

Debt and Informative Content: Evidence in the Spanish Stock Market

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Abstract

This paper analyses the informative content of the straight debt issue announcements by firms quoted on the Spanish Stock Market. We have analysed the share price responses to the mentioned issue and the substitution effect between debt and dividends as signalling devices. The obtained results suggest that the Spanish market reacts positively and significantly when such announcements are made by low dividends payout firms and the reaction seems to be irrelevant if the announcements are made by high payout firms. These results support the informative content of debt issue announcements, which is higher for low payout firms, and also the substitution argument between debt and dividends.

Key words: Debt, dividends, information effect, substitution effect, event study

JEL classification: G14, G35, D82

I. Introduction

Firms enter capital markets with relative frequency to obtain funding through share or debt issues. The market interpretation of one or another financial decision is different: it is exactly the opposite. This way, many empirical studies about new share announcements support that the capital market reacts to it negatively. However, the market responses to the issuing bonds are positive and in some cases null, although the evidence is not as conclusive as in the case of shares.

The aim of this paper is to analyze if a small stock market - with minor size, frequency and volume of contracting than the United States market - as the Spanish Stock Market reacts in the same way to the announcement of straight bond issues, i.e. non-convertible and non-subordinated bonds, as well as

to examine the possible substitution effect between debt and dividends. In order to carry out this study we have taken the announcement of straight bond, issued by corporations quoted on the Spanish Stock Exchange over the period 1989-1998.

This paper is organized as follows: section 2 reviews the relevant literature and outlines the hypotheses of our study. We describe the sample and explain the methodology in section 3. This is followed by the empirical results in section 4. Finally, the conclusions of the study are presented in section 5.

II. Review of The Literature and Suggested Hypotheses

Ross (1977) affirms that the financial structure of a company provides information about its financial situation, and that the value of the companies will increase with the level of leverage. The company's choice of capital structure may convey management expectations about the company's prospects. Higher debt ratios are binding constraints on the firm signalling positive management expectations concerning future cash flows. In contrast, issuing new equity is a negative signal and may reduce the firm stock price.

On the other hand, Myers and Majluf (1984) and Miller and Rock (1985) defend the opposite position, as they think that the announcement of new external financing conveys unfavourable information and will have a negative impact on the market. Myers and Majluf generate a negative market reaction to a company's external financing by arguing that relatively uniformed purchasers of the company's security will demand a discount in order to hedge against the risk that the security is overvalued. Myers and Majluf's model suggests that the riskier the security issued, the higher the (negative) issue impact on the market value of the firm. Miller and Rock suggest that the company's decisions about obtaining funds reveal negative information about future internal financing, though as opposed to the previous model, the market response will be the same with independence of the financial asset.

Several other studies on U.S. firms analyse the impact of announcement of straight debt offerings and they have concluded that this kind of issues does not have a significant effect on the stock price (Dann and Mikkelson, 1984; Mikkelson and Partch, 1986; Eckbo, 1986; Barclay and Litzenberger, 1988; Shyam-Sunder, 1991; Tang and Singer, 1993; Johnson, 1995; ...), the stock price reaction can be potentially negative, positive or null. Smith (1986) argues that, in general, a new debt issue is likely to be more predictable than a new equity issue because principal repayments are more predictable than earnings; therefore there is a smaller stock price reaction to announcement of new debt issue. However, authors as Kim and Stulz (1988) for a sample of Eurobonds issued by U.S. corporations find a positive average abnormal stock return associated with the offering announcement. This result differs from the literature on the stock price effect on domestic bond issues, which reports negative or zero wealth effects.

Recent empirical studies, relying on Spanish data (González Méndez, 1996; González Méndez, 1997; Arrondo García, 1999), have shown that the market reaction to straight debt issue is positive and statistically significant, which contrasts with the empirical existing evidence in other markets as the American one.

The conclusions of the empirical evidence show that the market does not present a significant reaction to the announcement of debt issue, but when the market responses to this announcement, the results are positive. Bearing these results in mind the first hypothesis of our work can be presented in the following terms:

H1: The Spanish market reaction to straight debt issue is positive and statistically significant.

On the other hand, others theoretical models suggest that debt and dividends are substitute devices to reduce agency or asymmetric information problems.

According to Jensen's theory (1986), free cash flows, after funding all profitable projects, can be invested unprofitably by managers wishing to retain control over these funds. Both debt and dividends payments reduce this problem by reducing the amount of free cash flow under management control.

Moreover, the necessity of meeting debt and dividends payments gives managers an incentive to avoid unprofitable new projects and divest old ones.

This argument of substitution is also analysed in other studies. Ravid and Sarig (1991) consider debt and dividends as informational equivalents in a signalling model. Specifically, they argue that dividends and debt provide equivalent information. Both, debt and dividends, bind the firm to make periodical payments in the future, so that they are signs of the future earnings or firm quality. In the same way, Johnson's result (1995) supports arguments about debt and dividends, which are substitute control or signalling devices. He points out that the average share price response to announcements of straight debt issue is significantly positive for low dividend payout firms, and insignificantly different from zero for high dividend payout firms.

Taking into account the before mentioned, we examine in this study if the market reaction to the announcement of debt issue can be influenced by the level of dividends. If both, debt and dividends are substitute devices, the market response to the announcement of debt issue should be more favourable to low dividends payout firms. The second hypothesis of our work is expressed in the following form:

H2: The Spanish market reaction to bond issues of low dividend payout firms will be greater than to bond issues of high payout firms.

III. Data and Methodology

1. Data

The sample object of our study is constituted by all the announcements of straight debt issue, (non-convertible, non-subordinated) made by firms that have quoted on the Spanish Stock Market throughout the period 1989-1998. The selection criteria yield a total of 96 announcements but the final sample only contains 67 announcements. The two causes of the exclusion of the announcements are the following: firstly, there were other major corporate news reported the day of, the days prior or the days following the announcement, as for example, dividend payout, year earning results, capital reduction, etc. Therefore, 17 announcements were excluded to avoid unwanted noisy events. Secondly, the sample includes those firms for which stock price data are available. We eliminated those announcements made by firms with infrequent quotation (12 announcements). Likewise, the announcements by the same firm on the same day are counted as single observations.

The announcements that constitute the sample contain 4 financial firms and 16 non-financial firms, belonging to the following sectors: electrical, communications, construction, real estate agencies, chemistries, metal - mechanics and paper and wood (Table 1); being mostly the non-financial companies those which have made this type of announcement. In relation to the temporary distribution of the announcements throughout time, we have observed that most of the announcements were made over the period 1989-1994.

Table 1: Classification for sectors of the sample

Sectors	Number of announcements	Number of firms
Electrical	30	6
Communications	18	2
Construction	3	2
Real estate agencies	3	2
Chemistries	2	1
Metal – mechanics	1	1
Paper and Wood	1	1
Bank	9	4
Total	67	20

2. Methodology

We use market model event study methods to calculate excess returns about each debt issues. The excess return (RA_{it}) for firm i on event day t is a prediction error defined as:

$$RA_{it} = R_{it} - (\alpha_i + \beta_i \cdot R_{Mt}) \quad (1)$$

where R_{it} is the return for firm i on day t , \forall_i and \exists_i are estimates of market model parameters, and R_{Mt} is the return of market measure through the General Index of Madrid Stock Exchange on day t . Market model parameters are estimated for ordinary least squares, and over the 150 day period, day -180 to day -31, not considering the 30 days most close to the day of the announcement. This filter is set to neutralize the effect of another event.

We define day 0 as date register in *Registro de Comunicaciones de la Comisión Nacional del Mercado de Valores Español (CNMV)*. When measuring the price response to the announcement, we examine the one-day window (day 0) and longer windows.

Daily information prices have been used in this study, which allows observing the announcement effect in the share prices in that day. That can not be appreciated with so many clarity if the information is taken monthly or weekly. The information related to the daily quotes and to the General Index has been obtained from the Stock Exchange of Madrid.

The use of a narrow window to analyse the effect of the event together with the use of daily information reduces the possibility of other type of news included in the effect that is analysed. The null hypothesis is that the abnormal return is equal to zero for the relevant sample.

The significance of RA_{it} (one-day window) is estimated using the test statistic of Brown and Warner (1985), which is distributed Student-t with 149 degrees of freedom:

$$t = \frac{MRA_t}{\sigma_{MRA}} \quad (2)$$

where, MRA_t is the mean of the RA_{it} :

$$MRA_t = \frac{1}{N_i} \sum_{i=1}^{N_i} RA_{it} \quad (3)$$

The variance of this series is calculated from the 150 days from -180 through -31 as:

$$\sigma_{MRA}^2 = \frac{1}{149} \sum_{i=-180}^{-31} (MRA_t - \overline{MRA})^2 \quad (4)$$

The significance of the abnormal return over a variety of holding periods such as the windows of k days is estimated using Holthausen and Leftwich's test (1986), which uses Student-t with 149 degrees of freedom:

$$t = \frac{SMRA_{t,t+k}}{\sqrt{k} \sigma_{MRA}} \quad (5)$$

The average prediction errors are accumulated over the k days from t through $t+k$ to form window average prediction errors ($SMRA_{t,t+k}$).

Brown and Warner (1985) conclude that the use of daily information is much better than the monthly information and its use presents very few difficulties in the event study. The methodologies based on the market model with estimation for ordinary least squares and using standard parametrical test are well specified beneath a great variety of conditions

IV. Spanish Stock Mmarket Reaction Before The Announcement of Debt Issue

The results obtained from analysing the reaction of the Spanish Stock Market to bond issue announcements are presented in table 2. The results suggest that the capital market reacts positively and significantly to this type of announcements, centring this reaction in the nearest moments to the 0 day, therefore, Spanish Stock Market attributes informative content to these announcements. Abnormal positive returns are observed from the -3 day to the +5 day, being in the 0th in which they present the highest value, moment in which 68,42 % of the cases are positive. However, in windows previous to the -1st, though the accumulated abnormal returns are positive, they are non-significant to statistical effects, presenting values lower than those they take after the 0th.

These findings are consistent with the findings of González Méndez (1996,1997) and Arrondo García's (1999), studies that analyse the Spanish Stock Market, obtaining different results from the majority of the studies made for the American Stock Market (Dann and Mikkelson, 1984; Mikkelson and Partch, 1986; Eckbo, 1986; Barclay and Litzenberger, 1988; Shyam-Sunder, 1991; Tang and Singer, 1993; Johnson, 1995; ...), where a significant reaction to this type of announcements is unobservable.

Table 2: Results obtained from straight bond issue announcements (N=67 announcements; 20 firms)

Days	Accumulated abnormal returns (RAC)	Test Brown and Warner	% RAC > 0
(-10,-2)	0,00301	0,6225	49,32
(-5,-2)	0,00205	0,6362	50,44
(-1,0)	0,00463	2,0318	60,53
0	0,00396	2,4553	68,42
(0, +1)	0,00413	1,8143	57,89
(-1, +1)	0,00481	1,7228	56,14
(+2, +5)	0,00884	2,7422	53,51
(+2, +10)	0,00859	1,7758	48,93

1. Substitution effect between debt and dividends

In the first place, to analyse the substitution effect between dividend payout and the announcement effect of bond issues, we calculate the average payout of the three years prior to the year of announcement of straight bond issue by firms that compose our sample. Therefore, the payout ratio has been defined as the dividend corresponding to the exercise divided by the profit after taxation retained of the parent company for that financial year. We have observed that the payout ratio is stable for the majority of the firms of the sample over the three years considered to calculate the average. Once those two companies are excluded of the sample because of paying dividends with charge to reserves, the average payout ratio takes a value of 0,56. This value is used to divide the total sample in two subsamples: high dividend payout firms and low dividend payout firms. Thus, the first subsample (high dividend payout firms) encompasses the announcements belonging to those firms that have an average payout above 0,56, whereas the second subsample (low dividend payout firms) is constituted by the announcements of the firms with an average payout below 0,56. The first subsample contains 24 announcements corresponding to 6 non-financial firms, while the second one remains constituted by 41 announcements belonging to 12 financial and non-financial firms.

The results obtained for the subsample of high dividend payout firms (Table 3) indicate that the response of the capital market to the debt issue announcement by these companies is positive but not

statistically significant in the same day of the announcement, being positive 59,09% of the abnormal returns. The insignificance of the obtained results continues appearing in wider windows. However, the results corresponding to the subsample of low dividend payout firms (Table 3) show a positive and significant reaction to their debt issue announcements, so much in day 0, where the abnormal positive returns are 69,44%, as in wider windows later to the day of the announcement.

Table 3: Results obtained for the subsamples (high dividend payout firms and low dividend payout firms)

Subsample of high dividend payout firms (24 announcements; 6 firms)				Subsample of low dividend payout firms (41 announcements; 12 firms)			
Days	Accumulated abnormal returns (RAC)	Test Brown and Warner	%RAC>0	Days	Accumulated abnormal returns (RAC)	Test Brown and Warner	%RAC>0
(-10,-2)	0,00560	0,7699	43,94	(-10,-2)	0,00410	0,6511	51,54
(-5,-2)	-0,00125	-0,2586	40,91	(-5,-2)	0,00477	1,1375	54,17
(-1,0)	0,00179	0,5208	54,55	(-1,0)	0,00556	1,8753	61,11
				0	0,00433	2,0632	69,44
(0,+1)	0,00324	0,9461	50	(0,+1)	0,00346	1,1678	59,72
(-1,+1)	0,00303	0,7225	50	(-1,+1)	0,00470	1,2936	57,41
(+2,+5)	0,00690	1,4233	39,77	(+2,+5)	0,00846	2,0168	58,33
(+2,+10)	0,00897	1,2333	46,97	(+2,+10)	0,01013	1,6100	47,22

The hypothesis of substitution between debt and dividends is reinforced with the obtained results. This way, the effect of debt issue announcement by low dividend payout firms provides the capital market with relevant and new information, which was not known, helping to diminish the problems of asymmetries of information that such firms have in the market. On the other hand, the informative content of the debt issue announcement by high dividend payout firms is considerably smaller, since the company already provides information through these high dividends. Therefore, the signalling effect of the debt will benefit in a higher proportion to the companies that pay low dividends.

The obtained results for the subsample of low dividend payout firms are consistent with other findings for the American Stock Market (Johnson, 1995). Besides, the results also coincide with the non-significance of the returns for the subsample of high dividend payout firms, but not in the sign that they take.

V. Conclusions

The methodology of event study has been used for testing empirically if the share price in the Spanish Stock Market reacts to the straight debt issue by companies that have quoted in the Stock Exchange of Madrid over the period 1989-1998. We have also examined if debt and dividends could be used as substitute devices.

The obtained results show that the Spanish Stock Market reacts positively and significantly to debt issue announcements. But, if the sample is divided in two subsamples, distinguishing between announcements corresponding to high dividend payout firms and to low dividend payout firms, the analysis shows differences between both subsamples. The market response to the debt issue announcements has been positive and significant for the companies with a policy of low dividends. On the other hand, this relation has been positive but non-significant for companies with high dividend payouts. In this sense, we have verified the suggested hypothesis of substitution between debt and dividends as devices that help to diminish the problems of asymmetries of information. Thus, it is possible to say that the signalling effect of the debt will benefit in a higher proportion to the company that pays low dividends.

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