DOES THE MANDATORY BID RULE INCREASE VALUATION, LIQUIDITY, AND DECREASE RISK?

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Abstract

This study analyzes whether the mandatory bid rule has an impact on firm valuation, liquidity and volatility. Using data from Brazilian firms that have voluntarily granted the bid rule, we provide evidence of a positive relation between bid rule, firm valuation and liquidity. In contrast, the bid rule does not decrease firm volatility. Our results support the hypotheses that the bid rule strengthens the protection for minority shareholders.

Keywords: corporate governance, firm valuation, volatility, Brazil

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1. Introduction

Corporate governance has attracted considerable attention following recent corporate scandals in developed countries. One key aspect of corporate governance is the degree of protection provided to minority shareholders. When investor protection is weak, conflicts of interest may arise between the controlling shareholder and outside shareholders due to the potential expropriation of private benefits by controlling shareholders.

Our aim in this paper is to analyze the role of a specific regulation related to control benefits, namely, a mandatory bid rule. This rule implies that the acquirer of a control block is also obliged to offer minority shareholders the same (or partially the same) price for their shares. Despite its simple definition, the mandatory bid is one of the most controversial and debated rules developed to protect minority shareholders, because it presents several pros and cons (see Bebchuk (1994), Bergstrom, Hogfeldt, and Molin (1997), Bebchuk and Hart (2001), Burkart and Panunzi (2004), Carvalhal da Silva and Subrahmanyam (2007), and Sepe (2008)).

On one side, the mandatory bid rule protects minority investors because all shareholders are treated equally, share any control premium, and have an exit right in the event of a change of control. On the other side, the mandatory bid rule has been subject to severe criticism, because it fails to protect minority shareholders adequately, and does not prevent the extraction of private benefits. By raising the cost of acquisitions, the mandatory bid rule is likely to prevent value-increasing transactions, and reduce the value of the firm.

This paper examines the effect of the bid rule on firm valuation, liquidity and volatility in Brazil. Brazil offers a unique case study given the presence of a large number of firms that have voluntarily decided to grant the bid rule for their minority shareholders. Our results indicate a positive relation between bid rule, firm valuation and liquidity. In contrast, the bid rule does not decrease firm volatility.

The paper proceeds as follows. Section 2 presents a brief review of literature on the bid rule. Section 3 describes the data and methodology. Section 4 contains the results of the event studies. Section 5 discusses our findings and concludes.

2. Literature Review

The mandatory bid rule has been vastly studied in the literature (Bebchuk (1994), Bergstrom, Hogfeldt, and Molin (1997), Bebchuk and Hart (2001), Burkart and Panunzi (2004), Carvalhal da Silva and Subrahmanyam (2007), among others). This rule can be defined as the obligation imposed on the acquirer of the control of a company to make an offer to all or a part of the holders of all or a part of the securities issued by the company for a determined price.

There are two strong arguments in favor of the mandatory bid rule. First, all shareholders should be treated equally and share any control premium that is paid to controlling shareholders. Second, all shareholders should have an exit right in the event of a takeover.

From these arguments, the mandatory bid rule would protect minority shareholders from value expropriations by opportunistic buyers, which would increase minority share value, and reduce the firm's cost for raising equity capital.

Carvalhal da Silva and Subrahmanyam (2007) show that the mandatory bid rule strengthens the protection for minority shareholders in event of a takeover. This result is particularly relevant if the takeover increases private benefits of the controlling shareholders rather than all the shareholders' wealth (Bigelli and Mengoli (1999), Bae, Kang, and Kim (2002), and Shleifer and Vishny (2003)).

On the other side, the economic literature has pointed out that the mandatory bid rule may prevent value-increasing sales of control. Burkart and Panunzi (2004) show that the mandatory bid rule eliminates inefficient control transfers at the cost of discouraging more efficient control transfers in firms with a dominant shareholder (Bebchuk (1994)). Further, the benefits but not the costs of the mandatory bid rule tend to disappear when control is consolidated via dual class shares or pyramids. They conclude that the mandatory bid rule strengthens minority shareholder protection at the expense of promoting efficient control transfers.

On balance of all pros and cons, we hypothesize that the bid rule offers enough benefits that outweigh its costs, because its justifications seem more compelling than its criticisms regarding minority shareholder protection.

3. Data and Methodology

Our sample includes 75 firms listed on Sao Paulo stock exchange (Bovespa) that voluntarily granted the bid rule for voting and/or non-voting shares. We exclude companies with incomplete or unavailable information and firms without share liquidity. Most of the data come from the Economatica, a financial database that contains a wide coverage of Brazilian stock market data.

We perform an event study to determine the impact of the bid rule on the stock return, liquidity, and volatility. The event study methodology requires the precise identification of the event date. In the case of the bid rule, it is difficult to identify precisely the event date, because firms may discuss over time the possibility of voluntarily granting the bid rule for voting and non-voting shares.

Since the voluntary adoption of the bid rule must be written on the company charter, we consider two events: the date on which the call for the shareholders' meeting becomes publicly available, and the date on which the shareholders approve the inclusion of the bid rule on the company charter.

To be included in the event study, the company must have trading activity during the 250-day window before the voluntary adoption of the bid rule. Furthermore, the adoption of the bid rule must be the only relevant event approved by the shareholders' meeting.

After imposing these constraints, we exclude 52 companies that do not have the necessary data to conduct the event study. Our final sample consists of 23 firms, which can be divided as follows: 19 firms granting the bid rule for voting shares, and 23 firms granting the bid rule for non-voting shares. Note that most of the excluded companies have voluntarily granted the bid rule since their IPO, so there was no trading activity before their going public.

To calculate the abnormal returns, we estimate the market model using the Sao Paulo stock exchange index, and a 250-day estimation window from trading day –255 to –6 relative to the event date (t=0). On a particular day t, the abnormal return ARt is defined as the return in excess of its expected return calculated from the market model. Cumulative abnormal returns over days -1 to +1 (CAR [-1,+1]), -5 to +1 (CAR [-5,+1]), and -5 to +5 (CAR [-5,+5]) are calculated around the event date. To assess statistical significance, we use the traditional t-test for abnormal returns. Due to event clustering and possible event-induced volatility, we compute a bootstrap p-value (see Boehmer, Musumeci, and Poulsen (1991), Aktas, DeBodt, and Roll (2004), and Elayan, Pukthuanthong, and Roll (2005)).

In order to analyze the effect of the bid rule on firm liquidity (trading volume relative to the total market value) and volatility (annualized standard deviation of daily returns in the last 250 trading days), we run regressions in which the liquidity (volatility) of share i in day t depends on the liquidity (volatility) of share i in day t-1, and on the liquidity (volatility) of the market index in day t. We run the models using a 501-day window from trading day –250 to +250 relative to the event date (t=0). The following regressions are specified:

$$Liq_{i,t} = \alpha_0 + \alpha_1 Liq_{i,t-1} + \alpha_2 Liq_{m,t} + \alpha_3 Bid_{i,t} + \varepsilon_{i,t}$$

$$Vol_{i,t} = \beta_0 + \beta_1 Vol_{i,t-1} + \beta_2 Vol_{m,t} + \beta_3 Bid_{i,t,} + \upsilon_{i,t\,t}$$

where Liqi,t is the liquidity of firm i in day t, Liqm,t is the liquidity of the market index in day t,
Voli,t is the volatility of firm i in day t, Volm,t is the volatility of the market index in day t, Bidi,t
is a dummy variable that takes the value 1 if the firm i voluntarily grants the bid rule in day t,
e and u are error terms.

4. Results

The results of the event study for the relation between stock returns and voluntary adoption of the bid rule are reported in Table 1. The abnormal returns for

voting shares are positive (ranging from 0.03% to 1.96%) during both events, and most of them are statistically significant. When the bid rule is for non-voting shares, they also present positive abnormal returns, but the statistical significance is lower when compared to that of voting shares.

Table 1

Overall, our results provide some evidence of positive abnormal returns when the firm announces or approves the bid rule in the shareholders' meeting. We can note that the market reacts to both the call for the shareholders' meeting and the shareholders' meeting itself.

Although the call for a shareholder's meeting does not necessarily mean that the bid rule is going to be approved in the shareholders' meeting, it conveys information about the probability of the approval.

The results for liquidity are shown in Table 2. The current share liquidity depends strongly on the previous share liquidity and on the current market liquidity. Most importantly, there is a strong increase in the liquidity when the firm calls and approves the bid rule in the shareholders' meeting.

Table 2

Table 3 reports the results for volatility. We see that the current share volatility depends on the previous share volatility, and on the current volatility of the market, but is not affected by the adoption of the bid rule.

Table 3

Overall, the event studies and provides evidence that the bid rule is positively associated with firm valuation and liquidity, but is not related to volatility. Our results support the hypothesis that the bid rule strengthens the protection for minority shareholders.

5. Conclusions

This paper analyzes whether the adoption of the bid rule has an impact on firm valuation, liquidity and volatility. Brazil offers a unique case study given the presence of a large number of firms that have voluntarily granted the bid rule for their minority shareholders. Our analysis shows that firm valuation and liquidity tends to increase when the firm voluntarily grants the bid rule for minority shareholders. In contrast, firm volatility does not decrease after the adoption of the bid rule. Overall, our results support the hypothesis that the bid rule strengthens the protection for minority shareholders.

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Appendices

Table 1

Abnormal Returns around the Adoption of the Bid Rule

Abnormal returns of firms that voluntarily grant the bid rule. Two event dates are considered: the date on which the call for the shareholders' meeting becomes publicly available, and the date on which the shareholders approve the bid rule. The abnormal returns are estimated through the market model using a 250-day estimation window. Abnormal returns during the event date (AR_0) and cumulative abnormal returns over days -1 to +1 (CAR [-1,+1]), -5 to +1 (CAR [-5,+1]), and -5 to +5 (CAR [-5,+5]) are calculated. Bootstrap p-values (in parentheses) account for event clustering and event-induced volatility. ***, **, * denote statistical significance at 1%, 5% and 10%, respectively.

	Sample of Voting Shares		Sample of Non-Voting Shares	
	Call for the Shareholders' Meeting	Shareholders' Meeting	Call for the Shareholders' Meeting	Shareholders' Meeting
AR_0	0.09%	0.39%	0.06%	0.14%
	(0.35)	(0.31)	(0.44)	(0.29)
CAR [-1,1]	1.32%*	0.03%	0.73%	0.75%
	(0.09)	(0.51)	(0.23)	(0.23)
CAR [-3,3]	1.07%*	1.86%**	1.06%*	1.62%**
	(0.07)	(0.05)	(0.08)	(0.05)
CAR [-5,5]	1.23%*	1.96%**	0.43%	0.19%
	(0.10)	(0.02)	(0.33)	(0.43)

Table 2

Liquidity Changes around the Adoption of the Bid Rule

The dependent variable in each regression is the liquidity of share *i* in day *t*. Liq_m is the liquidity of the market index in day *t*, and Bid is a dummy variable that takes the value 1 if the firm voluntarily grants the bid rule in day *t*. We run the models using a 501-day window from trading day –250 to +250 relative to the event date (*t*=0). Two event dates are considered: the date on which the call for the shareholders' meeting becomes publicly available, and the date on which the shareholders approve the bid rule. The p-values are shown in parentheses. ***, **, * denote statistical significance at 1%, 5% and 10%, respectively.

	Sample of Voting Shares		Sample of Non-Voting Shares	
	Call for the Shareholders' Meeting	Shareholders' Meeting	Call for the Shareholders' Meeting	Shareholders' Meeting
Liq_{t-1}	0.66***	0.54***	0.28***	0.28***
	(0.00)	(0.00)	(0.00)	(0.00)
Liq_m	0.56***	0.00	1.51***	0.00
	(0.00)	(0.82)	(0.00)	(0.90)
Bid	0.05***	0.05***	0.09***	0.03
	(0.00)	(0.00)	(0.00)	(0.19)
# Firms	19	19	23	23
Adj R^2	0.45	0.30	0.09	0.08

Table 3

Volatility Changes around the Adoption of the Bid Rule

The dependent variable in each regression is the volatility of share *i* in day *t*. Vol_m is the volatility of the market index in day *t*, and Bid is a dummy variable that takes the value 1 if the firm voluntarily grants the bid rule in day *t*. We run the models using a 501-day window from trading day –250 to +250 relative to the event date (*t*=0). Two event dates are considered: the date on which the call for the shareholders' meeting becomes publicly available, and the date on which the shareholders approve the bid rule. The p-values are shown in parentheses. ***, **, * denote statistical significance at 1%, 5% and 10%, respectively.

	Sample of Voting Shares		Sample of Non-Voting Shares	
	Call for the Shareholders' Meeting	Shareholders' Meeting	Call for the Shareholders' Meeting	Shareholders' Meeting
Vol_{t-1}	0.80***	0.81***	0.05***	0.03***
	(0.00)	(0.00)	(0.00)	(0.00)
Vol_m	4.53*	5.16**	0.24***	0.23**
	(0.09)	(0.04)	(0.01)	(0.02)
Bid	0.04	0.04	0.01	0.00
	(0.90)	(0.90)	(0.51)	(0.95)
# Firms	19	19	23	23
Adj R^2	0.64	0.66	0.29	0.12