Does the market reaction to dividend news is influenced by investor sentiment? Evidence from Europe

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Área Temática: 6) Finanças

The market reaction to dividend news and the investor sentiment: Evidence from Europe

ABSTRACT

We analyse whether the investor sentiment affects the market reaction to dividend change announcements. We use the European Economic Sentiment Indicator data, from *Directorate General for Economic and Financial Affairs* (DG ECFIN), as a proxy for investor sentiment and focus on the market reaction to dividend change announcements.

Our results indicate that the investor sentiment have some influence on the market reaction to dividend change announcements, for two of the three analysed markets. Globally, we find no evidence of investor sentiment influencing the market reaction to dividend change announcements for the Portuguese market. However, we find evidence that the positive share price reaction to dividend increases enlarges with sentiment, in the case of the UK markets, whereas the negative share price reaction to dividend decreases reduces with sentiment, in the French market.

Key Words: *Investor Sentiment, Sentiment Indexes, Dividend News, Market Reaction to news, Behavioural Finance*

1. INTRODUCTION

According the signalling theory models (Bhattacharya, 1979; John and Williams, 1985; Miller and Rock, 1985), insiders use the dividend policy as a costly signal to convey their firm's future prospect to investors. Consequently, there should be a positive relationship between dividend changes and subsequent share price reaction.

Although there is empirical evidence supporting the signalling hypothesis (Aharony and Swary, 1980; Lee and Ryan, 2000, 2002, among many others), some studies have not supported this assumption (Benartzi *et al.*, 1997; Abeyratna and Power, 2002, among many others).

The behavioural finance introduces the investor sentiment in the decision-making process of the investor. Some authors developed proxies of sentiment (for example, Lemmon and Portniaguina, 2006; Baker and Wurgler, 2007) and others have explored the role of sentiment in financial markets (Han, 2008; Yu and Yuan, 2010). As the best of our knowledge, only Sankaraguruswamy and Mian (2008) analyse the effect of investor sentiment on the market reaction to corporate news, for the US market.

Using a sample of three distinct European markets, we try to provide further evidence on the role of the investor sentiment on the market reaction to dividend change announcements, analysing how the market reaction to dividend change announcements diverges with investor sentiment.

Our results suggest that the market reaction to dividend change announcements is more sensitive to dividend increases when sentiment is increasing, for the UK market and that the market reaction to dividend change announcements is less sensitive to dividend decreases when sentiment is increasing, for the French market. For the Portuguese market, we find no evidence of investor sentiment influencing the market reaction to dividend change announcements.

The remainder of this paper is organised as follows. Section 2 presents the research methodology. The sample selection is described in Section 3. Section 4 presents and discusses the empirical results. Finally, section 5 concludes.

2. METHODOLOGY

Because we are interested in measuring the effect of sentiment on the market reaction to dividend change announcements, we need to calculate dividend changes.

The annual dividend change is defined as the difference between the announced dividend in year t and the prior year dividend, scaled by the announcement day share price:

$$\Delta D_{i,t} = \frac{D_{i,t} - D_{i,t-1}}{P_{i,0}} \qquad [1]$$

where:

$\Delta D_{i,t}$ = change of dividend per share i for year t;
$P_{i,0}$ = price of share i in the announcement day.

To measure the market reaction to dividend change announcements, we opt to consider the buy-and-hold abnormal returns (BHARs). The BHAR for share i from time -1 to +1 generating model takes the following form (we consider a 3-day event window, where t = 0 is the dividend announcement day):

$$BHAR_{i(-1\,to\,+1)} = \prod_{t=-1}^{1}(1+R_{i,t}) - \prod_{t=-1}^{1}(1+R_{m,t}) \qquad [2]$$

where:

$R_{i,t}$ = return for share i in day t;
$R_{m,t}$ = market return for day t.

In order to measure the investor sentiment, we consider two approaches. First, we rely on the European Economic Sentiment Indicator (ESI), published by the European Commission and obtained from DG ECFIN database. The ESI index is based on sentiment surveys carried out in all member states of the European Union (EU), considering fifteen sentiment components[1].

[1] The DG ECFIN conducts regular harmonized surveys for different sectors of the economies in the EU to provide information for economic surveillance, short term forecasting and economic research. The surveys provide information on a wide range of variables (for example, production, business activity, consumer financial situation, unemployment, savings, among others) that are useful to monitor cyclical developments. The economic sentiment indicator is made with a range of individual components of the industry, services, consumers, construction and retail trade confidence indicators.
The economic sentiment data was collected in DG ECFIN website:
http://ec.europa.eu/economy_finance/db_indicators/surveys/time_series/index_en.htm.

In addition, we closely follow the methodology of Lemmon and Portniaguina (2006) to obtain a *proxy* for investor sentiment (ISENT). We regress the ESI indicator on a set of macroeconomic variables, in order to separate the rational and sentimental components of the ESI[2] and obtain a variable that is unrelated to fundamental risk factors. We consider the residual from this regression as our sentiment measure (optimism or pessimism).

To analyse the market reaction to dividend change announcements, considering the investor sentiment, we estimate the following regression, closely following the Sankaraguruswamy and Mian (2008) model:

$$BHAR_{i(\ 1\text{to}+1)} = \alpha + \beta_1 \text{ DI x } \Delta \text{ D}_{i,0} + \beta_2 \text{ DD x } \Delta \text{D}_{i,0} + \beta_3 \text{ DI x } \Delta \text{ D}_{i,0} \text{ x SENT} + \\ + \beta_4 \text{ DD x } \Delta \text{ D}_{i,0} \text{ x SENT} + \beta_5 \text{ SIZE}_i + \varepsilon_{i,t} \quad [3]$$

where:

DI = dummy variable that takes value 1 if dividend increases and zero otherwise;
DD = dummy variable that takes value 1 if dividend decreases and zero otherwise;
SENT = measure of investor sentiment at the end of the year before the dividend change year (considering both the ESI and the ISENT indexes);
$SIZE_i$ = size for share i, computed as the natural log of total assets at the end of the year before the dividend change year.

The coefficients β_1 and β_2 would capture the market reaction to dividend changes not considering the sentiment. The coefficients on SENT allow us to test whether the market reaction to dividend changes varies with the investor sentiment. We use the prior years' sentiment to avoid a look-ahead bias in our tests. We use the SIZE as a control variable in the regression, in order to control for potential scale differences (Barth and Kallapur, 1996).

For the UK market, the impact of earnings announcements is examined by dividing the sample of dividend changes into four categories instead of the previous two[3] (dividend increases and decreases): dividend increase-earnings increase (DIEI), dividend increase-earnings decrease (DIED), dividend decrease-earnings increase (DDEI), and dividend decrease-earnings decrease (DDED).

[2] Our variable set includes short and long-term interest rates, consumption, inflation, exportations and importations, as well the lags of these variables.
[3] We need to adapt the methodology when analysing the UK sample, as UK firms usually announce both dividends and earnings simultaneously.

Employing the panel data methodology, we use the three common estimation techniques, which are the pooled ordinary least squares (OLS), the fixed effects model (FEM), and the random effects model (REM). Subsequently, we use an F-statistic and the Hausman (1978) test to choose the most appropriate model for our samples. We present the standard errors corrected for heteroscedasticity and covariance, based on White's (1980) heteroscedasticity consistent standard errors method.

Afterwards, we consider the following regression, an extension of equation [3], in order to estimate the model considering some more control variables.

$$\begin{aligned} BHAR_{i(\ 1\,to+1)} = {} & \alpha + \beta_1 \, DI \times \Delta D_{i,0} + \beta_2 \, DD \times \Delta D_{i,0} + \beta_3 \, DI \times \Delta D_{i,0} \times SENT + \\ & \beta_4 \, DD \times \Delta D_{i,0} \times SENT + \beta_5 \, DI \times \Delta D_{i,0} \times SIZE_{i,t} + \beta_6 \, DD \times \Delta D_{i,0} \times SIZE_i + \\ & \beta_7 \, DI \times \Delta D_{i,0} \times VOLAT_{i,t} + \beta_8 \, DD \times \Delta D_{i,0} \times VOLAT_{i,t} + \\ & \beta_9 \, DI \times \Delta D_{i,0} \times BM_{i,t} + \beta_{10} \, DD \times \Delta D_{i,0} \times BM_{i,t} + \beta_{11} \, PROF_i, t \times \Delta D_{i,0} + \\ & \beta_{12} \, SIZE_i + \varepsilon_{i,t} \end{aligned} \qquad [4]$$

where:

$VOLAT_{i,t}$ = share return volatility, measured as the standard deviation of daily prices over the preceding year;

$BM_{i,t}$ = book to market ratio for share i, calculated by dividing book value per share at the end of the year before the dividend change year by the market price per share at the dividend change announcement date;

$PROF_{i,t}$ = dummy variable that takes value 1 for profitable firms (return on equity positive) and zero otherwise. Profitability is measured by the return on equity, computed as the income before extraordinary items at the end of the year before the dividend change year divided by shareholders equity at the end of the year before the dividend change year.

The variable SIZE allows for the differential response of the market to dividend news, according the firms size. The variable VOLAT enables to analyse the differential response of the market to dividend news, according the firms volatility. The PROF variable allows for the differential response of the market to dividend news, according the firms profitability and the BM variable analyses whether the market reaction to dividend change announcements is influenced by extreme growth or distressed shares. High values of BM ratio may indicate distress and low values may indicate high growth opportunities.

Although large firms have higher media coverage and greater institutional ownership, the smaller firms have less information available in the market, so, when they announce

dividend changes, it will generate greater market surprises that induce a larger reaction by the market. Consequently, we expect market reaction to dividend change announcements to be lower for large firms than for small firms.

3. SAMPLE SELECTION

We choose to examine different European markets: the UK, the French and the Portuguese markets. Although they are all European markets, they are different from each other for several reasons, such as size and liquidity, the ownership of equity and the financing system. Given the different characteristics, we expect to find a weaker support to the dividend signalling hypothesis as well as a weaker influence of investor sentiment in Portugal and France than in the UK.

The sample is drawn from dividend announcements of firms listed on the Euronext Lisbon and Paris and London Stock Exchange. Announcement dates are available on *Bloomberg* database and all other needed information is available on *Datastream* database. Our sample events include dividend increases, no changes and decreases from 1995 to 2002 for the French and the UK markets and from 1989 to 2002 for the Portuguese market. Our sample is an unbalanced panel data set[4].

Table 1 reports the number of dividend events classified by sample selection criteria. The Portuguese sample contains 380 events: 158 increases, 121 decreases and 101 no change observations. The French sample has 356 events: 235 increases, 62 decreases and 59 no change observations. Finally, the UK sample contains 3,278 events: 2,662 increases, 273 decreases and 343 no change events.

4. EMPIRICAL RESULTS

Table 2 reports the estimates of the regression model [3] for the most appropriate model for each of the country samples, based on the F-statistic and the Hausman (1978) test. The first regression results (Base Model), do not consider the interaction variables involving sentiment. In this model, for all the three countries, none of the coefficients present a significant value. Consequently, we find no evidence for the dividend

[4] The year of 1994 is conditioned by the availability of announcement dates *on Bloomberg* database. For the Portuguese sample we consider a longer period, in order to maximize the number of observations, since this is a small market, with a small number of dividend events. Because *Bloomberg* and *Datastream* lack information on the Portuguese market, we obtain data from *Dhatis*, an EL database and we also needed to collect some financial statements directly from the companies.

signalling hypothesis, which is in agreement with some of the studies carried out before, such as the ones of Lang and Litzenberger (1989), Benartzi *et al.* (1997), Abeyratna and Power (2002) and Vieira and Raposo (2007).

Considering the investor sentiment effect on the market reaction to dividend change announcements, the results are different for the three countries.

For the Portuguese market, we find no evidence that investor sentiment influences the share price response to dividend change news, since none of the coefficients is statistically different from zero.

In what concerns the French market, the only coefficient that is statistically significant, and only considering the ISENT index, is the coefficient for DD_SENT, being negative, as expected. This is an indication that the share price sensitivity to bad dividend news is lower when the sentiment is increasing. In addition, the results suggest that the ISENT proxy for invest sentiment is more robust that the ESI one. Indeed, although both low, the adjusted R^2 is slightly higher for the regression considering the ISENT as the investor sentiment measure.

Finally, for the UK market, only the results of the regression considering the ISENT index present significant values for the coefficients, which reinforce the robustness or this investor sentiment measure. The coefficient for DIED_SENT is positive, as expected, and statistically significant at 5% level, suggesting a stronger market reaction to dividend increase announcements when the investor sentiment is increasing. The variable SIZE is negative and statistically significant, which is an indication that the returns of large shares are smaller than those of small shares.

Table 3 reports the estimates of the regression model [4] for the most appropriate model for each of the country samples, based on the F-statistic and the Hausman (1978) test. This regression is useful, namely because it allows to analyse the robustness of the regression [3] results, when we introduce a set of control variables.

For the Portuguese sample, and considering the ISENT index, we have two control variables with significant values, which are the BM and the PROF. In the first situation, the DI_BM variable is negative and statistically significant, suggesting that the market reaction to dividend increase announcements is higher for the firms that have a lower BM, which is a proxy for growth firms. This result can be an indication that investors believe firms presenting growth prospects, have higher capability to sustain dividends

payment in the future, which is somewhat in agreement with the signalling hypothesis. The D_PROF variable is also negative, and statistically different from zero, suggesting that market responds more to dividend change announcements for non profitable firms. When we use the ESI index, only the DD_BM variable is statistically significant, and positive, suggesting that share prices react more to the negative dividend changes for firms with higher BM ratios, or, in other words, for distressed firms.

Analysing the French market results, we can see that only the ISENT index presents some significant coefficients. Once more, we find evidence of this index to be more robust that the ESI one. The DD coefficient is positive and significantly different from zero, suggesting that share prices decline in response to the dividend decrease announcements. The coefficient for DD_SIZE is negative and significant, indicating that the market reacts more to dividend decrease news for small firms, which is in agreement with some authors who find evidence of a significant effect of sentiment on returns for small, but not for large stocks, such as Schmeling (2009), Brown and Cliff (2005) and Lemmon and Portniaguina (2006).

In what concerns the UK results, we can see that the variables that are useful to explain the market sensitivity to dividend change announcements are SENT, VOLAT, BM and PROF. The coefficient for the interaction term DIEI_SENT is positive and statistically significant at the 1% level, suggesting that share price changes following good dividend and earnings news is greater when sentiment is higher. However, the coefficient for DIED_SENT, although positive, is statistically insignificant. Comparing the significance of DIEI_SENT and DIED_SENT variables, the results suggest that earnings announcements have information power beyond that of dividend announcements, which is consistent with the conclusion of DeAngelo *et al.* (1992) and Conroy *et al.* (2000), among others.

The coefficient on DIEI_VOLAT is negative and statistically different from zero for the two investor sentiment indexes, indicating that the market reacts more to the dividend increase announcements for less volatile firms, suggesting that investors reward firms with present lower levels of volatility.

It is interesting to see that the DIEI_BM coefficient is positive and the DDEI_BM is negative, both statistically significant, indicating that the market reacts more to dividend increases for higher BM firms (the distressed ones), and reacts more to dividend decreases for lower BM firms (which indicate high growth opportunities), which is in

contrast with the evidence found for the Portuguese sample. Although the Portuguese results are somewhat in agreement with the signalling hypothesis, the UK results give some support for the free cash flow hypothesis (Jensen, 1986).

Also in contrast with the Portuguese results, the D_PROF variable is positive, and statistically different from zero, suggesting that market responds more to dividend change announcements for profitable firms.

5. CONCLUSIONS

The main relevant issue of our study is to analyse whether the market reaction to dividend change announcements vary with the existing investor sentiment.

We find some differences according the analysed sample. For the Portuguese market, we find no evidence of investor sentiment influencing the market reaction to dividend change announcements. For the French and the UK, we find mixed results.

We find some evidence that the market reaction to dividend change announcements is more sensitive to dividend increases when sentiment is increasing, for the UK market and that the market reaction to dividend change announcements is less sensitive to dividend decreases when sentiment is increasing, for the French market.

In addition, the results suggest that the ISENT proxy for invest sentiment is more robust that the ESI measure. Furthermore, the evidence suggests that earnings announcements have information power beyond that of dividend announcements, which is consistent with the conclusion of DeAngelo *et al.* (1992) and Conroy *et al.* (2000), among others.

Globally, our results are somewhat in agreement with the ones of Brown and Cliff (2004), who find no evidence of fund discounts reflecting investor sentiment when they use an investor sentiment indicator from the American Association of Individual investors, and find little evidence of sentiment having forecasting power for near-term returns, using a measure of sentiment constructed by them.

In a further study, we would like to analyse whether the impact of sentiment on market reaction to dividend news is greater for certain categories of shares, such as young firms, high volatile shares, extreme growth shares and distressed shares.

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Table 1 - Sample

This table reports the number of dividend events for the Portuguese, the French and the UK samples. To be included in the final sample, a dividend announcement must satisfy the following criteria: 1) The firm is not a financial institution; 2) The firm paid an annual ordinary dividend in the current and previous year; 3) The firm's financial data is available on the *Datastream* or *Dhatis* (in the Portuguese sample) and announcement dates are available on *Bloomberg* database; 4) For the Portuguese and French samples, the dividend, earnings or other potentially contaminating announcements did not occur within 5 trading days of each other. For the UK firms we consider the same condition, except for earnings announcements. As they are simultaneous in almost the cases, we exclude dividend announcements which earnings announcements are announced on separate dates.

	Portugal		**France**		**UK**	
	Number	(%)	Number	(%)	Number	(%)
Dividend increases	158	41.6%	235	66.0%	2,662	81.2%
No change	101	26.6%	59	16.6%	343	10.5%
Dividend decreases	121	31.8%	62	17.4%	273	8.3%
Total dividend events	380	100.0%	356	100.0%	3,278	100.0%

Table 2 – Regression of market reaction to dividend change announcements, considering the sentiment

This table reports the following regression:

$$B_{i(1\,to\,+1)} = \alpha + \beta_1 \text{ DI x } \Delta D_{i,0} + \beta_2 \text{ DD x } \Delta D_{i,0} + \beta_3 \text{ DI x } \Delta D_{i,0} \text{ x SENT} + \\ + \beta_4 \text{ DD x } \Delta D_{i,0} \text{ x SENT} + \beta_5 \text{ SIZE}_i + \varepsilon_{i,t}$$

Portugal						
Pooled OLS						
	Base Model		ISENT		ESI	
	Coefficient	t	Coefficient	t	Coefficient	t
Intercept	0.0075	0.449	-0.0009	-0.041	0.0071	0.425
DI	0.0113	1.223	0.0210	0.512	-0.4281	-0.703
DD	0.0073	0.587	-0.0103	-0.396	-0.0913	-0.517
DI_SENT			-0.0027	-0.227	0.0042	0.721
DD_SENT			-0.0047	-0.498	0.0010	0.559
SIZE	-0.0005	-0.499	-0.0001	-0.074	-0.0004	-0.469
N	380		125		380	
Adjusted R^2	0.006		0.015		0.008	
France						
Pooled OLS						
	Base Model		ISENT		ESI	
	Coefficient	t	Coefficient	t	Coefficient	t
Intercept	-0.0067	-0.323	-0.0049	-0.239	-0.0081	-0.390
DI	-0.1000	-0.414	-0.5299	-1.475	-0.2915	-0.923
DD	0.1061	0.669	0.2600	1.444	0.7121	1.618
DI_SENT			-0.5867	-1.577	0.0291	0.893
DD_SENT			-0.1866 *	-1.673	-0.0689	-1.596
SIZE	0.0014	0.430	0.0013	0.407	0.0015	0.484
N	356		356		356	
Adjusted R^2	0.002		0.017		0.012	

Table 2 – Regression of market reaction to dividend change announcements, considering the sentiment (continued)

	UK					
	Base Model - FEM		ISENT - REM		ESI – FEM	
	Coefficient	t	Coefficient	t	Coefficient	t
Intercept	0.0691*	1.683	0.0404 ***	3.615	0.0700 *	1.702
DIEI	0.0001	0.575	-0.0002	-0.741	-0.0156	-1.125
DIED	-0.0068	-0.923	-0.0079	-1.120	-0.0387	-0.165
DDEI	-0.0197	-0.667	-0.0265	-1.022	-0.5647	-0.847
DDED	-0.0190	-1.137	-0.0139	-0.906	0.1914	0.414
DIEI_SENT			0.0002	0.644	0.0002	1.132
DIED_SENT			0.0149 **	2.281	0.0003	0.137
DDEI_SENT			-0.0259	-1.548	0.0053	0.818
DDED_SENT			0.0110	1.046	-0.0021	-0.456
SIZE	-0.0095	-1.234	-0.0041 **	-1.999	-0.0097	-1.255
N	3,276		3,276		3,276	
Adjusted R^2	0.193		0.196		0.194	

*** Significantly different from zero at the 1% level
** Significantly different from zero at the 5% level
* Significantly different from zero at the 10% level

Table 3 – Regression of market reaction to dividend change announcements, considering the sentiment and control variables

This table reports the following regression:

$$BHAR_{i(\ 1\text{to}+1)} = \alpha + \beta_1 \text{DI x}\,\Delta D_{i,0} + \beta_2 \text{DD x}\,\Delta D_{i,0} + \beta_3 \text{DI x}\,\Delta D_{i,0} \text{ x SENT} + \beta_4 \text{DD x}\,\Delta D_{i,0} \text{ x SENT} + \beta_5 \text{DI x}\,\Delta D_{i,0} \text{ x SIZE}_{i,t} + \beta_6 \text{DD x}\,\Delta D_{i,0} \text{ x SIZE}_i + \beta_7 \text{DI x}\,\Delta D_{i,0} \text{ x VOLAT}_{i,t} + \beta_8 \text{DD x}\,\Delta D_{i,0} \text{ x VOLAT}_{i,t} + \beta_9 \text{DI x}\,\Delta D_{i,0} \text{ x BM}_{i,t} + \beta_{10} \text{DD x}\,\Delta D_{i,0} \text{ x BM}_{i,t} + \beta_{11} \text{PROF}_i \text{ x}\,\Delta D_{i,0} + \beta_{12} \text{SIZE}_i + \varepsilon_{i,t}$$

Portugal				
Pooled OLS				
	ISENT		ESI	
	Coefficient	t	Coefficient	t
Intercept	0.0089	0.399	0.0556 *	1.738
DI	0.3410	1.476	-0.6091	-0.815
DD	-0.1458	-1.349	-0.4753	-1.415
DI_SENT	0.0063	0.229	0.0094	1.240
DD_SENT	0.0001	0.007	-0.0009	-1.131
DI_SIZE	0.0091	1.050	0.0543	0.554
DD_SIZE	-0.0001	-1.178	0.0029	0.048
DI_VOLAT	-0.1480	-0.509	0.0010	0.513
DD_VOLAT	0.0262	0.201	-0.0012	-1.112
DI_BM	-0.0287 *	-1.726	-0.0159	-0.604
DD_BM	0.0098	1.003	-0.0030 *	-1.736
D_PROF	-0.0556 *	-2.057	0.0055	0.793
SIZE	-0.0003	-0.286	0.0037	1.271
N	125		378	
Adjusted R^2	0.091		0.255	

(Continue)

Table 3 – Regression of market reaction to dividend change announcements, considering the sentiment and control variables (continued)

	France			
	Pooled OLS			
	ISENT		ESI	
	Coefficient	t	Coefficient	t
Intercept	0.0077	0.286	0.0052	0.192
DI	2.8105	0.617	-0.1928	-0.029
DD	1.0260 *	1.707	1.1734	1.343
DI_SENT	-0.4513	-1.155	-0.4027	-0.530
DD_SENT	-0.2601	-1.442	-1.0684	-1.321
DI_SIZE	-0.5151	-0.720	-0.0963	-1.181
DD_SIZE	-1.6284 *	-1.709	0.0539	0.812
DI_VOLAT	-0.0660	-0.811	0.0174	0.288
DD_VOLAT	0.0394	0.580	0.0049	10467
DI_BM	0.0142	0.235	-0.0578	-0.935
DD_BM	0.0036	1.054	0.0002	0.045
D_PROF	-0.0491	-1.798	0.0275	0.771
SIZE	-0.0001	-0.035	-0.0511	-0.916
N	356		356	
Adjusted R^2	0.038		0.033	

(Continue)

Table 3 – Regression of market reaction to dividend change announcements, considering the sentiment and control variables (continued)

	UK					
	FEM					
	ISENT			ESI		
	Coefficient		t	Coefficient		t
Intercept	-0.0047		-0.109	-0.0072		-0.165
DIEI	0.0001		-1.121	-0.0001		-10142
DIED	-0.0041		-0.240	-0.0001		-1.539
DDEI	0.1059		1.540	-0.2875		-0.415
DDED	-0.0338		-0.965	0.0062		0.013
DIEI_SENT	0.0102	***	3.430	0.0003		0.531
DIED_SENT	0.0113		1.546	-0.0002		-0.125
DDEI_SENT	-0.0297		-1.635	0.0037		0.568
DDED_SENT	0.0152		1.335	-0.0005		-0.099
DIEI_SIZE	0.0001		1.121	0.0001		1.142
DIED_SIZE	0.0001		1.580	0.0001		1.539
DDEI_SIZE	0.0210		1.562	-0.0561		-0.413
DDED_SIZE	-0.0067		-0.983	0.0005		0.006
DIEI_VOLAT	-0.0001	**	-2.074	-0.0001	*	-1.725
DIED_VOLAT	0.0001		0.618	0.0001		0.634
DDEI_VOLAT	-0.00080		-0.882	-0.0007		-0.772
DDED_VOLAT	0.0004		0.767	0.0004		0.696
DIEI_BM	0.0085	*	1.706	-0.0044		-1.314
DIED_BM	-0.0102		-0.680	-0.0138		-0.915
DDEI_BM	-0.0857	**	-2.355	-0.0795	*	-2.140
DDED_BM	-0.0028		-0.145	0.0010		0.053
D_PROF	0.1340	***	5.166	0.1292	***	4.955
SIZE	0.0021		0.257	0.0025		0.309
N	3,276			3,276		
Adjusted R^2	0.210			0.205		

* Significantly different from zero at the 10% level
** Significantly different from zero at the 5% level
*** Significantly different from zero at the 1% level