1). The results from an intact observation sample are close to zero, indicating that intact observations were expected. Results are in line with other studies.

3.   RESEARCH QUESTIONS AND HYPOTHESES

3.1   Research questions

To explain the main research problems arising from the previous chapters and show the underlying variables concerning the world economy and the market sentiment in the years of 2000 - 2002 and 2005 - 2007, the following chapter is developed for this study.

This study is made to answer for the following main research questions:

Empirical part:

Q1   How abnormal returns of dividend announcements differ during a recession and a boom?

Q2   How abnormal returns of dividend announcements differ between different yield brackets (thereby between a recession and a boom)?

Q3   How the market reacted to the extra dividends in Finland, being delivered especially in 2004 due to a taxation change?

Theoretical part:

Q1   Why companies pay dividends and extra dividends?

Q2   How dividends are seen from the viewpoint of shareholders and managements?

Obviously the whole study is linked to the efficient market theory introduced by Eugene Fama, while market efficiency is linked to market transparency and stock markets' functioning. Some of the research

question and results are scientific and some of them can be interpreted from a subjective viewpoint, for example: does it feel good to receive pure cash from companies as a dividend or alternatively companies' shares which can be not used as a means of payment? Also psychological aspects play a part of this study. An answer for whether investors on average are rational or irrational is hard to pronounce. The history shows a number of instances where investors' rationalisation has been totally foolish, the latest example from United State's subrime mess. According to rational expectation theory agents' expectations are correct on average. In other words, although the future is not fully predictable, agents' expectations are not assumed to be systematically biased, says Thomas Sargent (1987).

The rational expectations theory defines these kinds of expectations to be identical to the best guess of the future that uses all available information. It is assumed that outcomes that are forecasted do not differ systematically from the market equilibrium results, thus it assumes that people do not make systematic errors when predicting the future and deviations from the expected foresight are only random. For example, behaviour of consumers is typically modelled by a mathematical equation and the expected value of a variable is equal to the value predicted by the model, plus a random error term which represents the role of ignorance and mistakes. In the field of finance it can be noted that the error term has been too large in many instances, like all the stock price bubbles have showed.

The results in the sixth chapter will be interpreted from the scientific viewpoint. A null hypothesis of the empirical part is clear: we do reject the null hypothesis or it remains in force. The aim of interpretations from the financial viewpoint is to maximize an investor's wealth. This is not unambiguous. Only theoretically we can expect investors to maximize their wealth. In reality greed, fear and different emotions control peoples' behaviour and satisfaction of the best results are difficult to achieve.

Different taxation between countries, competence of the management, investors opportunities to invest money forward (after receiving of dividends) and asymmetric information make it troublesome to expect investors to act based on the best choices. If they did so, after receiving of cash dividends investors should invest money into business opportunities which can yield on the best return. Thinking dividends this way, companies with a skilful management and good investment opportunities should not pay any money out as dividends since shareholders have to pay taxes on dividends and opportunities to reinvest money may be worse. Still, almost all the listed companies at least in Finland pay dividends every year. Is this irrational behaviour? Most of us can admit that excess money feels good on a bank account even though this is not the best choice.

3.2 Country orientated characteristics of dividend taxation

In many jurisdictions, the government requires the company to pay at least the standard tax to national authorities. Usually dividend payments are considered as capital gains but sometimes as an ordinary income. It is an issue of a continuous debate whether or not dividends should be considered as a capital or a normal income. Some argue that it is unfair that shareholder have to pay taxes twice in a sense that the company has already paid a corporate tax on these profits; this is called "double taxation". Some who want to tax dividends as normal job incomes or higher, argue that to gain dividends incomes require less work than active work or companies may not have paid their full share of income tax. They argue that such taxation can help the wealthiest of individuals who have excess money to buy large quantities of stocks and live on these dividends.

People who advocate a lower taxation on dividends say that there is a risk contained in business activity which is obviously true. Being an entrepreneur is more risky than to work as a normal worker with a monthly

salary. Due to risk, dividends should be taxed on a lower rate. It is also said that there must be an incentive to people to advance entrepreneurship since that is a major force to create new jobs.

In 2003, President George W. Bush proposed to change the U.S. dividend tax system by saying that "*double taxation is bad for our economy and falls especially hard on retired people".* He also argued that while "*it is fair to tax a company's profits, it is not fair to double-tax by taxing the shareholder on the same profit"* After this, Congress of United State passed a new law. The new law changed the taxation on dividends to be 15 per cent for most individual taxpayers. Dividends received by low income individuals are taxed on a five percent rate until December 31, 2007 and become fully untaxed in 2008. These provisions will expiry on January 1, 2011 (CATO Institute, 2003). These taxations changes might be reversed in the future since the authority has moved to Democrat.

Also in Finland the government promised to change taxation on small dividends in 2007. According to this new policy dividends under 1000 € would not be taxed at all. To this day the new dividend provision has not been implemented. These kinds of taxation changes have a huge meaning when we talk about maximize investors' wealth and choosing the best available choices.

The Finnish fiscal authority (Verohallinto 2007) considers dividends being received from abroad by following lines: "*Dividends, received from another EU country or from a country which has a dividend taxation contract with Finland, will be taxed with the same principles than dividends received from Finnish company. Dividends received from other countries than listed above, will be consider as a normal income",* thus with higher tax rate. In Finland companies pay 26 % of profits as a tax to fiscal authority and 70 % of dividends (listed companies) are taxable from which shareholders pay 28 %, thus totally 19.6 %. Due to continuous change in taxation system,

the researcher does not see a need for a further inspection of differences between national taxation systems.

3.3   Main hypotheses

It might be a case that there occurs no statistically significant average abnormal market reaction to dividend announcements in the data from Finland or U.S. set. Would it be expected or unexpected? Should we expect to find positive or negative abnormal returns due to dividend announcements? This depends obviously on how investors see dividends and how expected for example a dividend increase was? Arbel & Strebel (1982) suggest that firms with low levels of analyst following (measured by the number of analysts forecasting a firm) earn higher risk-adjusted returns, even after controlling for firms' size. Also Mitra & Owers (1995) find that for the firms with analysts following companies, the association between dividend initiation announcements and abnormal returns appears to be much stronger for the "low" analyst following group than for the "high" group.

Regardless of observation presented above about the controversy of how investors see dividend announcements, the articulated main hypothesis in a conventional and testable form, the null hypothesis is expressed as follows:

> *Null hypothesis: There will be no average abnormal returns*
> *due to dividend announcement in U.S. market or in Finland*
> *(i.e. abnormal market reactions will be close to zero).*

Based on the previous empirical studies we can expect that there will be either positive or negative abnormal reactions to dividend announcements. Although, it is not the aim to identify abnormal reactions, it is interesting and motivating to notice their existence in some form. If the null hypothesis

is rejected, it means that at least one variable or aspect has power to create abnormal reactions. Hence, these two competing hypothesis to explain investors' reaction to dividend announcement are presented here. Bhattacharya (1979) says that the dividend signalling theoretical model implies that a dividend increase is a credible signal that the firm's prospects have improved. This is consistent with many other articles including Lintner's findings. In summary: the positive signalling hypothesis is based on all the "good" aspects of sharing dividends to shareholders, being told earlier in this study. For example: management's confidence to the development of the firms is so strong that they can increase dividend per share.

Positive signalling hypothesis: There will be a positive average abnormal reaction due to dividend announcements.

This study concentrates only on dividend announcements of increases and intact observations (constant observation.). To explain positive abnormal returns in a case of dividend decreases would be a bit difficult, as a one explanation to be a wrong relationship of dept and equity.

Negative signalling hypothesis

Negative abnormal market reactions could be explained by saying that investors see dividends as a bad thing. In some extent this would be expected since investors have to pay taxes for dividends whereas capital gains are taxed when stocks are sold. Negative signalling hypothesis could also state that investors' trust on the management is stable and they do not want to receive cash in a form of dividends. They trust on, that the management can gain better yield on their money and should be not delivered out.

Negative signalling hypothesis: There will be a negative average abnormal reaction due to dividend announcements.

3.4 Interpretations of market reaction hypotheses

This study covers 21 days around the dividend announcement in order to examine how the market reacts to the announcements. It is possible that pre-, or post-drifts will be found, meaning that investors act before the announcement day or after the announcement. Here are listed three possible hypotheses to explain reasons.

Neo-classical theory founds on three approaches. First, people have rational preferences among outcomes that can be identified and associated with the value. Second, individuals maximize utility and firms maximize profits. Third, people act independently on the basis of full and relevant information. (Boland, 1981)

> *Neo classical market reaction hypothesis: There will be a negative or a positive average abnormal reaction to the dividend announcements on the announcement day.*

Rational expectation theory introduced by Muth (1961) indicates that the market fully responds to the announcements beforehand. So:

> *Rational Expectations market reaction hypothesis: There will be a fully-captured negative or positive average abnormal reaction to the dividend announcements on the pre-announcement period.*

The third explanation states according to Ghosh, C. & Woolridge (2006) that investors react slowly and only after the announcements. Myopic theory is stated as follows:

> *Myopic market reaction hypothesis: There will be a negative or a positive average abnormal reaction to the dividend announcement only on the post-announcement period.*

3.5 Characteristic hypotheses

Despite a wide range of studies concerning abnormal market reactions to dividend announcements, the author has not found studies which concentrate only on abnormal returns during a boom or a recession. However, the time span the other authors have used is long enough in order to separate booms and recession. The problem is that they have not separated different time intervals, but calculated abnormal returns from the total sample. For example Firth (1996) used a time span of 1980 - 1991 and 1115 observations and Dyl & Weigand (1998) used the years of 1972 - 1993. In that sense, this study is unique.

The author could not either find many articles on abnormal returns of dividend announcement from this decade. The latest one from Dasilas (2007) which concentrates on the price reactions of dividends in Athens market. The reason for the absence of studies in this field might stems from the economic fluctuations in the 21st century. As mentioned in the introduction chapter, investors all around the world have experienced vast capital gains during the years of 2003 - 2007. Dividend yields have been only a fraction of capital gains. Situation was different in the beginning of the decade. After techno bubble burst, investors faced capital lost, especially those who owned technology companies.

Figure 1

The S&P 500 index for the time period of 3.1.2000 - 31.12.2007. The S&P 500 is a stock market index which contains the biggest listed American companies in U.S. The index is the most notable of the many indices and maintained by Standard & Poor's, a division of McGraw-Hill. The index is float-weighted.
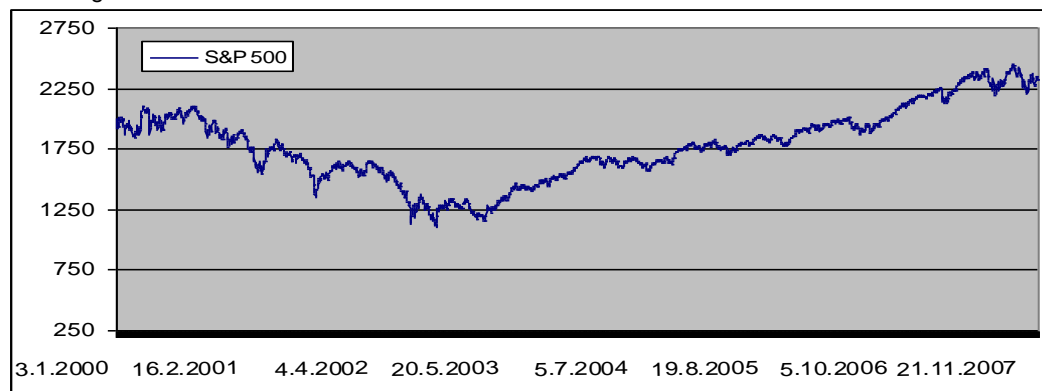
In the years 2000, 2001 and 2002 the S&P index yielded -8.23%, -11.89% and -22.10% respectively. In the years 2005, 2006 and 2007 numbers were 5.77%, 15.79% and 15.8%, respectively. In Finland OMXH 25 index yielded 11.85% in 2003 and 19.50% in 2004. Thus, stocks did not yield very well in the beginning of this decade. These capital gains tell clearly how the sentiment differed during the recession after the techno bubble and the latest boom.

What are investors' opportunities to invest money if stock markets decline? Obviously assets with negative correlations could be suitable to protect against stock markets. Oil, commodities, governments' bonds, art collectables represent and pure cash on a bank account are alternatives to consider. Companies with a high dividend per share compared to the share price could also give the protection against capital losses. As far as the author knows, these kind of empirical tests have not been done in which a researcher would find out how much dividend gains cover capital losses during a recession. Of course, when a share price goes down, a dividend yield goes up. Should it be expected to see higher positive abnormal market reactions due to dividend increases during a recession than a boom? This depends on how investors see high dividend companies as a protection against stock market's slump. At least, on the theoretical level it can be expected so. Thus, it is hypothesized:

Characteristic hypothesis 1: There will be higher positive abnormal reactions due to dividend announcements during the time period of 2000 - 2002 than 2005-2007, especially in a case of dividend increases.

Characteristic hypothesis 2: There will be negative abnormal reactions due to dividend announcements during the boom 2005 - 2007 due to the large capital gains, especially in an case of dividend increases.

Should it be expected to see the higher dividend yield companies to show higher positive abnormal reactions on the dividend announcement day compared to the low dividend yielding companies? This is really controversial. In United State a rational investor should ignore dividends due to their tax system and sell stocks when the price is favourable. In Finland a rational investor should prefer dividends since they are taxed with a lower rate. Due to the controversial explanations why companies pay dividends the author can not define hypothesis for this question.

Dividend tax provision

In Finland the new dividend tax provision was implemented in 2005. Before that shareholders did not have to pay taxes on dividends. When the government decided to abandon the avoir fiscal system, companies paid enormous dividends to shareholders. Thus, it is hypothesized:

> *Characteristic hypothesis 3: There will be (large) positive abnormal reactions to the extra dividend announcements in Finland.*

4. DATA

In this study a dividend announcement day is defined in the following way in U.S.: the declaration date is the day when the board of director's announces their intention to pay a dividend. On this day, the company creates a liability on its books; it now owns the money to the shareholders. On the declaration date, the board will also announce a date of record and a payment date. In Finland the concept of dividend announcement day is defined in the following way: the board of directors makes a proposition of the amount of the dividend to the general meeting some weeks before the meeting. Usually the dividend proposition is confirmed without changes. For the extra dividend payment the board of directors announces an extra shareholders' meeting. Appendix 1 shows an example of a typical Finnish extra dividend announcement.

The stock market data being used in this study is gathered from Thompson Data Stream database, the program is provided by Lappeenranta University of Technology (LUT). The dates for the extra dividend announcements are gathered from the web side provided by eQ Bank[9]. Dividend announcements from U.S are gathered by hand from the companies' web pages. It can not be said for sure that the data collection covers all the extra dividend announcements in Finland in this decade but as far as the author knows, almost all the announcements were used in this study. The companies from U.S are gathered from the Fortune 500 list. The Fortune 500 is a ranking of the top 500 American public corporations as measured by gross revenue. Mostly the companies chosen for this study are picked from the top of list taking into account their dividend history - some of the companies do not pay dividends and were not chosen naturally.

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[9] eQ Bank is a Finnish investment bank. www.eq.fi

Some industries for example a car and an airlines industry are represented only with one observation. Dividend decreases are not included in the study due to lack of them. The author was able to found only a couple of dividend decrease announcements during this decade. As mentioned earlier, time periods are chosen due the economic situation at the time. A list of the companies being used in this study can be found from appendix 2.

Table 2

The table provides notes about the sample i.e. how many observations were gathered.

Class	N
Finnish extra dividends	26
Dividend increse 00-02	33
Dividend increse 05-07	38
Total sample 00-02	70
Total sample 05-07	85

5. METHODOLOGY

5.1 Event study methodology

Event studies examine the behaviour of firm's stock price around corporate or economic events such as dividend announcements. The event study has many applications. In accounting and finance research, event studies have been applied to a variety of firm specific and economy wide events. Some examples include mergers and acquisitions, earnings announcements, issues of new debt, or equity and announcements of dividends which is the case in this paper. Roots of event study go to year 1933 when James Dolley examined the effects of stock splits to stock prices. (Coutts & Roberts 1994) In the years since these first pioneering studies, a number of modifications have been developed.

Although the event study process has been modified over the years, it has remained pretty much same it was when Fama (1969) developed the process further; conditional event study Acharya 1993, the power and robustness by Brown & Warner 1985 and the speed of adjustment measure Hillmer & Yu 1979[10]

5.2 The event study process

The first task of conducting an event study is to define a particular event day. In this study it is the declaration day in U.S and in Finland the day when the board of directors has proposed the dividend proposal. The second thing is to define the time period over which the security prices of the companies are involved - the event window.

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[10] For the further information of the event study studies, see e.g. MacKinlay (1997).

This paper uses a time period of -10, + 10. It is totally up to an author what kind of time periods are used.

Asquint & Mullins (1983) have chosen -10, +10 whereas Michaely, Thaler & Womack (1995) use -254, +1 and -1, +758. The author of this paper doesn't see a need for a longer event window. It is assumed that all the abnormal returns due to dividend announcements will be captured in 21 days. By using the event window we can test the hypotheses being mentioned earlier and make interesting conclusions.

Appraisal of the event's impact requires a measure of the abnormal returns. An underlying assumption here is that stock markets' returns can be predictable to some degree. The researcher gathers the actual stock returns over the time period of interest and computes the difference between the returns given by the "model" and the returns which actually occurred. As we know, no one can predict the future exactly and "noise" or random errors will occur. The event study is interested in these errors which constantly exceed the returns given by the prediction model. These errors are called as abnormal returns. Mathematically this is expressed as follows:

(4) $$AR_{it} = R_{it} - E(R_{it})$$

Where AR_{it}, R_{it} and $E(R_{it})$ are the abnormal, actual, and expected returns, respectively, for security i during the time period t. In this paper the actual returns are calculated using total return (RI) time series and calculations are made by using natural logarithms rather than simple percentage changes to avoid arithmetic anomaly[11].

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[11] E.g. if stock opens at 10 and closes at 11, an investor experiences 10 percent return for that day. If stock returns to 10 on the next day the return will be 9.1 percent. If natural logarithms are used the return for day one is 9.1 percent and for the day two 9.1 percent and moreover, the average returns over the two-day period is zero.

Figure 2 demonstrates investors' reaction to an event which is perceived to have a positive impact on the shareholders' value. It can be assumed this event to be for example an announcement of a quarterly report. As we can notice, the stock price goes up before the announcement day, investors are anticipating that the firm will come out with a higher than expected result and they buy the stock in advance. However, no one outside the management should have additional information from the upcoming result in advance according to the efficient market hypothesis. This could be a sign of abuse of inside information. As an assumption here is that no information have been released during the ten days before the announcement.

Figure 2

Stock returns being affected by an event. This sample is only an unreal example and being used only to describe different aspects. The day 0 is the announcement day when the information the researcher is studying was released to all investors.
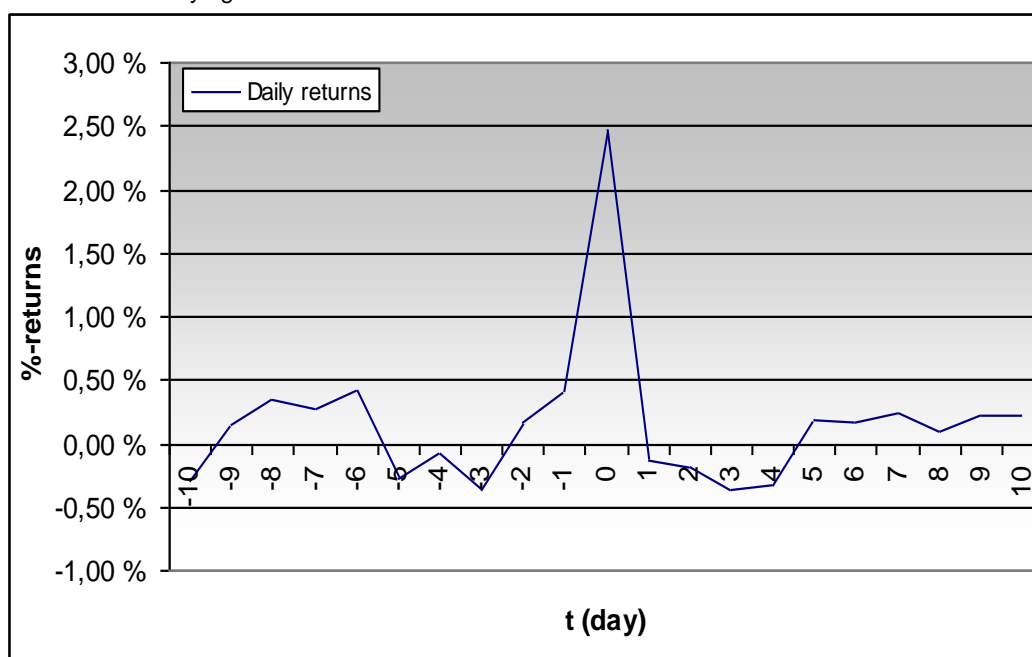
5.2.1 Estimation of expected and abnormal returns

After all the returns are calculated and time intervals are chosen, the next step is to choose general indices in order to calculate "normal returns" and

hereby abnormal returns by using a specific market model the researcher has chosen.

A number of approaches are available to calculate the normal return of a given security. The approaches can be uneasily grouped into two categories - statistical and economic. The statistical models follow from statistical assumptions concerning the behaviour of asset returns and do not depend on any economic argument. The economic models bases on assumption concerning investors' behaviour and are not based solely on statistical assumptions. It is, however, worth to notice that to use economic models in practice it is necessary to add the statistical assumptions. Generally, it can be said that the economic models give an opportunity to calculate more accurate measures of normal return by using them along with the statistically models. (MacKinlay, 1997)

Several methods to capture market returns have been developed. A general type of models is the *factor model*. The aim of this model is to reduce abnormal returns by explaining more of the variance in the normal return. Normally the factors are portfolios of traded securities. Factors can be industry, size and price-book ratio. MacKinlay (1997) says: "*Generally, the gains from employing multifactor models for event study are limited. The reason for the limited gains is the empirical fact that the marginal explanatory power of additional factors are small, and hence there is a little reduction in the variance of abnormal return. The variance reduction will typically be greatest in cases where the sample firms have a common characteristic*".

The author of this paper agrees totally with opinions presented above. Of course, it could be found that some variables can explain why some companies pay higher dividends, for example techno versus value companies but anything new would not probably arise from a cross-sectional regression.

Two common and widespread methods to capture normal returns are the Capital Asset Pricing Model (CAPM) and the Arbitrage Pricing Model (APT). The CAPM introduced by Sharpe 1964 and Lintner 1965 is an equilibrium theory where the expected return of a company is determined by its covariance with a market portfolio. The APT model introduced by Stephen Ross (1976) is an asset pricing theory where the expected return of a given asset is a linear combination of multiple risk actors. The use of the CAPM is common in event studies, however, the model is not perfect and some questions arise from its quality.

This paper uses the CAPM. The method begins by estimating the beta for each stock. Beta describes a particular company's risk relative to the average risk, i.e. compared to a general index[12]. The indices being used in this paper are S&P 500 and OMXH 25 index. A stock with beta of 1.0 means same risk than the index, while beta above 1.0 higher risk and betas below 1.0 lower risk. Companies with higher betas than average are expected to yield more in good times and worse in bad times.

Under the CAPM, the expected daily return $E(R_{it})$ for security i on day t is calculated as follows: (MacKinlay 1997)

(5) $$E(R_{it}) = \alpha_i + \beta_i R_{mt} + e_{it},$$

where α_i and β_i are ordinary least square (OLS) values estimated from estimation period, and R_{mt} is the daily market return on day t.

When $E(R_{it})$ is assumed to zero, it follows:

(6) $$E(R_{it}) = \alpha_i + \beta_i R_{mt}$$

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[12] It is up to researchers which general index should be use; of course, the aim is to use the most favourable index which describes the company's risk relative to the overall risk.

Combined with the equation 5, abnormal return is calculated as follows:

(7)
$$AR_{it} = R_{it} - \alpha - \beta_i R_{mt}$$

The betas and intercepts being used in this paper are calculated over an estimation window of 250 trading days prior to the event window.

After these calculations are made for each company, abnormal returns are aggregated across chosen firms in the sample. These abnormal returns for a specific group of firms are examined in order to determine whether the event produces returns which can not be explained by the CAPM. Mathematically the average abnormal return AR_t on day t is calculated as follows:

(8)
$$AR_t = \frac{1}{n} \sum_{i=1}^{n} AR_{it},$$

where n is the number of observations. The purpose of this across sample is to fade out "noise" variables which can skew the whole sample. Cumulative abnormal returns (CAR) are calculated by aggregating daily ARs over time. Cumulative average abnormal daily returns for an event period from T_0 to $T_0 = CAR_{T_0}^{T_1}$, is calculated as follows:

(9)
$$CAR_{t_0}^{t_1} = \sum_{T_0}^{T_1} AR_t$$

5.2.2 Test for statistical significance

Even though, a researcher had found large abnormal returns, it must be proved that the results are not gained by coincidentally or by biased time series. An underlying assumption here is that the daily abnormal returns are identically and independently distributed. It is also assumed that over a long time stock prices have a tendency to approach the expectation value

(mean value). Standard two tailed t-test is used when abnormal returns are expected to zero. The test is expressed as follows:

$$(10) \qquad \frac{AR_t}{\sqrt{\sigma^2(AR_t)}} \sim t(N),$$

where AR_t is day t abnormal return, and where variance, σ^2, is:

$$(11) \qquad \sigma^2(AR_t) = \frac{1}{N^2}\sum_{i=1}^{N}\sigma_{it}^{2} = \frac{1}{N^2}\sum_{i=1}^{N}\sigma^2(e_i)$$

Alike, the t-statistic for the cumulative average daily abnormal returns (CARs) over a longer time interval in the event window is calculated as follows:

$$(12) \qquad \frac{CAR_{T_1}^{T_1}}{\sqrt{\sum_{t=T_0}^{T_1}\sigma^2(AR_t)}}$$

where $CAR_{T_0}^{T_1}$ is the daily cumulative abnormal return from day T_0 to day T_1.

5.3 Problems with event studies

Regardless of the advantages of the event study and its widespread usage in the field of finance, there are some problems which arise already from the choosing a suitable market model. Even though Capital Asset Pricing Model is the most favourable to identify risk, it is proved to have problems with specific companies. Banz (1981) noticed that companies with low market value yielded more than large companies. Basu (1977) proved that companies with high E/P rations yielded more than companies with low E/P rations. This kind of "value premium" was also proved by

Rosenberg, Reid & Lanstein (1985). They pointed out that the companies with low P/B[13] rations showed higher stock market returns.

Bartholdy & Peare (2004) questioned the event study's meaningfulness with the small stock exchanges. They tested this with a data from Copenhagen Stock Exchange (CSE). They noticed that some requirements were needed in order to use the event study: 1) 25 observations are needed in order to achieve power in statistical power 2) trade-to-trade returns should be used 3) researchers should separate results from frequently traded stocks and other.

Brown & Warner (1985) stated that producers other than OLS for estimating the market model in the presence of non-simultaneous trading convey no clear evidence of better detection of abnormal returns.

One problem arises from the difficulty of identify the event day and other events around the event day. This paper does not ignore other events around dividend announcement days. The first reason for this is that there would not probably be any dividend announcements if all other events near the announcement day were ignored. Obviously, this skews pre- and post-cumulative abnormal returns. Some articles have been made in which authors have selected dividend announcement without other events 20 days around the dividend announcement, e.g. Asquint & Mullins (1983). However, as far as the author of this paper noticed, other events were not found on the dividend announcement days, if were, those observations were dropped out. The impact of e.g. a quarterly result a couple days before the dividend announcement days may still has an effect; depending on how efficiently the market works.

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[13] also *book to market* rations (BtM) are used which is inverse to P/B.

6. RESULTS

All the results of the empirical tests are presented here. First is a text part, being followed by the results.

Table 3 presents the average abnormal returns of the dividend increase announcements during the years of 2000, 2001 and 2002. Figure 3 shows correspondingly the graphical development of the cumulative average abnormal return (CAR) during the 21-day event window. These results imply that in general investors perceived the dividend increase announcements as a positive signal, or good news, for the shareholder value. The average abnormal return on the announcement day is 1.06% (significant at the 5% level). It is noteworthy that the mean abnormal return on the second day is negative -1.93% (significant at the 1% level). Abnormal return in the fourth day before is abnormal large 2.19% and falsifies the pre-announcement period. The results also evert the null hypothesis. It seems that investors experience the abnormal return on the announcement day too large since the abnormal return on the second day is negative. The overall cumulative abnormal returns are positive and tell that the dividend increases were found as a positive thing for the shareholders' value. These results cover 33 announcements and despite a small number of observations there are statistically tenable results.

Market reacts to the announcements on the event day in a manner consistent with the neo classical theory. Other two market hypothesis (myopic & rational) can be rejected since the abnormal returns for the interval of [-5, -1] is 2.62% (significant at the 1% level) and for the interval of [+1, +5] is -2.31% (significant at the 1% level). Results for the time intervals of [-10, -1] and [+1, +10] are 1.38% and -0.82%, respectively, but they are not statistically significant. Myopic hypothesis can be rejected since abnormal returns are detected on the pre-announcement period.

Table 3

Daily average abnormal returns (AR), cumulative average abnormal returns (CAR), t-statistics, being followed by probability values of 33 dividend increase announcements from years of 2000, 2001 & 2002 from U.S. In the second part CARs and t-statictics for different time intervals. Day 0 is the event day when the announcement of dividend increase was officially disclosed through stock exchange NYSE. Standard two-sided t-test was used for statistical significance. Symbols * (**, ***) indicate significance at the .10 (.05, .01) level.

t(day)		AR_t	CAR	t-stat	p-value	
-10		-0.07 %	-0.07 %	-0.17	0.86	
-9		-1.40 %	-1.48 %	-3.58	0.00***	
-8		-0.03 %	-1.51 %	-3.65	0.94	
-7		0.31 %	-1.20 %	-2.90	0.46	
-6		-0.04 %	-1.24 %	-3.01	0.91	
-5		0.07 %	-1.17 %	-2.83	0.86	
-4		2.19 %	1.02 %	2.48	0.00***	
-3		-0.35 %	0.67 %	1.63	0.40	
-2		0.01 %	0.68 %	1.66	0.98	
-1		0.70 %	1.38 %	3.35	0.10*	
0		1.06 %	2.44 %	5.92	0.02**	
1		-1.93 %	0.51 %	1.23	0.00***	
2		0.03 %	0.54 %	1.30	0.95	
3		-0.15 %	0.39 %	0.94	0.72	
4		-0.04 %	0.35 %	0.84	0.92	
5		-0.22 %	0.13 %	0.31	0.60	
6		1.55 %	1.68 %	4.07	0.00***	
7		-0.06 %	1.44 %	3.49	0.88	
8		-0.24 %	1.20 %	2.91	0.57	
9		0.48 %	1.69 %	4.08	0.25	
10		-0.24 %	1.45 %	3.50	0.57	
CAR interval	[-10, -1]	[-5, -1]	[-1, +1]	[0, +1]	[+1, +5]	[+1, +10]
CAR	1.38%	2.62%	-1.23%	-0.87%	-2.31%	-0.82%
t-stat	1.06	2.84***	-2.11**	-1.49*	-2.5***	-0.62

Figure 3

The development of the cumulative average abnormal return (CAR) for the overall sample of 33 dividend increase announcements within the event window of 21 days. Day 0 is the event day when the announcement was officially disclosed through the stock exchange of NYSE.
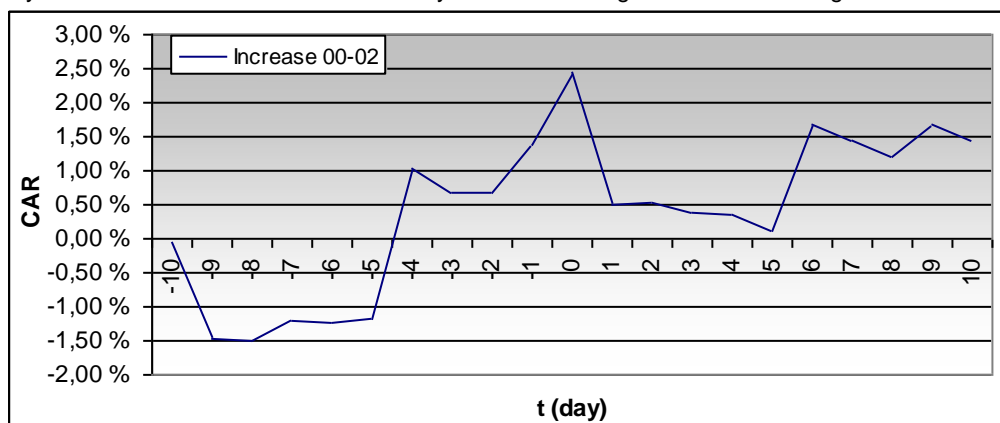
Table 4 presents the abnormal returns of the dividend increase announcements from the years of 2005, 2006 and 2007. Figure 4 shows correspondingly the graphical development of cumulative average abnormal return (CAR) during the 21-day event window. Results are totally different from the previous table. As it can be seen from Figure 4, there are negative abnormal returns around the dividend announcements. This indicates negative hypothesis. Thus, investors saw the dividend increases as negative news during the years of 2005, 2006 & 2007. However, the average abnormal returns are very small and the highest cumulative abnormal value is only -0.55%. Only two parameters are significant at the 10% significance level.

None of the CAR intervals is significant and the abnormal returns are also small. Investors did not experience any abnormal returns on the announcement day, indicating unresponsiveness or the announcements were expected mainly. All the hypothesis (rational, neo classical & myopic) are rejected since all the abnormal returns are so small and not significant statistically.

The results from the years 2000 - 2002 are in some extent in line with other studies. For example Charest (1978) found 1.7 % abnormal returns for days [-1] to [+1] relative to the dividend increase (> 10 cents) announcement day and Van Eaton (1999) found 1.9 % abnormal returns for dividend increase announcements on the same days. The mean abnormal return during the recession on the announcement day is two times higher what Dasilas (2007) found (0.488%). On the other hand, the results during the boom are also in line with some studies. Petit (1972) could not find any abnormal returns for dividend increase announcements around the event day. Dasilas could not find any abnormal returns from the intact observation sample. These results are in line with the sample from the boom time.

Table 4

Daily average abnormal returns (AR), cumulative average abnormal returns (CAR), t-statistics being followed by probability values of 37 dividend increases from years 2005, 2006 & 2007 from U.S. In the second part CARs and t-statistics for different time intervals. Day 0 is the event day when the announcement of dividend increase was officially disclosed through stock exchange NYSE. Standard two-sided t-test was used for statistical significance. Symbols * (**, ***) indicate significance at the .10 (.05, .01) level.

t(day)		AR	CAR	t-stat	p-value	
-10		-0.29 %	-0.29 %	-1.76	0.09*	
-9		-0.20 %	-0.50 %	-1.22	0.23	
-8		0.23 %	-0.27 %	1.36	0.18	
-7		0.02 %	-0.25 %	0.10	0.92	
-6		-0.02 %	-0.27 %	-0.11	0.91	
-5		0.01 %	-0.26 %	0.06	0.95	
-4		-0.08 %	-0.34 %	-0.48	0.63	
-3		0.01 %	-0.33 %	0.07	0.94	
-2		-0.17 %	-0.50 %	-1.04	0.31	
-1		-0.02 %	-0.53 %	-0.15	0.89	
0		0.06 %	-0.47 %	0.33	0.74	
1		0.05 %	-0.42 %	0.30	0.77	
2		0.15 %	-0.27 %	0.92	0.36	
3		-0.28 %	-0.55 %	-1.66	0.11	
4		0.31 %	-0.23 %	1.86	0.07*	
5		0.17 %	-0.06 %	1.04	0.31	
6		0.00 %	-0.06 %	0.01	1.00	
7		0.09 %	0.03 %	0.56	0.58	
8		0.16 %	0.19 %	0.95	0.35	
9		0.05 %	0.24 %	0.31	0.76	
10		-0.11 %	0.13 %	-0.66	0.52	
CAR interval	[-10, -1]	[-5, -1]	[-1, +1]	[0, +1]	[+1, +5]	[+1, +10]
CAR	-0.5 %	-0.02 %	0.008 %	0.01 %	0.41 %	0.6 %
t-stat	-0.99	-0.68	0.48	0.23	0.15	0.10

Figure 4

The development of the cumulative average abnormal return (CAR) for the overall sample of 37 dividend increase announcements within the event window of 21 days. Day o is the event day when the announcement was officially disclosed through the stock exchange of NYSE
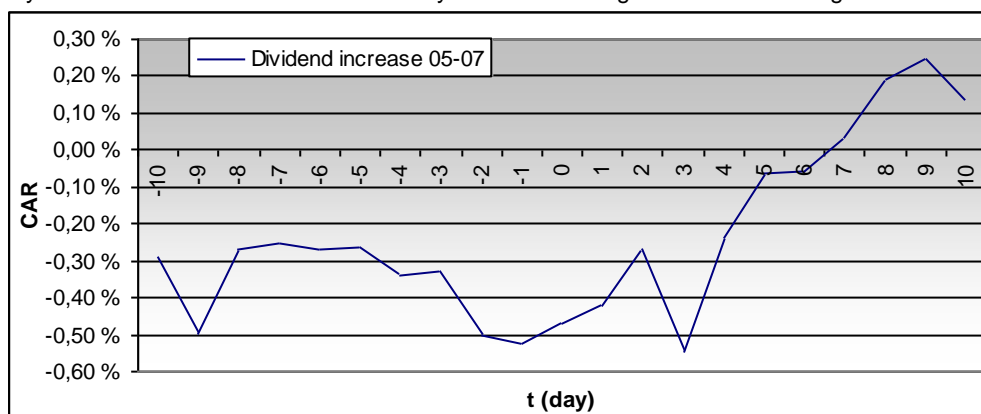
Table 5 presents abnormal returns of dividend announcements from the years of 2000 - 2002 when the announcements are divided into different dividend yield brackets. In this sample, the announcements of increases and the intact observations are gathered together. Figure 5 shows the graphical development of the cumulative abnormal returns (CAR) during the 21-day event window. Table 6 presents abnormal returns for different dividend yield brackets being divided into different time intervals.

The results are in some extent a bit controversial since in Figure 5 it can be seen that the line of dividend yield of [1.7 - 2.7%] goes beneath other two, whereas the line of [>2.8%] goes in the middle. Conclusions are hard to make. The overall sample shows that investors experienced 0.8% abnormal return on the announcement day during the years of 2000 - 2002 (significant at the 1% level). Thus, investors saw the dividend announcements more positively than negatively. This is line with the hypotheses. The abnormal returns seem not to rise up as dividend yield rises; this does not support the view that high dividend companies would be respected to higher. Statistically the results did not achieve a high level. Only some abnormal returns are tenable. This could be due to a single observation which means that they may falsify the overall sample. However, the most important, the abnormal return on the announcement day in the overall sample is significant at the 1% level.

The rational expectation hypothesis is prevailing only in the yield bracket of [1.7 - 2.7%] where the abnormal return is 0.28%. Abnormal return in the yield bracket of [>2.8%] for the time interval of [-5, -1] is high 2.66% (significant at the 1% level) but for the time interval of [-1, +1] negative 1.69% (significant at the 1% level). The neo classical hypothesis is practically the only tenable hypothesis in these samples. It can be noticed small pre- and post-drifts in every brackets, generally neutralizing each other.

Table 5

Daily average abnormal returns (AR), cumulative average abnormal returns (CAR), t-statistics, being followed by probability values of 70 dividend increase from years of 2000 - 2002 from U.S.A.. In the second part CARs and t-statictics for different time intervals. Day 0 is the event day when the announcement of dividend increase was officially disclosed through stock exchange NYSE. Standard two-sided t-test was used for statistical significance. Symbols * (**, ***) indicate significance at the .10 (.05, .01) level.

	t(day)	AR	CAR	t-stat	p-value
Overall sample	-3	-0.14 %	0.07 %	-0.51	0.61
(70 N)	-2	0.33 %	0.40 %	1.18	0.24
	1	0.09 %	0.48 %	0.31	0.75
	0	0.80 %	1.28 %	2.88	0.01***
	1	-0.91 %	0.37 %	-3.28	0.00***
	2	-0.40 %	-0.03 %	-1.45	0.15
	3	0.01 %	-0.02 %	0.04	0.96
Dividend increase	-3	0.15 %	1.87 %	0.30	0.77
< 1.69 %	-2	0.76 %	2.63 %	1.54	0.14
(24 N)	1	0.19 %	2.82 %	0.38	0.71
	0	0.26 %	3.08 %	0.53	0.60
	1	-0.77 %	2.31 %	-1.56	0.13
	2	-0.31 %	2.00 %	-0.64	0.53
	3	-0.06 %	1.93 %	-0.13	0.90
Dividend increase	-3	-0.18 %	-1.61 %	-0.37	0.71
1.7 - 2.79 %	-2	0.17 %	-1.44 %	0.36	0.72
(23 N)	1	-0.44 %	-1.88 %	-0.94	0.36
	0	0.43 %	-1.46 %	0.91	0.38
	1	0.23 %	-1.22 %	0.49	0.63
	2	-0.12 %	-1.34 %	-0.25	0.81
	3	0.32 %	-1.02 %	0.69	0.50
Dividend increase	-3	-0.41 %	-0.14 %	-0.86	0.40
> 2.8 %	-2	0.04 %	-0.10 %	0.08	0.94
(23 N)	1	0.52 %	0.42 %	1.07	0.29
	0	1.74 %	2.16 %	3.62	0.00***
	1	-2.21 %	-0.05 %	-4.60	0.00***
	2	-0.78 %	-0.84 %	-1.63	0.12
	3	-0.22 %	-1.06 %	-0.46	0.65

Table 6

An overall sample of cumulative abnormal returns of dividend announcements in 2000, 2001 & 2002. CAR values are calculated from the day -10 where the day 0 is the day when the announcement was officially disclosed through stock exchange of NYSE. Dividend yields are divided into three different groups, number of observations in a particular bracket can be found the previous table. Standard two-sided t-test was used for statistical significance. Symbols *, (**, ***) indicate significance at the 0.10 (.05, .01) level.

	$CAR_{interval}$	[-10, -1]	[-5, -1]	[-1, +1]	[0, +1]	[+1, +5]	[+1, +10]
Overall	*CAR*	0.42%	1.10%	0.87%	0.11%	-1.01%	-0.34%
	t-stat	1.01	1.81**	-2.1**	-0.28	-1.62*	-0.36
	$CAR_{interval}$	[-10, -1]	[-5, -1]	[-1, +1]	[0, +1]	[+1, +5]	[+1, +10]
Div yield	*CAR*	2.80%	1.20%	-0.50%	-0.51%	-0.87%	-3.0%
< 1.6 %	*t-stat*	1.81**	1.11	-0.83	-0.72	-0.8	-1.9**
	$CAR_{interval}$	[-10, -1]	[-5, -1]	[-1, +1]	[0, +1]	[+1, +5]	[+1, +10]
Div yield	*CAR*	-1.8%	-0.5%	-0.21%	0.66%	-0.12%	0.22%
1.7 - 2.7 %	*t-stat*	-1.26	-0.48	-0.32	0.98	-0.11	0.15
	$CAR_{interval}$	[-10, -1]	[-5, -1]	[-1, +1]	[0, +1]	[+1, +5]	[+1, +10]
Div yield	*CAR*	0.42%	2.66%	-1.69%	-0.47%	-2.03%	2.05%
> 2.8 %	*t-stat*	0.27	2.48***	-2.49***	-0.69	-1.9**	1.34*

Figure 5

The development of the cumulative average abnormal return (CAR) for the three different dividend yield brackets within the event window of 21 days in 2000, 2001 and 2002. Day 0 is the event day when the announcement was officially disclosed through the stock exchange of NYSE.
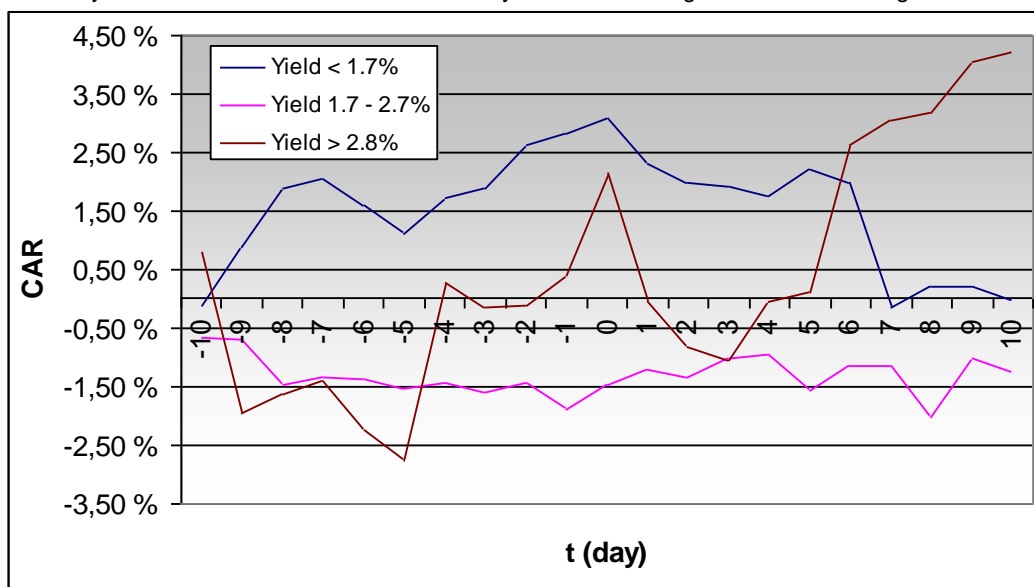
Table 7 presents the abnormal returns of the dividend announcement from the years of 2005 - 2007. The overall sample consists of 85 observations, containing the dividend increases and the intact observations. Cumulative abnormal returns (CAR) are calculated from day -10, thus CAR value on day -3, means that AR values are summed from days -10 to day -3. Figure 6 shows these cumulative abnormal returns when the dividends are divided into different yield brackets. Table 8 shows abnormal returns for the different time intervals in a particular dividend yield bracket.

By looking at the Figure 6 it can be drawn a conclusion that investors saw high dividend companies as a bad thing for shareholders' value during the years of 2005 - 2007. The highest dividend yield bracket gained the largest negative abnormal returns. Thus, stating that negative abnormal return rises as dividend yield rises. However, other two lines in Figure 6 intersect each other randomly. Abnormal return on the announcement day of the overall sample is zero, supporting the null hypothesis and indicates that investors saw these announcements as neutral for shareholders' value. However, this is not statistically tenable.

Interpretations of market hypothesis are hard to draw. It can be seen small abnormal returns before and after the dividend announcement days. They neutralize each other's effects as being discussed earlier. Results in Table 7 are in a large extent similar to Table 4, where only the dividend increases were gathered together. It seems that dividends did not get lots of attention during the years of 2005 - 2007 from investors, although taking into account the different dividend yield brackets or the dividend increases, as it can been seen from Table 7 and Table 4, respectively.

Comparing the results from the different yield brackets to other studies is practically impossible. No similar studies have been made. Michaely, Thaler & Womack (1995) are the only researchers who studied the price reactions in different dividend yield brackets to initiations and omissions.

Table 7

Daily average abnormal returns (AR), cumulative average abnormal returns (CAR), t-statistics, being followed by the probability values of 85 dividend announcements from the years of 2005 - 2007 from U.S. Day 0 is the event day when the dividend announcement was officially disclosed through stock exchange NYSE. Standard two-sided t-test was used for statistical significance. Symbols * (**, ***) indicate significance at the .10 (.05, .01) level.

	t(day)	AR	CAR	t-stat	p-value
Overall sample	-3	-0.08 %	-0.36 %	-0.63	0.53
(85 N)	-2	0.09 %	-0.27 %	0.73	0.47
	1	0.24 %	-0.03 %	1.96	0.05**
	0	0.03 %	0.00 %	0.26	0.80
	1	0.46 %	0.46 %	3.72	0.00***
	2	-0.23 %	0.23 %	-1.88	0.06*
	3	-0.42 %	-0.18 %	-3.38	0.00***
Dividend increase	-3	-0.11 %	0.43 %	-0.48	0.63
< 1.8 %	-2	-0.07 %	0.36 %	-0.27	0.79
(29 N)	1	-0.61 %	-0.24 %	-2.55	0.02**
	0	0.33 %	0.09 %	1.39	0.18
	1	-0.43 %	-0.34 %	-1.79	0.08*
	2	-0.19 %	-0.53 %	-0.80	0.43
	3	0.13 %	-0.40 %	0.56	0.58
Dividend increase	-3	-0.08 %	-0.41 %	-0.42	0.67
1.8 - 2.9 %	-2	0.11 %	-0.31 %	0.54	0.59
(29 N)	1	0.22 %	-0.08 %	1.16	0.26
	0	0.05 %	-0.03 %	0.26	0.80
	1	0.48 %	0.45 %	2.51	0.02**
	2	-0.23 %	0.22 %	-1.18	0.25
	3	-0.42 %	-0.19 %	-2.17	0.04**
Dividend increase	-3	-0.02 %	-0.85 %	-0.10	0.92
> 3.0 %	-2	-0.49 %	-1.34 %	-2.39	0.02**
(27 N)	1	0.01 %	-1.33 %	0.07	0.95
	0	-0.23 %	-1.56 %	-1.14	0.27
	1	-0.18 %	-1.74 %	-0.90	0.38
	2	0.23 %	-1.51 %	1.14	0.27
	3	-0.27 %	-1.78 %	-1.31	0.20

Table 8

Cumulative abnormal returns for different yield brackets of dividend announcements in 2005 - 2007. CAR values are calculated from day -10 where the day 0 is the day when the announcement was officially disclosed through stock exchange of NYSE. Dividend yields are divided into three different groups, number of observations in a particular bracket can be found the previous table. Standard two-sided t-test was used for statistical significance. Symbols *, (**, ***) indicate significance at the 0.10 (.05, .01) level using two tailed test.

	$CAR_{interval}$	[-10, -1]	[-5, -1]	[-1, +1]	[0, +1]	[+1, +5]	[+1, +10]
Overall	CAR	-0.03%	-0.22%	0.70%	0.49%	0.03%	0.42%
	t-stat	0.06	-0.78	4.01***	2.81***	0.12	1.07
	$CAR_{interval}$	[-10, -1]	[-5, -1]	[-1, +1]	[0, +1]	[+1, +5]	[+1, +10]
Div yield	CAR	-0.24%	-0.55%	-1.04%	-0.10%	-0.53%	-0.64%
< 1.8 %	t-stat	-0.32	-1.02	-3.06***	-0.28	-0.99	-0.84
	$CAR_{interval}$	[-10, -1]	[-5, -1]	[-1, +1]	[0, +1]	[+1, +5]	[+1, +10]
Div yield	CAR	-0.08%	-0.16%	0.71%	0.53%	0.10%	0.41%
1.8 % - 2.9 %	t-stat	-0.13	-0.37%	2.6***	1.96**	0.22	0.67
	$CAR_{interval}$	[-10, -1]	[-5, -1]	[-1, +1]	[0, +1]	[+1, +5]	[+1, +10]
Div yield	CAR	1.33%	-0.38%	-0.17%	-0.42%	0.04%	-0.08%
> 3.0 %	t-stat	-2.06**	-0.84	-0.59	-1.44	0.08	-0.12

Figure 6

The development of the cumulative average abnormal return (CAR) for the three different dividend yield brackets within the event window of 21 days in the years of 2005 - 2007. Day 0 is the event day when the announcement was officially disclosed through the stock exchange of NYSE.
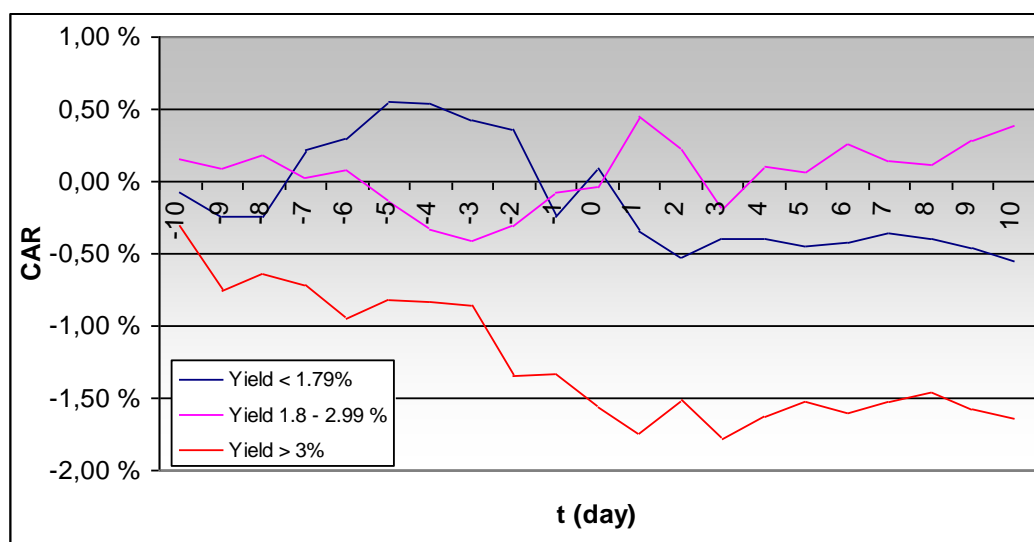
Table 9 presents the abnormal returns of dividend announcements for the overall sample of 26 Finnish extra dividends. Figure 7 shows the graphical development of the cumulative average abnormal return (CAR) during the 21-day event window.

The results of the Finnish extra dividend are evident. The abnormal return on the announcement day is substantial 2.47% (significant at the 1% level). Thus, investors at least in Finland see extra dividends as a good thing for the shareholders' value. We can assume that mainly the high abnormal returns are a result of Finnish investors' behaviour since the tax provision in 2004 concerned only them (funds are set free from taxes). This is logical because they did not have to pay any taxes, so extra dividends at the time were considered as good. The sample consists mainly of extra dividends in 2004 but there are three observations after the tax provision. These extra dividends were taxed as normally, so it can be assumed that they lower the overall results closer to zero. However, as mentioned earlier, there are some problems with the companies included since some of them are rarely traded and the abnormal returns of particular companies were substantial.

The abnormal returns around the announcement day are small; the highest return is 0.42%, a day before the event day. The results are well consist with the neo classical theory. The abnormal returns on the pre- or post-period are so small that we can reject both the rational and the myopic market reaction hypothesis alike.

Abnormal returns for the different time intervals are not either tenable statistically. It is noteworthy that the abnormal returns for the next four days after the announcement day are negative; telling that investors may have overreacted to the extra dividends. No similar studies have been made, thus comparing these results to other is impossible.

Table 9

Daily average abnormal returns (AR), cumulative average abnormal returns (CAR), t-statistics, being followed by the probability values of 26 extra dividend announcements from Finland. Day 0 the event day when the announcement of an extra dividend was officially disclosed through stock exchange of Helsinki. Standard two-sided t-test was used for statistical significance. Symbols * (**, ***) indicate significance at the .10 (.05, .01) level

t(day)		AR	CAR	t-stat	p-value	
-10		-0.29 %	-0.29 %	-0.09	0.93	
-9		0.15 %	-0.14 %	0.48	0.64	
-8		0.34 %	0.20 %	1.08	0.29	
-7		0.28 %	0.48 %	0.89	0.38	
-6		0.41 %	0.89 %	1.29	0.21	
-5		-0.27 %	0.62 %	-0.86	0.40	
-4		-0.08 %	0.54 %	-0.28	0.78	
-3		-0.37 %	0.17 %	-1.16	0.26	
-2		0.16 %	0.33 %	0.52	0.61	
-1		0.42 %	0.75 %	1.33	0.19	
0		2.47 %	3.22 %	7.70	0.00***	
1		-0.13 %	3.09 %	-0.43	0.67	
2		-0.18 %	2.91 %	-0.56	0.58	
3		-0.36 %	2.55 %	-1.15	0.26	
4		-0.33 %	2.22 %	-1.04	0.31	
5		0.18 %	2.40 %	0.56	0.58	
6		0.17 %	2.57 %	0.56	0.58	
7		0.24 %	2.81 %	0.76	0.46	
8		0.09 %	2.90 %	-0.30	0.77	
9		0.22 %	3.12 %	0.70	0.49	
10		0.23 %	3.35 %	0.74	0.46	
CAR interval	[-10, -1]	[-5, -1]	[-1, +1]	[0, +1]	[+1, +5]	[+1, +10]
CAR	1.02 %	-0.01 %	0.28 %	2.33 %	-0.83 %	-0.52 %
t-stat	1.01	-0.2	0.63	5.14***	1.17	-0.05

Figure 7

The development of the cumulative average abnormal return (CAR) for the overall sample of 26 extra dividends announcements within the event window of 21 days. Day 0 is the event day when the announcement was officially disclosed through the stock exchange of Helsinki.
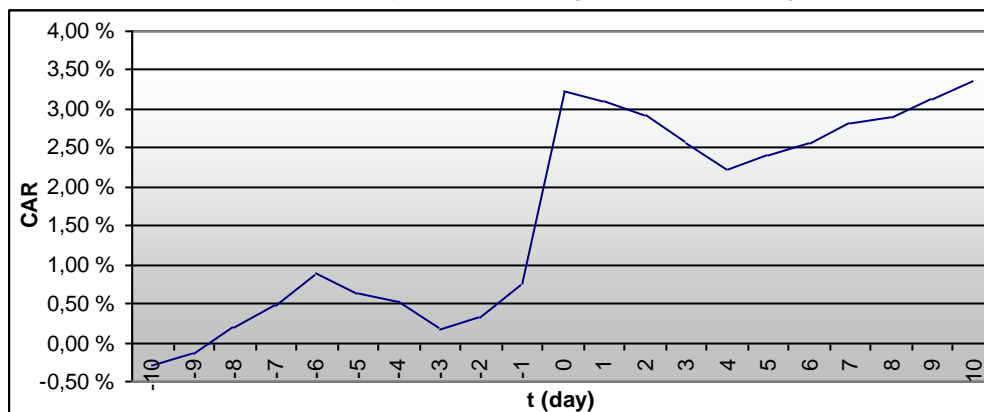
7. CONCLUSIONS

This study examines abnormal returns (i.e. returns over predicted by a market model) of dividend announcement during a boom and a recession and differences between them and differences between different dividend yield brackets. An especial aspect in this study is Finnish extra dividends, being delivered mainly in 2004 due to the tax provision. The paper also analyzes reasons why companies pay dividends or not pay dividends. The study investigates the dividend dilemma from both sides; shareholders' and managements' alike. This examination is divided into three separated parts; first a deep theoretical part of dividends and in the second part empirical test and finally conclusions from the empirical tests which are analyzed by taking into consideration the conclusions being made in the theoretical part.

The observations being used in the study were gathered from the years of 2000 - 2002 and 2005 - 2007. Dividend announcements consist of increase and intact observations. Economic situations were very different in these time periods and the general sentiment in stock exchanges varied notably. The Finnish extra dividends are gathered mainly from 2004 except a couple of observations. The study was made by using the event study methodology.

One of the strongest arguments presented in the finance history concerning dividends is Lintner's (1956) findings about the positive relationship between dividend changes and firms' net income. It seems that this is one of the rare strong conclusions which can be drawn from empirical tests; firms try to keep dividend flows as stable as possible without change it, if there is no reason to think the earnings flow will change.

Dividend singling, dividends as a tool of communication (agency dilemma), the clientele effects and the dividend models are very controversial. A

number of studies have tried to find out clear evidence concerning dividends and why companies pay dividends. No single theory has become the dominant explanation. Thus, the empirical contest among the various theories continues. Perhaps the strongest one is that the management delivers extra money to shareholders when no better business opportunities (i.e. investment objects) are available. In other words: when the risk free rate is higher than the return on a potential business opportunity. Psychological factors may exhibit one explanation. Although, the subject is not studied widely, it could be claimed that money feels good in the pocket. Investors have not gained anything until she or he sells stocks in a portfolio. Dividends are paid into a bank account every year without asking for them. This may be irrational behaviour from investors' standpoint but human beings are not rational all the time.

This study supports partly characteristic hypothesis 1. The abnormal returns of dividend increases were clearly positively larger during the recession than the boom. This is in line with the view that investors respect dividend increases more during a recession than a boom. No substantial differences in abnormal returns were detected between the overall samples during the time periods. The abnormal return on the announcement day of the overall sample during the recession was positively slightly higher, thus stating that although intact observation are included, investors still respected dividends more during the recession. This is line with the theory but the abnormal returns were not substantially higher to support this view firmly.

Second, the results support partly characteristic hypothesis 2. Abnormal returns of dividend increases during the boom were slightly negative, stating that investors saw dividend increases as negative for shareholders' value. Dividend yields were a fraction of the total capital gains during the latest boom when investors experienced substantial gains. Thus, generally investors did not put attention on dividend announcements during the boom.

Third, no clear evidence could be found between the different dividend yield brackets during the boom and the recession. During the boom the highest dividend yield bracket experienced the largest negative abnormal returns, indicating that investors experienced high dividend companies as bad to shareholders' value. This is consistent with characteristic 2 mentioned above. However, in general all the lines in Figures 5 and 6 intersect each other so randomly that no clear conclusion can be drawn. The different dividend yield brackets do not clearly support the view that investors would respect high dividend yield companies more during a recession than a boom or investors clearly would dislike high dividend yield companies during a boom.

Fourthly, characteristic hypothesis 3 stated that there will be (large) positive abnormal reaction to the extra Finnish dividends. The results support this view. Investors experienced large abnormal returns on the announcement day. Abnormal returns around the event day are pretty much close to zero, indicating that the market information flow was quick and investors reacted exactly on the announcement day. This study supports strongly the view that investors saw the extra dividends as good news for shareholders' value.

Fifthly, the negative abnormal returns during the boom indicate negative signalling hypothesis and the positive abnormal reactions to the dividend announcements in 2000 - 2002 and to the Finnish extra dividends indicate positive signalling. Thus, generally and simply stated: it can be said that investors saw dividends as a good thing during the recession and in the year 2004 in Finland. The results from the boom time period were mostly negative but not substantially, stating that either investors saw dividends as a bad for shareholders' value or they did not care of dividends. The results from the both overall samples were quite small and close to zero. No clear and strong conclusion can be drawn that investors would respect dividends more during a recession than a boom from these results.

Sixthly, the null hypothesis can be rejected in the case of the Finnish extra dividends and the dividend increases during the recession. Abnormal returns during the boom were small and not statistically tenable, so the null hypothesis holds. Also the results from the overall samples were small and mainly not tenable, thus null hypothesis stays at least partly. The study supports the efficient market hypothesis. Although abnormal returns were indicated, they were in a large extent small and existed equally before and after the announcement. No substantial post- or pre-drifts were detected.

The abnormal returns in the both overall samples were close to zero, indicating that the intact observations smoothed the magnitude of abnormal returns in relation to the dividend increases. This was expected.

The results from the time period of 2000 - 2002 mean that investors can achieve abnormal returns from companies which raise dividends per share. Shares of these companies can yield returns over a risk-related model and investors should put some attention on them. However, the results from the different dividend yield brackets do not support evidently that positive abnormal returns rise as dividend yield rises during a recession. The results from the boom time indicate that investors should avoid buying companies which raise dividends. These companies gained mainly negative abnormal returns. Thus, during a recession companies which can raise dividends are a good protection against falling stock markets.

Typically dividend yields are only a fraction of total capital gains during a boom and they are not seen as important. Investors should also put attention to extra dividends; large abnormal returns were detected on the announcement day in the Finnish market. This was gained a consequence of the tax provision, so the benefits from these results are not useful anymore. A new tax provision being proposed by the Finnish government concerning small dividends this year can change the situation again.

Another important point from the other studies to investors is that they should avoid buying companies which have lowered a dividend per share. Investors expect companies to hold a steady flow of dividends and decreases are seen as a bad thing. Many researchers have found this as one of the strongest conclusion in their papers. Shares of these companies keep falling after a dividend decrease announcement. Investors consider this as a strong sign of worse future prospects.

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APPENDICES

Appendix 1. An example of a Finnish extra dividend announcement

Wärtsilä Oyj Abp Pörssitiedote 28.2.2008 klo 09.30

Wärtsilän hallitus ehdottaa 19.3.2008 kokoontuvalle varsinaiselle yhtiökokoukselle 4.2.2008 tehdyn 2,25 euron/osake osinkoehdotuksen lisäksi 2 euron ylimääräistä osinkoa/osake eli yhteensä 4,25 euroa/osake tilivuodelta 2007.

Appendix 2. The list of dividend announcement companies in U.S. and Finland

U.S.A (companies are not ranked according to some order)

1.	Altria	2.	Wells Fargo	3.	Walgreen
4.	Fed Ex	5.	Pepsi Co	6.	Wayerhaeuser
7.	Tyson Food	8.	HESS	9.	Nation Wide
10.	JC Penney	11.	Supervalu	12.	ManPower
13.	Duke Energy	14.	Nike	15.	Masco
16.	All State	17.	Marathon Oil	18.	Ford
19.	Bear Sterns	20.	Black Rock	21.	Schlumberger
22.	3M	23.	Alcoa	24.	American Express
25.	Catepillar	26.	Citigroup	27.	General Electric
28.	General Motors	29.	Hewlett-Packard	30.	Intel
31.	JP Morgan	32.	Coca-Cola Co	33.	The Home Depont

The Finnish companies

1.	Fiskars	2.	Marimekko
3.	Stockman	4.	OKO
5.	RK	6.	Lemminkäinen
7.	Wärtsilä	8.	Norvestia

9. Ponsse   10. Tietoenator

11. L & T   12. Belton

13. Kesko   14. PKC

15. Pohjola   16. Orion

17. Exel   18. Elisa

19. Tulikivi   20. Teliasonera

21. Uponor   22. Scanfil

23. Talentum   24. Konecranes

25. Vaisala   26. Ilkka