Do Dividend Announcements Affect The Stock Prices in The Greek Stock Market?

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Abstract

This paper examines the reaction of the Athens Stock Exchange (ASE) to dividend announcements by a sample of firms listed at the FTSE/ATHEX 20 and FTSE/ATHEX Mid 40 for a fixed period 2004-2008. It also provides analytical information about the Greek Stock Market and the regulations underlying it, which have been taken into account in the present thesis. Moreover, previous studies of important academic scholars are presented and discussed, in order for the reader to attain the appropriate theoretical knowledge about the examined issue. Finally, significant abnormal activity is documented throughout the multiple event-windows that are employed and therefore, the null hypothesis, which supports the irrelevance theory as introduced by Miller and Modigliani (1961), is rejected.

Keywords: Dividend announcements, abnormal activity, signalling effect

JEL classification: G14, G30, G35

1. Introduction

During the last decades, there are numerous researchers that have been concerned in their papers with the impact of the dividend announcements on the stock prices. However, it is a matter of intense debate for the academics, the managers and the shareholders of many companies for several years. The theories that have been introduced by significant academics were essentially unable to terminate the above mentioned debate, as the empirical results of various studies, in the most important stock exchanges globally, concluded to different outcomes, supporting different theories.

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The main issue of the financial economists was the corporate dividend policy and how – if it affects the firm value and thus, the shareholders' wealth, as well as the existence of an optimal corporate dividend policy. Lintner (1956) is considered to be a pioneer in the research of the relevance between dividend policy and firm value. According to Lintner (1956), under the assumption that capital markets are 'imperfect', the firms' dividend policy plays a prominent role in managements' decision making and hence, in shareholders' wealth. He claimed that changes in corporate dividend policy may convey information to the market about company's current and future financial position; given that there are information asymmetries between managers and investors (the former have information advantage over the investors). Therefore, Lintner suggested that increases in the amount of dividends that companies distribute to their shareholders lead to a positive market reaction, while decreases in the amount of dividends lead to a negative reaction of the stock prices. Similar outcomes about the reaction of the market to changes in corporate dividend policy have been resulted from other important researchers as well (Walter, 1956; Gordon, 1959; Gordon, 1962). On the other hand, Miller and Modigliani (1961) postulated in their land-mark study the irrelevance between the dividend policy a firm adopts and the value of the firm. In particular, they argued that under the assumption that 'perfect' capital markets with perfect certainty, no taxes and transaction costs exist, dividend policy does not have any impact on the shareholders' wealth. Indeed, they suggested that managers can affect the firm value only by changing the firm's investment policy. Finally, a last group of researchers, the most important of which were Brennan (1970) and Brennan and Thakor (1990), declared that the corporate dividend policy is relevant as well as crucial to the value of a corporation. Nevertheless, this group of academics claimed that an increase in dividends has a negative effect on the stock prices due to the existence of taxation. According to Brennan and Thakor (1990), most of a company's shareholders prefer dividend payments when distributions are small, while they prefer tender offer stock repurchases when distributions are quite larger. The level of taxation seems to affect stock prices considerably in many stock exchanges all over the world.

The aim of the current paper is to investigate the reaction of the stock prices to the announcements of dividends by Greek listed companies. It applied the classical event study methodology used, in order to measure the abnormal returns of companies' stock prices that occurred during a fixed time period, before and after the day of the announcement (event day).

The current study adopts an approach similar to Balachandran's (1998), (same as used by Dasilas, 2007; Dasilas et al., 2008; Asimakopoulos et al., 2008) as it employs more than one event window, without however, exceeding in length 20 days before and after the event day. However, the results of this paper differ from the results of the above mentioned researchers.

The rest of the paper is organized as follows. Section 2 presents the most important theories that have been developed. In section 3 data and methodology are presented, as

well as the research design of the present event study. Section 4 demonstrates extensively the empirical findings of the study. Finally, section 5 concludes.

2. The informational content of dividends and their signals to capital markets

In this part of the study it is worth discussing about the various information conveyed by dividends to market participants, the so-called 'information content hypothesis', as well as the dividend 'signalling effect', which are extensively cited in the financial literature. Modigliani and Miller (1961), in an attempt to bring together the irrelevance proposition of their 'ideal' world with the dividend policy, under circumstances of uncertainty, introduced the informational content of dividends. They suggested that dividends provide useful information about managers' views of company's future profitability prospects. However, they also stated that a change in the dividend policy is only the 'handle' for a change on the stock prices and not its cause.

Taking into consideration the valuable inside information about firms' future plans possessed by managers, dividend announcements became as one of the various mechanisms that managers incorporate, in order to signal information to market participants. According to the above, another significant mechanism is the earnings figures. However, dividends offer more dubious information than earnings, as their distribution is in managers' discretion and can be quite effortlessly manipulated by them.

Numerous researchers suggested that dividends convey a substantial amount of information to markets, when changes in dividend policies are observed. Definitely, the majority of them concerning with this issue conclude that dividend changes convey information to market participants, sometimes beyond the information that has already been available by earnings figures. Nevertheless, the main dispute between the academic scholars is whether market participants comprehend the dividend signals and accordingly adjust their portfolios. As noticed above, the group of rightists assumes a positive relationship between changes in dividends and investors' reaction, while leftists take for granted that investors have a negative reaction to dividend changes, and finally, the middle of the roaders presume no relevance between them.

2.1. Evidence of the Signalling Effect from different capital markets globally

In this part of the study it is considered worthy of examining the empirical findings of different researches, which investigate the dividend signalling hypothesis.

DeAngelo et al. (2000) tested the dividend signalling hypothesis in the case of special dividends paid by 942 NYSE firms. They stated that the majority of the firms on the US market used to pay special dividends quite often, but nowadays they rarely distribute this type of dividends. They indicated that special dividends are paid by the companies as predictably as the regular dividend payments, in a way that is difficult to distinguish the difference between them. In addition, they provided empirical evidence

that in spite of the general decline in the distribution of special dividends by NYSE companies, very large firms keep on paying specials on a regular basis. They finally suggested that the overall effacement of special dividends was not the result of the increased share repurchases, as they can not serve as signaling devices.

Nevertheless, there are studies concerning the US market that have challenged the informational content of dividend announcements. Christie (1994) identified all the reduction and omission announcements of dividends for a sample of firms listed on the New York Stock Exchange (NYSE) and on the American Stock Exchange (AMEX) for a period between 1967 and 1985. He provided evidence that future dividends have completely no significant relation to market reaction. Therefore, although studies which support the informational content hypothesis are by far more than the challengers, the dividend signaling effect on the US market remains an elusive issue.

Even though the largest firms in the world are listed on the US capital markets, European capital markets, especially those in the UK, stimulated the interest of many important academic scholars. According to Balachandran (1998), the UK capital market has at least two basic differences compared with the respective ones in the USA. Firstly, firms listed in the UK market usually pay dividends more frequently than the US companies, and more particularly they usually pay twice per year. Secondly, the tax treatment for companies listed in the UK market differs from the corresponding treatment on the US markets. Balachandran (1998) stated that 'although the US has a traditional taxation system, the UK has an imputation system'.

Lonie et al. (1996) were from the first economists who attempted to investigate the dividend signaling phenomenon in a European capital market, using UK data from a sample of listed companies on the London Stock Exchange. They stated that in capital markets with information asymmetries, the market participants try to explain correctly the managers' announcements of dividends and earnings, in order to make beneficial choices. Their results indicated that both dividends and earnings announcements affect the share prices. However, they found that earnings announcements have a more significant impact on them than dividend announcements.

On the other hand, Abeyratna (1996) implied that the simultaneous announcements of earnings and dividends are possible to interact with one another. The possibility is even greater in the UK capital markets, where it is a general practice for firms to announce dividends and earnings on the same day of the economic year. Therefore, the simultaneous signals of earnings and dividends may cause confusion to market participants and will probably make it quite complex for them to decode the conveyed information.

In addition, Balachandran (1998) scrutinized the dividend reductions in accordance with the interim effect in the UK capital market. He provided empirical evidence that the effect of dividend reductions on the firm value is quite significant around the announcement date and leads to value declines. However, the reductions of interim dividends have a more considerable impact on shareholders' wealth than the reductions on final dividends. According to the same author, the usual stability of interim dividends

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and the managers' reluctance to change them, compared to the final dividends, are the main reasons for the market's negative response.

Despite their limited size in terms of market capitalization and number of listed firms, the capital markets of Greece and Cyprus have stimulated the interest of several prominent financial researchers. In particular, numerous researchers have examined the stock market response to changes in corporate dividend policy by firms listed in those markets.

Beginning with the capital market of Cyprus, Travlos et al. (2001) investigated the stock price reaction to announcements of cash dividend changes in the environment of an emerging European market. In general, Travlos et al. (2001) believe that firms operating in emerging markets have to adopt a payout policy based on the special characteristics of the corresponding market, such as the market microstructures and the tax treatment of the Cyprus-listed firms. The results of their study demonstrated the existence of considerably positive abnormal returns associated with the announcements of changes in the payout policy, results which are conterminous with the information signalling hypothesis.

As it was mentioned in section 2 of the current thesis, the Greek stock market is considered a medium-sized one; however, it seems to be quite attractive to potential investors and an ideal case of study, as it allows examining the market response to dividend announcements without considering the effects of double taxation. Thereafter, the most essential studies concerning the Greek capital market will be presented, in order for the reader to have a more complete view about the Greek market as well as its reaction to dividend announcements.

One of the first attempts to examine the dividend signaling hypothesis in the Greek stock market was made by Papaioannou et al. (2000). It was a study that analyzed the stock price response to dividend announcements for a sample of firms listed on the Athens Stock Exchange. Their sample consisted of stocks traded on the main segment of the ASE for a period between 1981 and 1994. Their empirical findings seemed to be consistent with Modigliani and Miller's irrelevance theory, as no significant abnormal return was observed, as a result of the change in firms' corporate payout policy, neither on the announcement nor on the ex-dividend day.

In addition, Asimakopoulos et al. (2007) explored the same hypothesis in the ASE using a sample of listed firms, which distributed the lowest amount of dividend required or above the lowest required amount. Their outcomes suggest that when the listed companies in the ASE declared publicly the distribution of higher dividends than the compulsory amount and when this increase was regarded by the market participants as an unexpected one, then there was a negative stock price reaction. Consequently, Asimakopoulos et al. (2007) implied that increases in dividends that considered as unexpected changes in dividend policy convey 'bad news' to the market. However, the signaling effect does not apply to firms that pay only the minimum required amount for dividends. Therefore, the results of their study are consistent with the irrelevance theory about dividend policy.

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Furthermore, Dasilas (2007) and Dasilas et al. (2008) examined the stock market reaction on both final and interim dividend announcements in the Greek stock market. Nevertheless, their findings are diametrically different form the results of Asimakopoulos et al. (2007), as they found that positive changes in dividend policy, and hence increases in the distributed amount of dividends, have a positive impact on the stock prices, while decreases in the payout ratio lead to significantly opposite results in the stock prices.

In conclusion, empirical findings supporting the three different theories of dividend policy have been observed by the researchers in their studies concerning the Athens Stock Exchange. The next sections of the current thesis will present the classical event study methodology that has been employed, as well as its empirical findings.

3.   Data and Methodology

The sample is consisted of 60 companies, listed in the Athens Stock Exchange (ASE). More particularly, the firms negotiate on the FTSE/ATHEX 20 Index and the FTSE/ATHEX 40 Index. FTSE/ATHEX 20 is an index comprised of the 20 largest blue chip companies in the ASE, in terms of total capitalization, while FTSE/ATHEX 40 is an index which consists of the next 40 listed companies that are classified as medium capitalization companies on the ASE. The event study period will be from the 1st of January 2004 until the 31st of December 2008 and secondary data are used (daily closing stock prices and announced dividends from 2004 to 2008), in an attempt to test the dividend signalling hypothesis on the Greek capital market.

3.1.   Hypothesis Development

In order to shed some light on the continual debate of the dividend signaling effect, the current study attempts to examine whether the dividend announcements by the listed firms on the ASE convey information to the marketplace that can be evaluated by the investors and cause abnormal activity to the stock prices. Therefore, the current study aims to investigate the impact of the dividend announcements on the value of the selected firms, taking into account the special unique characteristics of the Greek stock market.

As a result, the null hypothesis that is tested by the current event study is the following:

H_0: Dividend announcements do not convey new information to the marketplace and should bear no effect on the firm value.
i.e. No abnormal returns in the stock prices

In case of accepting the above null hypothesis, it means that there is no significant abnormal activity by the stock prices during the examined period and thus, the irrelevance theory introduced by Miller and Modigliani (1961) stands true. Alternatively, in case of rejecting the null hypothesis, it means that statistically significant abnormal activity –

positive or negative – has been observed in the firms' stock prices during the same period and hence, either the conservative rightists' or the radical leftists' theory stands true.

3.2. Constructing the Event Study Window

Before constructing the proper event window, it is worth determining the event day of the analysis. It seems usual in many studies the event day to be called as day 0. According to Papaioannou et al. (2000), in Greece there are five important dates during the economic years related with cash dividends: (a) the meeting of the board of directors, where it recommends the dividend payment and invites the shareholders for another meeting, (b) the public declaration of the shareholders' meeting, (c) the day of the dividend announcement, (d) the day of the shareholders' meeting and, (e) the ex-dividend date. Consequently, it has to be clear that in the current study it is defined as 'day 0' the day that the amount of the distributed dividend is publicly announced by the general assembly of the firm (Travlos et al., 2001; Dasilas, 2007).

Moreover, the determination of the congruent event window length is a subject that occupied the mind of several researchers. In the current study, the event occurs at a distinctly identified time, and thus the start of the event period can be determined easily (Krivin et al., 2003). The attention should be focused on how much time the market needs to completely incorporate the new information in the stock prices. Krivin et al., (2003) suggested in their study three possible approaches of an appropriate event window length: (a) a fixed time period, (b) an *ad hoc* approach and, (c) an approach that depends on how quickly the market fully incorporates the available information on the security prices.

Gurgul et al. (2003) used in their study a rather short event window, compared with those in other event studies. In particular, Gurgul et al. (2003) attempted to examine the impact of corporate dividend announcements in the Austrian security prices by incorporating an event window which comprised five trading days – two days before (-2), two days after (+2) and the event day (0).

An even shorter event window was used by Lonie et al. (1996) in an attempt to scrutinize the UK market response to dividend announcements and identify any abnormal share activity. Namely, they used a three-day event window – one day before and one after the dividend declaration day.

Furthermore, the majority of the researchers make use of 41-day event window – 20 days before and 20 days after the announcement day (Dasilas, 2007; Dasilas et al., 2008; Asimakopoulos et al., 2008). The above researchers believe that this event window is the most appropriate, in order for the stock prices to capture all the available information conveyed by the dividend announcements.

Finally, it is a common practice for the most recent researchers the use of more than one event window in their studies. Travlos et al. 2001 employed a symmetrical event window of 31 days – 15 days before and 15 days after the event day (0). In addition,

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Balachandran (1998) used multiple event windows, the larger of which did not exceed 20 days before and 20 days after the announcement day.

The current study adopts an approach similar to Balachandran's (1998), as it employs more than one event window, without however, exceeding in length 20 days before and after the event day. Therefore, the event window of the present thesis is 41 days (-20 days, +20 days) as it is defined day '0' the day of the dividend announcement.

3.3. Raw Return Measures

In order to estimate the stock price reaction to corporate dividend announcements, the current event study employs the use of logarithmic returns. According to literature, log-returns are usually preferred in the event studies than the discrete returns, as they can relate correctly returns over long time intervals.

Therefore, the raw returns ($R_{i,t}$) of the stock prices are calculated as follows:

$$R_{i,t} = \ln(P_{i,t}) - \ln(P_{i,t-1}),$$

where, $P_{i,t}$ denotes the daily closing price of the stock i on day t and $P_{i,t-1}$ is the daily closing price of the same stock on the previous day (*t-1*).

3.4. Abnormal Return Measures

Having calculated the actual logarithmic returns of every stock of the sample, the classical event study methodology 'necessitates' the measurement of the abnormal – excess returns. By saying abnormal return, researchers mean the percentage difference between the actual share return, which derives from the occurrence of the particular event – dividend declaration, and the normal return, which is expected by the investors to be received in the absence of the particular event (Dasilas, 2007).

Thus, the abnormal return can be estimated using the following equation:

$$AR_{i,t} = R_{i,t} - E(R_{i,t}),$$

where, $AR_{i,t}$ is the abnormal return on stock i on day t and $E(R_{i,t})$ is the expected return on stock i on day t.

The expected return of each stock $E(R_{i,t})$, presented bellow:

$$E(R_{i,t}) = R_{i,t} - R_{m,t}$$

where, $E(R_{m,t})$ indicates the market portfolio return on day t.

Numerous researchers both in the Greek and in other capital markets have used the market model as a standard event study technique in their papers (Travlos et al., 2001; Capstaff et al., 2004; Asimakopoulos et al., 2007; Dasilas, 2007; Dasilas et al., 2008).

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Finally, as it was mentioned above, the current paper uses multiple event windows, in order to estimate the cumulative abnormal returns (CARs) of the stock prices of the sample. The 15 event windows that have been used are the following:

(-20, +20), (-20, -1), (-20, 0), (+1, +20), (-10, +10), (-10, -1), (-10, 0), (+1, +10), (-5, +5), (-5, -1), (-5, 0), (+1, +5), (-1, +1), (-1, 0), (0, +1).

4.   Empirical Results

In Table 1 we present the companies listed on the FTSE/ATHEX 20 Index of the Athens Stock Exchange, the market-adjusted model have been used to estimate the abnormal returns on the stock prices for the examined period of 2004.

Table 1: Average daily abnormal returns of the firms listed on the FTSE/ATHEX 20 Index for the whole event window in 2004

Market-Adjusted Model

Days	ARs%	t-Statistic
-20	-0,621**	-2,07
-17	+0,680**	2,2
-8	+0,658*	1,7
-6	+0,797**	2,03
0	0,406	0,8
1	-1,284**	-2,41
14	-0,576**	-2,14

Note: * 10% of significance, ** 5% of significance, *** 1% of significance

More specifically, throughout the days which precede the dividend announcements (-20, -1) there is an abnormal activity on the stock prices, however it seems to be statistically insignificant, except for the following days: t=-20, t=-17, t=-6, where the abnormal returns (-0.621%), (+0.6796) and (+0.7972) respectively are statistically significant at the 5% level, and on the day t=-8 (0.6577%), which is statistically significant at the 10% level of significance. Moreover, on the event day there is a positive, while statistically insignificant abnormal return of (0.406%). Finally, there is a negative trend on the stock returns until the fifth day after the announcement t=+5, but only on the first day t=+1 the abnormal return is statistically significant (-1.284%) at the 5% level.

Similarly, during the event window before the event day (-20, -1), for the year 2005, there is a fluctuation of the stock returns without the existence of statistically significant abnormal returns, apart from the fifteenth day t=-15 before the announcement, where the abnormal return (0.696%) is significant at the 5% level. In alignment with 2004, on the event day there is a positive, though statistical insignificant abnormal activity. Moreover, there is a negative reaction of the market following the announcement day, especially on the days t=+1, t=+8, t=+11, where the abnormal returns (-1.139%),

(-0.843%) and (-0.789%) are statistically significant at the 5% level. Table 2, below, demonstrates the abnormal activity of the stock prices for the whole event window (-20, +20) for the year 2005.

Table 2: Average daily abnormal returns of the firms listed on the FTSE/ATHEX 20 Index for the whole event window in 2005

Market-Adjusted Model

Days	ARs%	t-Statistic
-15	+0,696**	2,12
0	0,311	0,32
1	-1,139**	-2,4
8	-0,843**	-2,16
11	-0,789**	-2,18

Note: * 10% of significance, ** 5% of significance, *** 1% of significance

In contrast to the preceding years, in 2006 the market does not seem to experience so much significant abnormal activity, as only on a day before t=-5 and on a day after the event day t=+2 there are significant abnormal returns on the 5% significance level. On the other hand, during the prior-announcement and the post-announcement period as well as on the event day the stock prices fluctuate at statistically insignificant levels. Table 3 below shows the abnormal activity of the stock prices for the whole event window (-20, +20) for the year 2006.

Table 3: Average daily abnormal returns of the firms listed on the FTSE/ATHEX 20 Index for the whole event window in 2006

Market-Adjusted Model

Days	ARs%	t-Statistic
-5	+0,907**	2,36
0	0,185	0,44
2	-0,977**	-2,42

Note: * 10% of significance, ** 5% of significance, *** 1% of significance

In 2007, the market presents a quite similar tendency as in 2004 and in 2005. Namely, the 20 days before the dividend announcements the stock prices presented abnormal activity, which was however statistically insignificant, except for the second day before the announcement t=-2. In particular, on this day t=-2 the abnormal stock return was (+0.6729%), which is statistically significant at the 5% significance level. Similarly on the event day, the stock prices experience negative and statistically significant abnormal return at the 10% level. During the post-announcement period,

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although the negative slope of the stock returns dominates, only the second day after the announcement t=+2 there is a strong statistically significant negative abnormal return (-1.677%) at the 1% level. The following Table depicts the abnormal activity of the stock prices for the whole event window (-20, +20) throughout 2007.

Table 4: Average daily abnormal returns of the firms listed on the FTSE/ATHEX 20 Index for the whole event window in 2007

Market-Adjusted Model

Days	ARs%	t-Statistic
-13	-0,800***	-2,62
-2	+0,673**	2,5
0	-0,422*	-1,66
2	-1,677***	-3,92
3	-0,658*	-1,82

Note: * 10% of significance, ** 5% of significance, *** 1% of significance

Finally, the fifth and last year included in the current analysis is 2008. As one can notice on Table 5 below, the positive abnormal returns monopolize throughout this year both on the prior-announcement and on the post-announcement period. Nevertheless, the majority of these returns are not statistically significant. The only exceptions are on the day t=-6, where a very strong statistically significant abnormal return can be observed (+1.655%) at the 1% significance level, and on the days t=+2 and t=+19 where a negative abnormal return (-1.157%, -1.174%) can be observed, which is statistically significant at the 5% and 1% significance level.

Table 5: Average daily abnormal returns of the firms listed on the FTSE/ATHEX 20 Index for the whole event window in 2008

Market-Adjusted Model

Days	ARs%	t-Statistic
-16	-0,576*	-1,77
-6	+1,655***	4,08
0	-0,119	-0,19
2	-1,157**	-2,04
19	-1,174***	-3,49

Note: * 10% of significance, ** 5% of significance, *** 1% of significance

Having discussed explicitly the empirical findings of the companies negotiating on the FTSE/ATHEX 20 Index, this part of the chapter analyses the empirical results of the companies included in the rest of the selected sample, namely the empirical findings of the firms negotiating on the FTSE/ATHEX Mid 40.

Beginning the analysis with 2004, there is a continual alteration of the abnormal returns' signs throughout the prior-announcement period (-20, -1). However, only five abnormal returns seem to be statistically significant at an accepted level. On the first event-window day (t=-20) the market reacts negatively experiencing an abnormal return of -0.644%, which is statistically significant at the 5% level of significance. As the announcement day approaches the market gives the impression to respond positively t=-18 (+0.491%), t=-14 (+0.838%) and t=-3 (+0.424%), with the only exception the fifth day before the announcement (t=-5), where there is a negative market reaction (-0.455%). Both the positive and the negative abnormal returns are statistically significant at the 10% level of significance. On the other hand, on the event day (t=0) there is an abnormal return on the stock prices of about (-0.923%), which is statistically significant at the 10% significance level. The negative reaction of the market continues for at least six days, where very strong negative abnormal returns can be noticed, t=+1 (-1.316%), t=+6 (-0.696%), which are statistically significant at a 1% level, and t=+2 (-0.911%), which is statistically significant at the 5% level. Table 6 below gives a picture of the average daily abnormal activity analysed above.

Table 6: Average daily abnormal returns of the firms listed on the FTSE/ATHEX Mid 40 Index for the whole event window in 2004

Market-Adjusted Model

Days	ARs%	t-Statistic
-20	-0,644**	-2,3
-18	+0,491*	1,74
-14	+0,839*	1,78
-5	-0,456*	-1,7
-3	+0,424*	1,68
0	-0,923*	-1,86
1	-1,317***	-4,24
2	-0,911**	-2,07
6	-0,697***	-2,6

Note: * 10% of significance, ** 5% of significance, *** 1% of significance

There is a similar market reaction throughout 2005 as well, as there are negative abnormal returns around the event day. Namely, on the days t=-14, t=-5 and t=-1 the abnormal returns were (-0.540%), (-0.431%) and (-0.604%) correspondingly. The negative slope continues to exist around the event day with statistically strong negative abnormal returns. Specifically, on the event day (t=0) the abnormal return is -1.521%, which is statistically significant at the 1% significance level. Moreover, the subsequent day (t=+1) the abnormal return appears decreased (-1.046%) and statistically significant

at the 1% significance level. It can be clearly stated that the dividend announcements conveyed negative news to the market place and this can be reflected on the stock prices' behaviour. The next Table illustrates the above mentioned behaviour analytically.

Table 7: Average daily abnormal returns of the firms listed on the FTSE/ATHEX Mid 40 Index for the whole event window in 2005

Market-Adjusted Model

Days	ARs%	t-Statistic
-14	-0,540**	-2
-5	-0,431*	-1,85
-1	-0,604**	-2,08
0	-1,521***	-3,04
1	-1,046***	-2,62
6	+0,738**	2,43
18	+0,735**	2,24

Note: * 10% of significance, ** 5% of significance, *** 1% of significance

Contradicting with the preceding economic years, in 2006 there is not any statistically significant abnormal activity during the period before the announcements. On the event day there is a positive, while insignificant abnormal return. On the other hand, throughout the post announcement period, the market appears to respond in general positively to the announcements. Specifically, on the day t=+1 and on the day t=+7 the abnormal returns equals to +0.634% and +0.674% and they are statistically significant at the 5% level. However, a negative abnormal return of about -0.636% intervenes the above ones on the day t=+4, and is statistically significant at the 5% level of significance. Table 8 below depicts the abnormal returns and their statistical significance in 2006.

Table 8: Average daily abnormal returns of the firms listed on the FTSE/ATHEX Mid 40 Index for the whole event window in 2006

Market-Adjusted Model

Days	ARs%	t-Statistic
-13	-0,667**	-2,24
0	0,305	0,44
1	+0,634*	1,92
4	-0,636**	-2,14
7	+0,674*	1,74

Note: * 10% of significance, ** 5% of significance, *** 1% of significance

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Additionally, in 2007 during the event window statistically significant abnormal returns can be observed only on three days before and on two days after the event day. In particular, on the day t=-18 there is a positive abnormal return of about +0.923% which is statistically significant at the 5% level. Also, on the next day t=-17 the abnormal return appears increased at +1.687%, which is significant at the 1% level of significance, and finally on the day t=-2 the abnormal return equals to +0.897%, which is significant at the 5% level. It can be stated that market participants expect the dividend announcements to have a positive impact on the stock prices. However, throughout the post-announcement period the only statistically significant abnormal returns appear to have a negative sign. Namely, on the days t=+3, t=+19 and t=+20 the abnormal returns were -0.607%, -0.865% and 1.201%, which are statistically significant at 10%, 1% and 5% significance level, respectively. The table below reviews the average abnormal activity of the stock prices for the whole event window (-20, +20).

Table 9: Average daily abnormal returns of the firms listed on the FTSE/ATHEX Mid 40 Index for the whole event window in 2007

Market-Adjusted Model

Days	ARs%	t-Statistic
-18	+0,925**	2,39
-17	+1,688***	2,65
-11	+0,788**	1,96
-2	+0,897**	2,33
-1	0,079	0,23
0	-0,181	-0,71
3	-0,607*	-1,88
19	-0,865***	-3,62
20	-1,201**	-2,16

Note: * 10% of significance, ** 5% of significance, *** 1% of significance

Finally in 2008, the period before the event day (-20, -1) appears to have a quite strong positive abnormal activity for the stock prices, which increases near the event day. As a whole, five days in the prior-announcement period present positive statistically significant abnormal activity, t=-18 (+0.732%), which is significant at the 10% level, t=-11 (+0.662%), t=-7 (+0.878%), t=-4 (+0.591%), which are significant at the 5% level, and finally t=-3 (+0.648%), which is statistically significant at the 1% significance level. On the other hand, both on the event day and the post-event day period the majority of the abnormal returns appear to be negative. However, the negative abnormal returns both on the event day and the post-announcement period are not statistically significant at any

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accepted level. The table 10 below illustrates the average daily abnormal returns for the whole event window (-20, +20) in 2008.

Table 10: Average daily abnormal returns of the firms listed on the FTSE/ATHEX Mid 40 Index for the whole event window in 2008

Market-Adjusted Model

Days	ARs%	t-Statistic
-18	0,732*	1,77
-11	0,662**	2,07
-7	0,878**	2,41
-4	0,591**	2,02
-3	0,648***	2,91
0	-0,114	-0,33

Note: * 10% of significance, ** 5% of significance, *** 1% of significance

The Table and the graph below illustrate the average abnormal returns of the whole sample for all the examined years (2004-2008).

Table 11: Average daily abnormal returns of the whole sample of firms for the event window for the all the examined years (2004-2008)

Market-Adjusted Model

Days	ARs%	t-Statistic
-18	+0,386***	3,19
-17	+0,553***	3,08
-9	+0,236*	1,84
-2	+0,186*	1,67
0	-0,209	-1,16
2	-0,876***	-3,44
3	-0,286**	-2,34

Note: * 10% of significance, ** 5% of significance, *** 1% of significance

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Graph 1: Average daily abnormal activity of the whole sample for all the examined years (2004 – 2008)
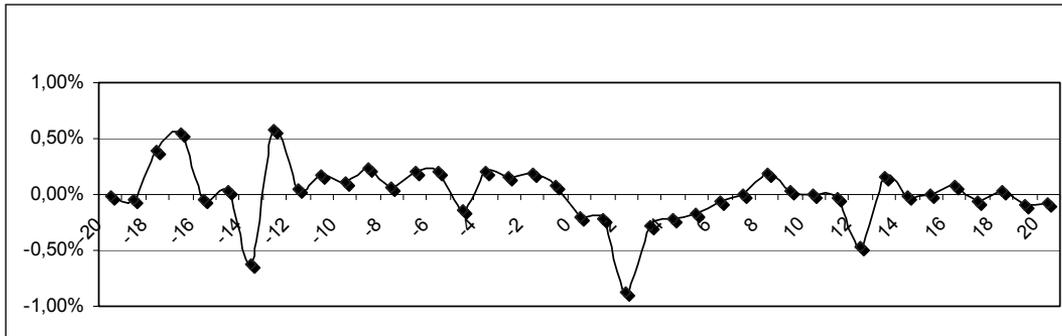
As one can observe from Table 11 and the above graph, the majority of the abnormal returns in the prior-announcement period appear to have a positive sign, although most of them move at statistically insignificant levels. However, on the day t=-17 the market reacts abnormally, having a return of about +0.553%, which is statistically significant at the 1% level. Additionally, on the days t=-9 and t=-2 the abnormal returns are +0.236% and +0.186% correspondingly, which are statistically significant at the 10% level of significance. As in the majority of the years that have been examined separately, on the event day there is a negative, while statistically insignificant abnormal return. At last, throughout the post-announcement period the market seems to react negatively with strong abnormal returns around the announcement day. Specifically, on the days t=+2 and t=+3 the abnormal returns -0.876% and -0.286% respectively, and thus, it can be clearly stated that the market has a general tendency to react negatively to dividend announcements.

As the reader can observe from the table below, the Cumulative Abnormal Returns (CARs) follow, in general, a similar trend as the abnormal returns.

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Table 12: Cumulative Abnormal Returns (CARs) of the whole sample of firms for the multiple selected event windows

Event Windows	2004		2005		2006		2007		2008		2004-2008	
	CAR%	t-statistic	CAR%	t-statistic	CAR%	t-statistic	CAR%	t-statistic	CAR%	t-statistic	CAR%	t-statistic
(-20,+20)	-1.603	-0.76	-1.882	-0.79	+1.606	0.95	-1.131	-0.21	+2.269	0.99	+0.002	0.00
(-20,-1)	+1.829	1.24	-0.517	-0.31	+1.617	1.38	+4.083	1.06	+4.163***	2.61	+2.340*	1.97
(-20,0)	+1.463	0.96	-1.289	-0.75	+1.871	1.55	+3.810	0.96	+4.103**	2.51	+2.130*	1.75
(+1,+20)	-3.060**	-2.07	-0.593	-0.35	-0.265	-0.23	-4.941	-1.28	-1.834	-1.15	-2.128*	-1.79
(-10,+10)	-2.136	-1.41	-2.634	-1.54	+2.155*	1.79	+1.081	0.27	+0.584	0.36	-0.532	-0.44
(-10,-1)	+1.103	1.05	-0.151	-0.13	+2.269***	2.73	+2.209	0.81	+2.103*	1.87	+1.303	1.55
(-10,0)	+0.737	0.67	-0.923	-0.74	+2.524***	2.89	+1.936	0.68	+2.043*	1.73	+1.094	1.24
(+1,+10)	-2.873***	-2.74	-1.711	-1.45	-0.369	-0.44	-0.856	-0.31	-1.459	-1.29	-1.626*	-1.94
(-5,+5)	-2.934***	-2.67	-2.835**	-2.29	+0.775	0.89	+0.161	0.06	-0.842	-0.71	-1.506*	-1.71
(-5,-1)	+0.147	0.20	-0.087	-0.10	+1.008*	1.71	+1.495	0.78	+0.658	0.83	+0.482	0.81
(-5, 0)	-0.219	-0.27	-0.859	-0.94	+1.262*	1.96	+1.222	0.58	+0.598	0.69	+0.272	0.42
(+1,+5)	-2.715***	-3.67	-1.976**	-2.36	-0.487	-0.83	-1.061	-0.55	-1.440*	-1.81	-1.779***	-3.00
(-1,+1)	-1.451**	-2.53	-2.108***	-3.26	+0.794*	1.74	+0.304	0.20	+0.402	0.65	-0.356	-0.77
(-1,0)	-0.148	-0.32	-1.024*	-1.94	+0.302	0.81	-0.112	-0.09	+0.234	0.46	-0.130	-0.35
(0,+1)	-1.669***	-3.57	-1.856***	-3.51	+0.747**	2.01	+0.143	0.12	+0.109	0.22	-0.435	-1.16

Note: *   10% of significance
      **   5% of significance
      *** 1% of significance

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More specifically, it is quite obvious that the market reacts positively during the period before the dividend announcements, while throughout the first days of the post-announcement period strong negative abnormal returns are observed. More particularly, for the whole event window (-20, +20) the CAR seem to be marginally positive, but statistically insignificant. On the other hand, throughout the event windows that precede the announcement day, (-20, -1) and (-20, 0), there are positive and statistically significant cumulative abnormal returns. For example, for all the examined years simultaneously, the CARs are +2.340% and +2.130% for the above event windows respectively, which are statistically significant at the 10% level. In contrast, throughout the post announcement event windows, the sign of the CARs turns to be negative. Namely, for all the examined years simultaneously it equals to -2.128% and is statistically significant at the 10% level, as well. This is a result of the strong negative CAR that can be noticed in 2004 (-3.066%), which is statistically significant at the 5% significance level. However, the strongest negative abnormal returns appear to be just few days after the event day and particularly during the following event windows (+1, +5) and (0, +1). In 2004, an extremely statistically strong CAR, of about -2.715%, exists and it is significant at the 1% level. Moreover, in 2004 and 2005 there are statistically significant CARs in the short event window (0, +1), -1.669% and -1.856% correspondingly, which are statistically significant at the 1% level.

In order to present the above results, the t-test has been applied in the current thesis. The above discussed outcomes undoubtedly reject the null hypothesis that supports the irrelevance theory proposed by Miller and Modigliani (1961), as abnormal returns were sighted both before and after the dividend announcements. Generally, the trend that has been followed by the abnormal returns is positive in the prior-announcement period and negative in the post-announcement period. Specifically for all the examined years simultaneously, in the event window (-20, -1) the CAR is +2.340% (statistically significant at the 10% level), while in the event window (+1, +20) the CAR is -2.128% (statistically significant at the 10% level).

Nevertheless, the results would be insufficient without mentioning two important limitations that have been taken into account throughout the analysis.

5.   Conclusions

The relationship between the dividend policy and the value of the firm is an issue that has been arisen many decades ago and stimulated the interest of many economic researchers. However, it is also a matter of intense debate, as many theories have been developed in an attempt to shed some light on this troublesome issue. The aim of the current thesis was to examine the market reaction to dividend announcements by Greek listed companies on the indices FTSE/ATHEX 20 and FTSE/ATHEX Mid 40.

As it was mentioned in the second part of the study, the Greek stock market is characterized by some unique characteristics that other stock markets do not have, making it an ideal candidate for academic research. The absence of double taxation in the

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Greek stock market, in contrast with other stock markets in the USA and Europe, is a characteristic that may lead to different responses of the market participants to dividend announcements.

The empirical findings of the current thesis obviously reject the null hypothesis and challenge the irrelevance theory introduced by Miller and Modigliani (1961), as they indicate the existence of abnormal activity in the stock market both before and after the dividend announcements. In particular, they indicate positive market reaction during the prior-announcement period (statistically significant at the 10% level) and negative market reaction throughout the post-announcement period (statistically significant at the 10% level). On the other hand, on the event day, which is the day that the amount of dividends is officially announced by the firms, most of the abnormal returns that have been observed appear to be statistically insignificant at any accepted level. Therefore, it can be clearly stated that market participants expect the dividend announcements to have a positive impact on the stock prices, and they adapt their own portfolios according to their expectations. However, investors seem to interpret the news come from the dividend announcements, as ominous for the firms' future, and thus they react with a negative manner.

As it was mentioned in the last section of the literature review, there are numerous researches concerning the signaling effect on the Greek stock market. Nevertheless, none of them has the same outcomes with the present study. Initially, Papaioannou et al. (2000) did not observe any abnormal stock market activity around the dividend announcements by the firms including in their sample. Moreover, Asimakopoulos et al. (2007) stated that the signaling effect does not apply for firms that distribute only the minimum required amount as dividends, even for unexpected changes in their dividend policy. Therefore, the empirical findings of the above two mentioned studies are undoubtedly aligned with the irrelevance theory and are in clear contradiction with the results of the present research. Finally, Dasilas (2007) implied that there are no abnormal stock returns during the prior-announcement period, a fact that is clearly in contrast with the findings of the current paper, even if both studies support the signaling effect of dividends.

Thus, in spite of the restricted number of limitations, the current study through its empirical findings and based on previous relevant literature is an additional attempt to shed some light s of the most troublesome issues of the financial theory.

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