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Agency Problems and Synergistic Effects in Romania: The Determinants of the Control Premium*

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Abstract

Estimation of the control premium remains one of the main concerns in the financial literature: different approaches take into consideration synergistic effects, agency problems, and the bargaining power of different agents. We estimated the level of the control premium and its determinants for Romanian listed companies in the period 2000–2011. The median of the control premium was 25%. Using a linear regression model, we found that the determinants of the control premium for Romanian listed companies are similar to those revealed for other countries. The control premium was directly related to the liquidity of the shares of the acquired company before the transaction, to the percentage share purchased in the transaction, and to the ownership concentration of the acquired company. Also, its level was higher if the buyer was a corporation, and also if the acquirer, or the majority shareholder before the transaction, was Romanian. The control premium was inversely related to the size of the acquired company, to the bargaining power of the buyer, and to the fact that the acquirer was already a shareholder of the target company. The control premium increases if the target company has a majority shareholder, or at least shareholders owning more than 33% of the equity capital, before the transaction, but decreases if the ownership is dispersed. Moreover, we find that the sector of the target company has an influence on the control premium. Thus, if the firm was active in services or in the machinery and equipment industry, the control premium was higher, while if it was active in agriculture, construction, the food industry, or the chemicals industry it was lower.

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However, we would like to mention that the results and conclusions of the paper are entirely our responsibility and the BSE cannot be held liable for any of the opinions stated in our research paper.

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1. Introduction

Estimation of the control premium[1] remains one of the main concerns in the financial literature. The reasons for the large number of studies on this topic are related to its applications in corporate finance, business valuation, valuation of controlling interests, and corporate governance. Different approaches take into consideration, for example, synergistic effects, agency problems,[2] bargaining power in the transaction, and liquidity issues in order to identify and explain the control premium determinants. From this standpoint, it would be interesting to find out the determinants of the control premium for the case of one post-communist East European country, namely, Romania.[3]

Practitioners as well as academics are interested in estimating the average control premium for different countries or for different industries, and in finding its determinants. For instance, the control premium can be used not only as a reliable proxy in the estimation of synergistic effects, but also as an indicator when analyzing the intensity of agency problems in the context of protection of minority shareholders. Also, the control premium can be a useful tool for correcting the market value of a company estimated from a minority perspective in order to obtain a value from the controlling perspective.

Many approaches are used to estimate the determinants of the control premium. This study considers transactions that caused a change in control of the company, and not a proxy for this (for instance, Barclay and Holderness, 1989, and Zingales, 1995, take into consideration all transactions involving a stake of 5% or more as a proxy for changes in control of the company). In this way we eliminated some estimation problems indicated by other studies (e.g., Nicodano and Sembenelli, 2004).

Our approach is applied to Romania. Country-level characteristics matter (see Guilen and Vargas, 2010, among a long list of papers). Single-country studies can complement multi-country ones (see, for instance, Dyck and Zingales, 2004), offering a thorough analysis of some specific national issues (Ødegaard, 2007). To our knowledge this is the first study analyzing the determinants of the control premium for Romanian listed companies.[4]

The remainder of the paper is structured as follows. The next section outlines the main findings of related studies and the hypotheses we tested. Section 3 describes the database and methodology. Section 4 presents and discusses the main empirical results. The final section concludes.

[1] Although we use the term *control premium* in our paper, the same considerations apply to the *discount for a lack of control*, the reverse of the control premium. In the practice of business valuation, a positive payment for having control is defined as a *premium*, and a reduction in the price paid due to a lack of control is defined as a *discount*. However, in the academic literature the term *negative control premium* is frequently used (see, for instance, Barclay and Holderness, 1989; Ødegaard, 2007).

[2] As in Maury and Pajuste (2005) and other papers, in this paper we analyze the potential agency problems that arise between controlling and minority shareholders, and not those between managers and shareholders (see, for instance, Jensen and Meckling, 1976). For a survey of corporate governance, see Shleifer and Vishny (1997).

[3] We consider that the methodology can be easily generalized for other countries with similar features. For a description of specific Romanian features, see Dragotă et al. (2009b).

[4] Dragotă et al. (2007) estimate the control premium for Romanian listed shares for the period 2002–2004, but do not analyze the determinants of the control premium.

2. Theoretical Background and Hypotheses Tested

By definition, the control premium is the amount overpaid to gain control of a company. The control premium is usually defined as the total value of the benefits derived from holding a number of shares that provide a controlling position (Nenova, 2003). Dyck and Zingales (2004) explain the existence of the control premium based on two factors: the increase in the value of the company due to the new management, and the private benefits after gaining control.

The control premium can be explained by the synergistic effects (the shared benefits of control, in the terminology of Holderness, 2003) resulting from the acquisition of the company by a strategic investor. In this context, other synergies can be a result of revenue increases, cost savings, tax reductions or cost of capital decreases (Ross et al., 2005). These approaches are the subject of a large number of studies in business valuation and corporate finance. Moreover, by monitoring the managers, larger shareholders can benefit the minority shareholders (Shleifer and Vishny, 1986).

The existence of private benefits of control does not *necessarily* imply an expropriation of minority shareholders (Holderness, 2003). For example, these benefits may be given by "psychic" values (Dyck and Zingales, 2004), by an interest in gaining higher social positions or a better personal image, or by political campaigns, which will be negatively affected if the minority shareholders are suffering. For this reason, in some cases, the private benefits of controlling shareholders can produce shared benefits of control (Holderness, 2003). Becoming a larger shareholder is also a way of protecting your investment, so owning a stake of 51 percent or more becomes a goal for some investors (Shleifer and Vishny, 1997).

On the other hand, the control premium can be interpreted as an estimator of the benefits that controlling shareholders can obtain by expropriating the other shareholders.[5] The control premium may be explained by the worries of the non-controlling shareholders about losing a part of their wealth because of the behavior of the controlling ones[6] (see Barclay and Holderness, 1989; Dyck and Zingales, 2004). Similarly to the situation reported for Bulgaria (Atanasov, 2005) and Poland (Trojanowski, 2008), previous studies for Romanian companies have revealed the presence of agency problems (see, for instance, Dragotă et al., 2009a).

The explanations of the size of the control premium are sometimes more complex for companies listed on emerging and/or frontier financial markets from post-communist East European countries (see Atanasov, 2005, for Bulgaria; Trojanowski, 2008, for Poland; Filatotchev et al., 1999 and Chernykh, 2011, for Russia, etc.). As such, the phenomenon can easily be affected not only by psychological factors (i.e., greed, regret), but also by a lack of financial education among investors, creating overreaction and, as a result, large variation in the control premium from one case to another.

[5] For a literature review regarding the private benefits of control, see Benos and Weisbach (2004). See also Shleifer and Vishny (1997).

[6] Regarding the stress of losing a part of their wealth, a distinction can be made between the effective risk and the perception of this risk. Shareholders with control might act in such way as to generate value destruction for the minority shareholders. Of course, shareholders without control may either only perceive a risk of wealth reduction or actually experience it (Bates et al., 2006). Thus, the size of the control premium might include a reward for the risk perceived/actually experienced by minority shareholders for their reduction in wealth.

From a macroeconomic point of view, mergers and acquisitions (M&A) are often considered to have a positive effect on the overall economy. However, taking control does not always create value added for an economy; the reasons behind M&A transactions can be purely financial and in the sole interest of some stakeholders. For example, some companies in Romania were acquired at prices lower than their net worth and were closed down shortly afterwards. In most cases, this was due to the corporate restructuring that followed the financial crisis that started in 2008 (e.g., Bunge, which operates in the oil market, liquidated the Unirea Iaşi factory only six years after acquiring it; likewise, Kraft Foods liquidated the Poiana chocolate factory in Braşov in a post-acquisition process of reorganization). Another possible explanation, besides a company taking advantage of the mismanagement of companies it acquires, is the exclusion from the market of potential competitors. Thus, it is rather difficult for an outsider to estimate the potential growth of such companies. Additionally, if politics interferes significantly in defining economic strategies (see Romania before 1989, the year of the anti-communist revolution), anomalies will arise (i.e., artificial development of certain industries or certain regions specializing in unviable industries). The large variability of the control premium may also be explained by social and political pressures on economic decisions.

In our study we estimated the control premium based on the difference between the offer price (in a tender bid) and the share prices before this offer (Barclay and Holderness, 1989; Dragotă et al., 2007).[7,8] Thus, the control premium (CP) can be estimated as the difference between the offer price in the case of transactions that give control over the decisions of the company ($P_{O,t}$) and the price of the shares before the bidding moment ($P_{t\text{-}1}$) divided by $P_{t\text{-}1}$ (see relation 1):

$$CP = \frac{P_{O,t} - P_{t-1}}{P_{t-1}} \tag{1}$$

[7] The control premium can also be estimated as the difference between the empirical return of the share on the day of the announcement and the normal expected return (Copeland et al., 1996). However, to calculate the normal return, an appropriate model should be applied. This model has to capture the regular behavior of asset prices on the market analyzed. The lack of liquidity raises some questions regarding the possibility of applying these models. Moreover, we have some doubts about the usefulness of some models for estimating normal share returns (e.g., the CAPM or three-factor model) on Romanian capital markets as long as market efficiency studies still reject the Market Efficiency Hypothesis (see Dragotă and Mitrică, 2004; Todea and Zoicaş-Ienciu, 2008), even though some studies reveal an improvement in efficiency (Pele and Voineagu, 2008; Dragotă et al., 2009b, Smith, 2012). See also Martynova and Renneboog (2008a).

[8] Another convenient expression is the difference between the price of voting shares and the price of non-voting shares (Zingales, 1994; Nenova, 2003; Dyck and Zingales, 2004; Caprio and Croci, 2008). Of course, this method assumes that such different classes of shares are traded on a liquid capital market. These conditions are rarely found in less developed financial markets. The legislation in Romania recognizes the right of companies to issue preferred shares, which have priority in dividend payments, but their holder is not entitled to vote. These shares have a nominal value equal to common shares, but cannot represent more than 25% of the total number of shares (Article 95 of Law No. 31/1990 on companies, republished in the Official Journal of Romania 1066/2004). The shareholders may convert non-voting shares into voting shares. In some special circumstances (only when the company announces that it will not pay dividends next year) preferred shares bear voting rights (Article 43 of Law No. 441/2006, amending Law No. 31/1990 on companies). However, such shares have never been traded on the Bucharest Stock Exchange.

Ideally, in relation (1), P_{t-1} should be the price at the moment of announcement of the offer. This assumption is very hard to fulfill on a market with low liquidity such as the Romanian one. The lack of liquidity persistent on the Romanian capital market is revealed by the number of trading days between 2000 and 2011.[9] Sometimes, a large period passes between two transactions for some financial assets. For this reason, we considered P_{t-1} to be the last price before the offer and we included lack of liquidity in our regression as an explanatory variable for the control premium.[10] In the practice of business valuation, the discount for the lack of liquidity and the control premium are distinct corrections in order to estimate the fair market value (IVSC, 2008). Unfortunately, our estimation regarding the control premium includes a bias due to this lack of liquidity.

We consider this gross (empirical) control premium to be representative of the effective control premium. However, this relation implies that the offer price is a good proxy for the value of the business in the hypothesis of having control (in this case, it includes the synergistic effects as well as the private benefits of control[11]). Also, this price is assumed to be unbiased by the negotiating skills of the parties to the transaction. Regarding the price before the announcement, this relation also assumes that the market is efficient (in this case, the price should reflect the fair market value of the asset as long as no change of control is made). If the market has a lower level of efficiency,[12] the price can be separated into two components—one related to the fair market value, and one related to the behavior of the noisy traders (Shleifer and Summers, 1990; Dragotă and Mitrică, 2004). There is another issue that can influence both prices, namely, liquidity (see *Figure 1* for an illustration of the determinants of the control premium).

The indicators that have an influence on the control premium are not directly observable (see *Figure 1*). The observable variables, namely, the offer price and the price before the announcement, are somehow biased by the lack of liquidity persistent on the Romanian capital market, and especially on the Romanian over-the-counter market (RASDAQ). For this reason, some studies are forced to simply ignore the lack of liquidity (see Dragotă et al., 2007),[13] while in others, such as ours, liquidity is taken into account as an explanatory variable (see Caprio and Croci

[9] For this period, the average number of trading days was 255 and the median was 82, with a maximum of 2,929 and a minimum of two. However, the number of trading days was lower than four days in only four cases (less than 2.5% of the database) and was lower than 20 days in only 23 cases (less than 12% of the database).

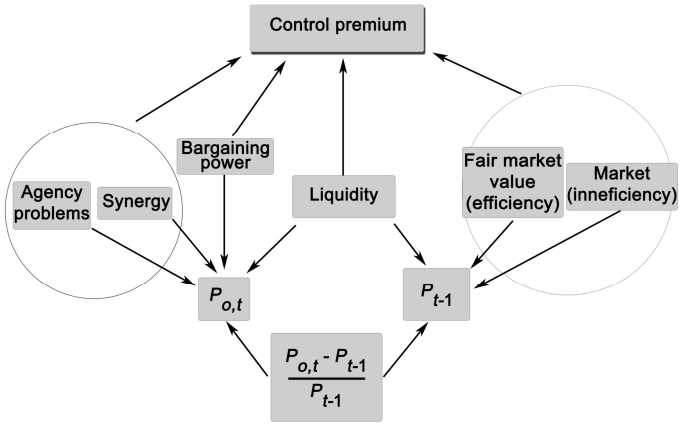
[10] We used two proxies for liquidity: (i) the average annual turnover of the acquired company (AAT) and (ii) the total annual turnover of the acquired company in the takeover year divided by the total capitalization before the transaction (ATC).

[11] Unfortunately, the private benefits of control and the synergistic effects are very hard for an external analyst to distinguish. Moreover, the control position does not provide advantages to the investor only. The most important one seems to be non-diversification of the portfolio (see also Dyck and Zingales, 2004). These issues can cause bias in the "objective" estimation of the control premium and, thus, of the value of control.

[12] In the majority of the studies related to estimation of the control premium, the Efficient Market Hypothesis is generally accepted. However, this assumption is questionable for emerging markets. See also footnote 7.

[13] A methodology based on predicting the normal returns as a function of past returns was used in that study due to this restrictive hypothesis.

Figure 1 Determinants of the Control Premium



Notes: The difference between the offer price and the last price before the announcement is a proxy for the control premium. However, the control premium depends on some unobservable factors, some of them biasing the actual control premium (bargaining power, lack of liquidity, noisy traders, psychic values, etc.).

2008, etc.). We took into account two measures as proxies for liquidity: (i) the average annual turnover of the acquired company in the period 2000–2011 (AAT),[14] and (ii) the total annual turnover of the acquired company in the takeover year divided by the total capitalization before the transaction (ATC). We expect interest in buying less liquid shares to be lower than interest in acquiring frequently traded shares. Consequently, we anticipate that the control premium is larger for more liquid shares than for less liquid ones. Based on these considerations, the first hypothesis tested in this study was:

H1: The liquidity of the shares of the acquired company before the transaction and the control premium are directly related.

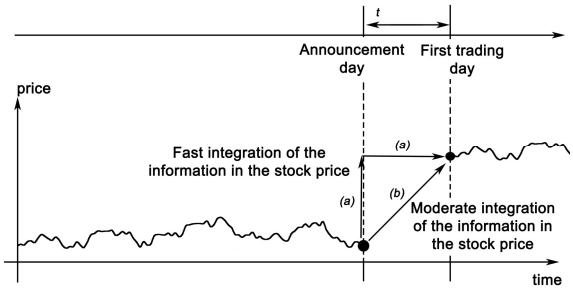
The indicators depicted in *Figure 1* not only are drivers of the control premium, but also influence the share price. If the market is efficient, we expect the price to evolve around the moment of an M&A transaction as shown in *Figure 2 (a)*. However, the tests regarding the efficiency of the Romanian capital market revealed at least some doubts regarding market efficiency.[15] For this reason, we expect information to be integrated into prices as presented in *Figure 2 (b)*.

We did not include in our study factors to account for the lack of market efficiency and/or for investors' behavior (psychic values, in the terminology of Dyck and Zingales, 2004). This is a limitation of our study: the estimated control premium is influenced by bargaining power and psychic values, and may also be biased by the existence of noisy traders (Shleifer and Summers, 1990; Dragotă and Mitrică, 2004; Kubicova and Komarek, 2011).

[14] We determined the average annual amount of shares traded between 2000 and 2011. Alternatively, if the company was delisted before 2011, the average was determined for the period between 2000 and the year when the company was delisted.

[15] See footnote 7.

Figure 2 Expected Evolution of the Price Around an M&A Transaction Announcement (a) in the Case of an Efficient Market (the Theoretical Case) or in a Liquid Market; (b) in the Case of a Lag in the Integration of Information into the Stock Price or in the Case of a Lack of Liquidity



We should not ignore the negotiating skills of the parties to the transaction when explaining the size of the control premium. Therefore, it is equally important to understand the psychological typologies or bargaining power of the buyer and/or seller that can lead to a change in the control of a company (Varaiya, 1987; Massari et al., 2006). The hypothesis of different negotiating skills cannot be excluded, especially when privatization transactions are analyzed, as trading prices may be questionable and can be skewed to lower levels. Moreover, the higher the stake initially owned by the investor (before launching the offer) is, the lower the level of the control premium should be. For this reason, we tested as our second hypothesis:

H2: The bargaining power of the buyer and the control premium are inversely related.

We used as a proxy for the buyer's bargaining power the stake owned by him or her before the announcement day (PBA), as in Walkling and Edmister (1985) and Dyck and Zingales (2004). The bargaining powers of the acquirer and the seller can be different. Moreover, according to the Romanian legislation, the transaction price in tender offers (TOs) is regulated.[16]

The acquirers can be Romanian or foreign (in our database, 129 of the acquirers are Romanian and 44 are foreigners). According to previous studies, in general, acquirers have a preference for geographically nearby targets (Smith, 1774, p. 362; Kand and Kim, 2008; for a more detailed discussion see Martynova and Renneboog, 2008b). A local acquirer can better appreciate the key resources of a close-by target company (e.g., human capital, key technologies, brands, growth prospects, and relations with other firms and customers), while faraway acquirers are likely to lack this kind of information. In other words, an increase in the geographical distance can induce an increase in the level of asymmetric information between the acquirer and

[16] Tender offers (operations) have been regulated in Romania since Law 28/2002 regarding securities investment services and regulated markets was passed. In Romania, tender offers can be either voluntary or mandatory. A voluntary tender offer is initiated by a person who intends to acquire more than 33% of the voting rights of an issuer. A mandatory tender offer is initiated within two months from the moment when a shareholder, acting independently or in concert with other shareholders, has reached 33% of the voting rights of an issuer. The operation is not mandatory if reaching 33% of the voting rights was unintended by division, merger or reduction of the capital of the company (Anghelache, 2004).

the target (domestic investors are better informed than foreign investors) about potential agency problems or privileged relations with different stakeholders (Ragozzino and Reuer, 2011). These issues might create competitive advantages for domestic acquirers and they are thus likely to pay more for control.[17] In the same context, foreign investors may be negatively affected by perceptions induced by the mass media regarding the Romanian socio-economic environment. On the basis of these considerations, the third tested hypothesis was:

H3: If the acquisition is performed by a domestic acquirer (DDA), the size of the control premium is larger.

An acquirer who owns a stake in the target company will have not only voting rights, but also inside information about its strategy and organization, leading to a lower premium (Albuquerque and Schroth, 2010). Also, it is possible that shareholders are more likely to sell some of their shares to a known person than to an unknown one (a reputational effect). Based on these considerations, the fourth tested hypothesis was:

H4: The fact that the acquirer already owns a stake in the target company (he or she is an active investor) (DAINV) has a negative influence on the size of the control premium.

Whether the investor in that company is active or not, the number of shares purchased may influence the level of the control premium. A greater fractional ownership gives the controlling shareholders not only some private benefits, but also some private costs (for instance, an undiversified portfolio) (Barclay and Holderness, 1989). For this reason, the relation between the size of the stake purchased (PSP) and the control premium is not obvious. However, for the case of Romania, we expect that the private benefits are greater than the private costs: previous studies have revealed agency problems as an explanation for different financial decisions—see, for instance, dividend policy (Dragotă et al., 2009a). Considering the above mentioned, the fifth tested hypothesis was:

H5: The size of the stake purchased in the transaction has a positive effect on the control premium.

Both large and small companies are subject to transactions on the M&A market. The ownership structure can be expected to be more dispersed, the larger is the company. In the case of small companies, the ownership may be more concentrated and the shareholders may be less willing to sell their shares. This factor is used in most studies regarding the control premium. However, the relation between firm size and the private benefits of control is ambiguous (Massari et al., 2006). As a proxy for the size of the company we can use the total capitalization (CAP) before the transaction (Nenova, 2003; Gaspar et al., 2005) or the total assets of the company (Dyck and Zingales, 2004; Maury and Pajuste, 2005; Albuquerque and Schroth, 2010). Based on these considerations, the sixth tested hypothesis was:

[17] Even when there are foreign investors the odds of acquiring a company in a nearby country are substantially higher than the odds of acquiring a company from a faraway country (Erel et al., 2012).

H6: The size of the acquired company is inversely related to the control premium.

We investigated the effect of ownership concentration in the acquired company on the control premium (see Dyck and Zingales, 2004; Duggal and Millar, 1999). We chose as a proxy the percentage of common shares owned by the largest shareholders before the transaction and we determined an ownership concentration index using the methodology for building the Herfindahl-Hirschman index (HHI) applied to the shareholders that held more than 5% of the shares.[18] The ownership concentration index determined in this manner has also been used in other studies—see Agrawal and Mandelker (1990), Duggal and Millar (1999), Nenova (2003), Luypaert and Huyghebaert (2010), etc. However, as far as we know, the HHI has not been used before in empirical studies related to the size of the control premium. We expect this index to have a positive effect on the control premium. If a company is owned by fewer shareholders, it is likely to be more difficult to convince them to sell their shares, so the buyers will pay a higher premium to obtain control.[19]

Also, we took into account the impact on the control premium of some ownership categories, defined by Hanousek et al. (2007). For every target company, we studied the ownership structure before the transaction and we considered three major categories. The first one consists of target companies with a majority owner (DCMS—he or she holds over 50% of the target's equity). According to Romanian corporate law, this type of owner has important rights in the management and exerts a high degree of control on the entity. We can assume that, in this case, the controlling owner will not give up his position unless he is offered a good price for his shares. The second category, as in Hanousek et al. (2007) and Bena and Hanousek (2008), refers to target companies with one or more shareholders having more than 33 percent but not more than 50 percent of the target's equity (DCIS—we consider them to be companies with a low number of important shareholders). The last category contains target companies where no shareholder owns more than 33 percent. In the case of a company with diversified ownership (DCDO), we expect the control premium to be low. In this case, shareholders do not have any special benefits and they can give up their shares easily at a good price.

Based on these considerations, the seventh tested hypothesis was:

H7: A higher level of ownership concentration for the acquired company before the transaction should lead to a higher control premium.

The ownership categories of the target companies are also important. For our database, before the transaction the acquired company had a domestic majority owner in 144 operations, as against 29 cases for which he or she was a foreigner. We expect domestic investors to be more interested than foreign investors in taking control of Romanian companies (see H3). However, the domestic owner of the acquired company may also have reasons for maintaining control or, at least, for

[18] A higher level of the HHI signifies a higher concentration of ownership.

[19] According to Maury and Pajuste (2005), the presence of a second larger (important) shareholder can benefit the minority shareholders because he or she can assume the role of monitoring the controlling shareholder. If this shareholder is not interested in selling his or her shares, the level of the control premium will be lower, because the larger shareholder will be limited in extracting private benefits. However, the sale of an important stake can be interpreted as a reduction in monitoring activities or as an increase in the potential for extracting private benefits.

accepting to sell only at a higher premium. Domestic investors may be more dedicated to the local community (reputation of certain investors), which can be substantially affected by the management of the acquired company, especially if the domestic investors are considering a future political career. On the other hand, the foreign investor, as the majority shareholder of the acquired company, might be willing to exit the market or to be required to exit the market and he or she will accept a lower premium.

Accordingly, the eighth hypothesis was:

H8: The fact that the acquired company is domestically owned before the transaction (DDO) has a positive influence on the size of the control premium.

In accordance with previous studies (Barclay and Holderness, 1989; Hanousek et al., 2007), we also tested whether the type of bidder—individuals or corporations—has an influence on the size of the control premium.[20] It seems reasonable to expect that corporations carry higher levels of agency problems than individual investors. On the other hand, individuals are less monitored by the other stakeholders, so they can extract private benefits more easily. For Romania, our expectation was that the control premium should be higher for corporations, given that previous studies had revealed agency problems (see, for instance, Dragotă et al., 2009a). Based on this, the ninth tested hypothesis was:

H9: The control premium is higher if the purchaser is a corporation (DPERS).

It is possible that a higher control premium arises for companies active in some specific industries. We tested whether such an influence can be observed and what are the sectors for which higher/lower premiums are recorded (as in Dyck and Zingales, 2004; Atanasov, 2005; Gaspar et al., 2005).

3. Methodology and Database

To test the hypotheses presented in Section 2 we used a linear regression model in which the control premium (CP) was the dependent variable. This methodology was also applied by Barclay and Holderness (1989). The control premium was estimated on the basis of relation (1).

We took into account all the operations that had caused a change in controlling position on the BSE (Bucharest Stock Exchange) and RASDAQ during the period 2000–2011. The transactions were analyzed case by case in order to identify those which had caused the acquisition of a stake of larger than 50%. Certainly, for some companies, control can be achieved with only 5% of the total shares issued (see the ones with a dispersed ownership structure), while in other cases, having 49% is not enough (if another shareholder owns slightly more than 50%). However, it is possible that some controlling positions were omitted, specifically those in which control was possible by owning less than 50% of the shares, considering pyramidal structures here too.

In general, the transactions that changed the controlling position were tender offers (TOs). For the period January 2000–March 2002, the database contained

[20] Hanousek et al. (2007) also analyze other types of ownership, such as ownership by the state, banks, investment funds, or portfolio companies. We tested the impact of the state, but the results were inconclusive. In our database, the number of investment funds or portfolio companies as acquirers was small (only 20 companies), and there were no banks.

Figure 3 Evolution of the BET Index in the Period 2000–2011

several transactions that finished with a change in control that were made through simple public purchase offers (PPOs).[21] The analyzed period includes a phase of economic growth, but also one of economic recession. *Figure 3* presents the evolution of the Romanian BET stock index in the period 2000–2011.

From the total number of 1,515 TOs and PPOs launched in the period 2000––2011 (77 on the BSE and 1,438 on RASDAQ), we had information for only 1,368 operations (39 on the BSE and 1,438 on RASDAQ), because 147 companies were delisted in this period. This lack of information may cause sample selection bias (Heckman, 1979) because it is possible that these companies were delisted because the PPO was successful and the controlling shareholder decided for the company to go private. Other reasons for delisting the company might be related to the fact that these companies did not meet the financial performance, liquidity, and market capitalization criteria (especially for companies listed on the BSE) or the transparency requirements of regulators. If we do not take agency problems into account, we can state that there is no reason to consider that these missing data will affect the size of the control premium or the explanatory variables (in one direction or the other): generally, the market for control has its own features regardless of the status of the company, public or private. However, a delisted company is less likely to be monitored for the protection of minority shareholders. Also, an investor might be willing to pay more for a company if he/she is highly interested in the private benefits of control. Consequently, the presence of agency problems on the Romanian capital markets (see Dragotă et al., 2009a) may cause underestimation of the control premium.

The number of transactions fell significantly after 2004, from an average of over 200 transactions per year in the period 2000–2004, to an average of 50 after 2005 (see *Figure 4*). This is mainly due to the privatization of a large number of companies in the early 2000s, but another possible cause is the 2004 revision of the regulations regarding the price of this type of transaction.

Out of the total of 1,368 transactions, the bidders acquired control (more than 50% of the total voting rights) in only 227 operations. The other transactions were either not concerned with taking control, for example PPOs with no intention to take

[21] No distinction between purchase offers and tender offers was made in Romania before 2002. According to the current Romanian legislation, a purchase offer represents the intention of a person or several persons acting in concert to purchase a specified quantity of shares without gaining a position of control (Anghelache, 2004).

Figure 4 Number of Public Purchase Offers and Tender Offers on the Romanian Capital Markets between 2000 and 2011

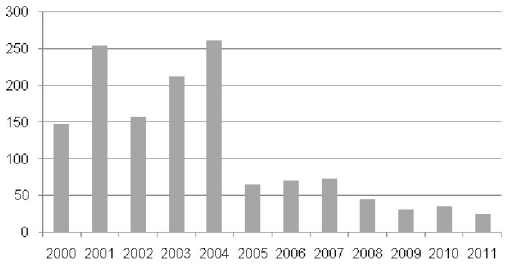
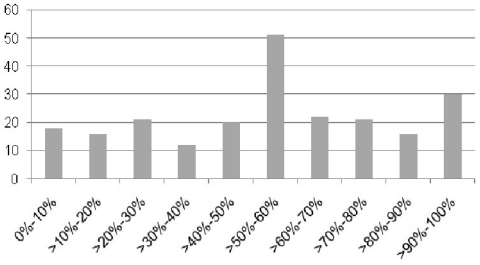


Figure 5 Stakes Purchased for Gaining Control between 2000 and 2011



Notes: Figure 5 presents the stakes purchased by buyers in order to gain a controlling block of shares in an entity. The period analyzed is 2000–2011 and we only include transactions that ended with a change of control.

control (a maximum potential stake below 50%), PPOs launched by controlling shareholders (with more than 50% of the shares before this operation), or operations with the intention of taking control which failed. Investors purchased stakes of different values to secure their position in the company (see *Figure 5*). A maximum stake level of between 50% and 60% seems to be in accordance with the logic of taking control. However, the large percentage of cases in which the acquired stake is between 90% and 100% is very interesting and could be a question for further research.

Out of the 227 cases, 34 transactions were completed for companies that had been listed for no more than two years and whose new owners, after the change of control, decided to delist them and convert them into closed businesses. The sample selection considerations stated above apply here, too, so we should expect a slight underestimation of the control premium that is effectively recorded on the Romanian capital market.

From the total number of remaining companies (193) we trimmed the control premiums at the 5th and 95th percentiles in order to limit the influence of outliers (this corresponds to values of the control premium below –70% and above 2,000%). Such outliers could distort the empirical results as long as the distribution of control premiums for our initial database ranges between –98% and 4,300%. The asymmetry of the control premium distribution is explainable as long as the theoretical distribution based on relation (1) ranges between –100% and +∞. However, from a financial point of view, these outliers are understandable only if some very par-

Table 1 Evolution of the Control Premium over Time for the Romanian Listed Companies

Year	No. of transactions	Mean	Median
2000	30	97.06%	27.02%
2001	46	143.97%	18.33%
2002	22	149.48%	25.00%
2003	27	167.96%	40.63%
2004	22	43.17%	25.48%
2005	11	80.07%	45.24%
2006	5	37.39%	18.69%
2007	5	84.34%	9.41%
2008	1	6.94%	6.94%
2009	1	133.33%	133.33%
2010	1	12.50%	12.50%
2011	2	3.70%	3.70%
Total	**173**	**115.36%**	**25.00%**

ticular conditions occur. Thus, the main database for this study consists of 173 transactions.

We analyzed the evolution of the size of the control premium per year between 2000 and 2011 and for the entire period. The mean and median of the control premium in each year are presented in *Table 1*. It is difficult to see any pattern. The Romanian economy experienced major structural changes between 2000 and 2004 due to the extensive privatization process in that period. This "rush" to complete the privatization process might thus have triggered a higher control premium than in the following years, when the process slowed down.

Overall, the control premium for the Romanian capital market has a mean of 115% and a median of 25%.[22] The control premium is not normally distributed and has a positive skewness, which reveals that there are many premiums larger than the mean value. It is important to mention that since 2004, the Romanian legislation has also regulated the acquisition price for PPOs and TOs, in the sense that it must be at least equal to the price paid by the buyer who launched the offer in the past 12 months or the weighted average price in the past 12 months, whichever is the higher.[23]

In 18 cases the control premiums were negative. The phenomenon is present on other markets, too. For instance, Barclay and Holderness (1989) and Ødegaard (2007) reported negative control premiums for U.S. and Norwegian corporations, respectively.

We considered the influence of the industry on the level of the control premium. Thus, we divided our database into eight major sectors and we used dummies to reflect the industry in which the target firm is active. The statistics for the control premiums for each of these industries are presented in *Table 2*.

[22] The control premium for the sample ranged between –66.67% and 1,050%. Dragotă et al. (2007) estimate the control premium for the period 2002–2004 at an average of 79.96% and a median of 44.62%. However, the results are not perfectly comparable since the methodologies used in these studies are different.

[23] Law 297/2004 regarding the capital market and Regulation 13/2004 regarding issuers and operations in securities.

Table 2 The Control Premium in Different Industries

Industry	No. of firms	Percentage in total number of firms	Mean	Median	Standard deviation
Agriculture	7	4.05%	52.47%	16.78%	0.8688
Clothing	12	6.94%	136.63%	16.44%	2.6973
Construction	9	5.20%	34.40%	12.50%	0.4637
Food industry	22	12.72%	46.41%	7.18%	1.4207
Chemical industry	8	4.62%	35.16%	5.46%	0.5385
Machinery and equipment	6	3.47%	223.34%	156.25%	2.6913
Manufacturing	23	13.29%	109.07%	16.67%	2.4490
Services	86	49.71%	145.23%	43.77%	2.3440
Total market	**173**	**100.00%**	**115.36%**	**25.00%**	**2.1629**

Notes: This table summarizes the characteristics of the control premium for the 173 transactions in our sample. We determined the mean and median control premium for every major industry sector in Romania as well as the standard deviation recorded.

The explanatory variables and some relevant studies that have considered them are described in *Table 3*.

Some descriptive statistics for the variables used in the model are presented in *Table 4*. Overall, the percentage share owned before the transaction by the acquirer was around 20%. For gaining control of the company he or she purchased an average stake of 51%. The mean of the active investor variable is higher than 0.5, revealing that, generally, the acquirer was already a shareholder of the company.

4. Results and Discussion

Consistent with our hypotheses, the regression results in *Table 5* highlight that the variables used in the model have the expected effect on the control premium.

All the tested hypotheses listed in Section 2 were validated. The low adjusted R^2 levels associated with some of the regressions are understandable considering the heterogeneity of the population. The particularities of the company acquired in the transaction can be expected to have an important effect on the control premium. Also, the R^2 levels are relatively similar to the ones reported in other studies (see, for instance, Chung and Kim, 1999).

According to H1, the liquidity of the shares of the acquired company is directly related to the control premium. If the measures of liquidity considered in this study are high, the level of the control premium is high. In other words, companies that are liquid and very attractive for investors tend to sell their shares at a price higher than the share price before the announcement of any offer.[24] The result is similar to the one of Caprio and Croci (2008).

In accordance with H2, the bargaining power of the buyer, as quantified by the percentage share held before the announcement day (PBA), is inversely related to the level of the control premium. An investor who has a higher percentage share in the target company will benefit from this position by reducing the price paid in the offer. Our results are in accordance with those of Walkling and Edmister (1985) and Dyck and Zingales (2004).

Table 3 Explanatory Variables Used in the Model. Relevant Studies that Considered these Variables Are also Presented

Indicator	Explanation	Relevant studies
AAT	Average annual turnover of the listed companies in the period 2000–2011. We have used ln(AAT) in the regression.	Ødegaard (2007)
ATC	The total annual turnover divided by the total capitalization before the transaction of the target-company.	
PBA	Stake owned by the buyer before the announcement day—proxy for the bargaining power of the buyer.	Walkling and Edmister (1985), Dyck and Zingales (2004)
PSP	Percentage of share purchased in the transaction.	Walkling and Edmister (1985), Barclay and Holderness (1989), Dyck and Zingales (2004)
DAINV	Active investor—dummy variable (1 if the acquirer already owns shares of the target-company; 0 if not)	Albuquerque and Schroth (2010)
CAP	The total capitalization (million RON) of the target-company before the transaction. We have used ln(CAP) in the regression.	Barclay and Holderness (1989), Nenova (2003), Dyck and Zingales (2004), Gaspar et al. (2005)
HHI	Ownership concentration index.	Duggal and Millar (1999), Nenova (2003), Gaspar et al. (2005), Luypaert and Huyghebaert (2010)
DDO	Dummy variable for the type of the major shareholder's type (of the target company) before the transaction (1 if the owner is a domestic corporation, 0 if is a foreign corporation).	Hanousek et al. (2007)
DDA	Dummy variable for the buyer's type (1 if the buyer is a domestic company, 0 if the buyer is a foreign company).	Barclay and Holderness (1989), Kand and Kim (2008), Ragozzino and Reuer, (2011), Hanousek et al. (2007)
DPERS	Buyer's type—dummy variable (1 if the buyer is a corporation, 0 if the buyer is an individual).	Barclay and Holderness (1989), Hanousek et al. (2007)
DCMS	Dummy variable for target company with a major shareholder (more than 50% of shares) (1 if the company has a majority shareholder, 0 otherwise).	Hanousek et al. (2007), Bena and Hanousek (2008)
DCIS	Dummy variable for target company with a low number of important shareholders (target companies with one or more shareholders having more than 33 percent but not more than 50 percent of the target's equity) (1 if the company is in this situation, 0 otherwise).	Hanousek et al. (2007), Bena and Hanousek (2008)
DCDO	Dummy variable for target company with a diversified ownership (no shareholder owns more than 33 percent) (1 if the company is in this situation, 0 otherwise).	Hanousek et al. (2007), Bena and Hanousek (2008)
DSEC	Industry sector—dummy variable (1 for a corporation in a industry, 0 in other industry)—a total of 8 industries.	Dyck and Zingales (2004)

Notes: The indicators (except DPERS) were obtained using data provided by the Bucharest Stock Exchange (www.bvb.ro). DPERS were provided by the Bucharest Stock Exchange.

Observation: We also tested the influence of other variables regarding the target company, specifically return on equity, the cash and cash equivalents/current liabilities ratio, the EBITDA/total assets ratio, and the debt/total assets ratio, all determined for the year before the transaction, but the results were irrelevant. Due to the low liquidity of the shares of the acquired company, we did not test the influence of the variance of the common stocks of the firm, as suggested by Barclay and Holderness (1989).

Table 4 Summary Statistics Regarding the Variables Used in the Study

Variables	Mean	Standard deviation	Median	Min	Max
Control premium (%)	115.36	216.30	25.00	-66.67	1050.00
Average annual turnover of the listed companies (million RON)	1.16	4.46	0.13	0.001	38.92
The annual turnover divided by the total capitalization before the transaction	129.79%	171.37%	71.92%	0.14%	1059.34%
Percentage of shares owned before the announcement day (%)	19.80	19.32	14.33	0.00	49.91
Percentage of shares purchased in the transaction (%)	50.97	26.81	51.91	0.50	99.26
The capitalization of the target-company (million RON)	4.325	18.512	0.423	0.011	168.303
Active investor	0.64	0.48	1.00	0.00	1.00
Ownership concentration index	0.31	0.21	0.27	0.01	0.92
Domestic acquirer	0.75	0.44	1.00	0.00	1.00
Domestic majority shareholder	0.83	0.37	1.00	0.00	1.00
Buyer's type (corporation or individual)	0.68	0.47	1.00	0.00	1.00
Target company with a major shareholder	0.35	0.48	0.00	0.00	1.00
Target company with a low number of important shareholders	0.40	0.49	0.00	0.00	1.00
Target company with a diversified ownership	0.25	0.43	0.00	0.00	1.00

Notes: This table summarizes the characteristics of the determinants of the control premium. Most of these variables are specific to the target company or to the acquirer. The sample consists of all transactions made to acquire control on the Romanian capital market between 2000 and 2011. To limit the influence of outliers, we trimmed the control premium at the 5th and 95th percentiles.

According to H3, acquirers have a strong preference for nearby targets. Domestic acquirers have an advantage over foreign ones because they have inside information about their targets and they are likely to pay more for control. These results are in accordance with Kand and Kim (2008) and Ragozzino and Reuer (2011).

Consistent with H4, the fact that the buyer has a number of shares before the announcement implies a reduction in the control premium. The result is similar to the one of Albuquerque and Schroth (2010).

In accordance with H5, the percentage of shares bought in the transaction (PSP) is directly related to the control premium, as in Barclay and Holderness (1989). In the case of Romanian investors, the interest in control is more important than the potential costs associated with an undiversified portfolio.

[24] We found another interesting result, not reported in detail in the final version of our paper: the number of days in which the stock was traded in the analyzed period (trading days) was inversely related to the control premium. A similar result (from a statistical point of view) was also obtained for the percent of trading days before the transaction (in the particular stock) in the 100 days preceding the public offer. However, this indicator for liquidity is not characteristic of the market for control. We suppose that the interest in buying non-controlling shares is inversely related to the interest in taking control. We also tested the influence of another proxy, illiquidity, specifically the number of days between the last day when the shares were traded and the day of the offer (non-trading days), but the results were statistically insignificant.

Table 5 Determinants of the Control Premium for the Romanian Listed Companies—Linear Regression Model

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
ln(CAP)	**-0.27****	**-0.29****	**-0.32*****	-0.02					
	(-2.41)	**(2.38)**	**(-3.51)**	(-0.57)					
PBA	**-2.05****				**-1.38***				
	(-2.24)				**(-1.81)**				
PSP		**2.24*****							**2.17****
		(2.73)							**(2.57)**
DAINV			**-0.61***			**-0.76***	-0.64		
			(-1.72)			**(-1.73)**	(-1.56)		
HHI			**2.37*****			**2.05****	**2.05****		
			(2.97)			**(2.29)**	**(2.17)**		
ATC				**1.09*****					
				(12.73)					
ln(AAT)					0.09			**0.15***	
					(1.25)			**(1.67)**	
DPERS	**0.61***	**0.63***	**0.77****	0.07	0.06	0.27	0.21	0.09	0.13
	(1.79)	**(1.93)**	**(2.07)**	(0.34)	(0.16)	(0.78)	(0.62)	(0.25)	(0.38)
DDA	**0.85****	**0.86****	**0.85****	**0.37****	**0.98****	**1.07****		**0.93****	
	(2.13)	**(2.19)**	**(2.33)**	**(2.20)**	**(2.19)**	**(2.31)**		**(2.11)**	
DDO							**0.68***		**0.62***
							(1.72)		**(1.68)**
DCMS					**0.78****				
					(2.01)				
DCIS				**0.31***					
				(1.83)					
DCDO	**-0.71***								
	(-1.83)								
DAGR	-0.72	-0.76	-0.33	0.08	**-0.99***	-0.56	-0.57	0.27	0.12
	(-1.60)	(-1.61)	(-0.43)	(0.44)	**(-1.95)**	(-1.26)	(-1.16)	(0.69)	(0.28)
DCLOTH	0.11	-0.16	0.13	0.11	-0.15	-0.04	-0.11	0.94	0.71
	(0.16)	(-0.24)	(0.21)	(0.25)	(-0.23)	(-0.06)	(-0.13)	(1.44)	(1.09)
DCONST	**-0.69***	-0.58	-0.55	-0.16	**-0.71***	**-0.67***	**-0.67***	-0.06	0.39
	(-1.81)	(1.46)	(-0.81)	(-0.61)	**(-1.80)**	**(-1.80)**	**(-1.76)**	(0.18)	(1.09)
DFOOD	**-0.86****	**-0.71***	**-0.96****	-0.21	**-1.18*****	**-1.15*****	**-1.31*****		
	(-2.23)	**(-1.94)**	**(-1.99)**	(-0.84)	**(-2.65)**	**(-2.75)**	**(-2.83)**		
DCHEM	**-0.54***	**-0.66****	-0.65	**-0.47****	**-1.27****	**-1.17*****	**-1.14*****		
	(-1.63)	**(-2.15)**	(-0.89)	**(-2.27)**	**(-2.66)**	**(-2.91)**	**(-3.01)**		
DMACH	0.53	0.49	0.65	-0.27	0.46	0.61	0.54	**1.63***	**1.55***
	(0.58)	(0.59)	(0.79)	(-0.76)	(0.53)	(0.65)	(0.54)	**(1.86)**	**(1.68)**
DMAN	-0.12	-0.52	-0.51	-0.32	-0.47	-0.44	-0.51	0.57	0.55
	(-0.75)	(-0.99)	(-0.96)	(-1.51)	(-1.22)	(-1.19)	(-1.39)	(1.16)	(1.21)
DSERV								**0.97*****	**1.11*****
								(2.78)	**(3.01)**
Intercept	**4.45****	**2.90****	**3.98*****	0.22	0.51	0.31	0.54	**2.24****	**1.26****
	(2.66)	**(2.38)**	**(3.24)**	(0.42)	(0.61)	(0.69)	(0.99)	**(1.89)**	**(2.21)**
***R*-squared**	**18.36%**	**20.67%**	**22.26%**	**76.69%**	**15.55%**	**16.73%**	**13.75%**	**10.01%**	**12.92%**
Adjusted *R*-squared	**12.24%**	**17.26%**	**18.69%**	**74.94%**	**9.22%**	**11.04%**	**7.86%**	**5.05%**	**8.11%**
RESET Test									
***t*-statistics**	**0.54**	**1.21**	**1.22**	**-0.67**	**0.84**	**-0.67**	**-0.67**	**-1.35**	**0.08**
probability	**0.58**	**0.25**	**0.26**	**0.49**	**0.41**	**0.49**	**0.49**	**0.22**	**0.93**

Notes: This table reports the specific determinants of the control premium of a company in nine regressions. The determinants are: the total capitalization of the target company before the transaction (a logarithm in the regression—ln(CAP)); the percentage of shares held before the announcement day—a proxy for the bargaining power of the buyer (PBA); the percentage share purchased in the transaction (PSP); active investor—a dummy variable—DAINV (1 if the acquirer already owns shares in the target company, 0, if not); the ownership concentration index (HHI); ATC—the annual turnover divided by the total capitalization before the transaction; AAT—average annual turnover (million RON) (a logarithm in the regression—ln(AAT)); buyer type (DPERS)—a dummy variable (1 if the buyer is a corporation, 0 if the buyer is an individual); DDO—a dummy variable for domestic majority shareholder before the transaction; DDA—a dummy variable for domestic buyer; DCMS—a dummy variable for a target company with a majority shareholder (more than 50%); DCIS—a dummy variable for a target company with a low number of important shareholders (target companies with one or more shareholders having more than 33 percent but not more than 50 percent of the target's equity); DCDO—a dummy variable for a target company with diversified ownership (no shareholder owns more than 33 percent); sector (DAGR——a dummy variable for companies active in agriculture; DCLOTH—a dummy variable for companies active in the clothing industry; DCONST—a dummy variable for companies active in the construction industry; DFOOD—a dummy variable for companies active in the food industry; DCHEM—a dummy variable for companies active in the chemicals industry; DMACH—a dummy variable for companies active in the machinery and equipment industry; DMAN—a dummy variable for companies active in manufacturing industry; DSERV—a dummy variable for companies active in the service industry).

Each regression uses 173 observations. To limit the influence of outliers, we trimmed the control premium at the 5th and 95th percentiles. We did not include in the same regression variables which have a correlation coefficient equal to or greater than 0.3. *t*-statistics are in parentheses. We also included the Ramsey Regression Equation Specification Error Test (RESET) test statistics (FITTED^2). The symbols *, **, *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

As expected (see H6), the size of the company, as measured by market capitalization, is inversely related to the control premium (ln(CAP) in the regression). The result is also in accordance with those of other studies: Barclay and Holderness (1989), Nenova (2003), Gaspar et al. (2005). The level of total assets, as a proxy for the size of the acquired company, was also a significant determining factor of the size of the control premium (there is a strong correlation between market capitalization and total assets).

Ownership concentration (HHI) has a positive influence on the control premium (see H7). In accordance with Maury and Pajuste (2005), we also tested if the percentage held by the most important shareholder (excluding the one who has launched the offer) has an influence on the level of the control premium. As the HHI and this percentage are highly correlated (0.907), we regressed alternatively using the two variables. The results (not reported in detail) are comparable, but we still obtained a higher adjusted R^2 level by considering the HHI in the regression. Ownership structure also has a significant influence on the control premium. We found that if the target company has one majority owner (more than 50% of the shares), the control premium is higher. As the ownership becomes more diversified (target companies with one or more shareholders which have more than 33 percent but not more than 50 percent of the target's equity) the intensity of the relation becomes lower and the relation even becomes negative for target companies with owners that hold less than 33 percent of the equity.

In accordance with H8, domestic owners may consider a controlling position to offer them more than just company benefits. The local socio-economic environment will have a better opinion of them and this cannot be valued in cash terms. Indeed, domestic ownership before the transaction was associated with a higher control premium.

We also tested the influence of state ownership (Hanousek et al, 2007). However, the results were inconclusive. First, in only one company from the sample did the state own a majority stake. Second, when we took into account whether the control premium was affected by the state being an important shareholder before the acquisition (more than 5% of the shares), the result was not statistically significant.

The control premium increases if the acquirer is a company compared to the case of an individual investor, which confirms H9. If we consider the control premium to be explained mostly by the existence of private benefits for the controlling shareholder, this result confirms (again) the agency problem as an explanation for some strategic decisions in the financial management of Romanian companies, as in Dragotă et al (2009a).

We also found that some sectors have a potential influence on the control premium. Companies active in services and machinery and equipment have a positive influence on the control premium. On the other hand, the opposite effect appears when the company is active in the food industry, the chemicals industry, agriculture or construction. No influence was recorded for the manufacturing and clothing industries.

The same results have been obtained in other studies, but for different sectors: Dyck and Zingales (2004) in transportation and the utilities industry, and Massari et al. (2006) in the financial industry. On the one hand, the explanation may lie in the potential comparative advantages/disadvantages of the sectors. On the other hand, the results may reflect a greater ability to extract private benefits in the services or machinery industries and a smaller such ability in agriculture and the food industry. Also, this result may be evidence for the presence of some psychic values for Romanian investors.

The levels of the variables have to be interpreted cautiously (see, for instance, the high levels for the intercepts of the regressions). We have some reservations about the predictive power of the regression. However, the signs of the variables in the regressions may be useful for practitioners when estimating the control premium in business valuations. When estimating the fair market value of a company, the valuer is also concerned with the estimation of the control premium. But, in this specific case, the variables characterizing the buyer should be ignored. For instance, for a practitioner estimating the fair market value of a company in accordance with valuation standards, the control premium should not count for the lack of liquidity and agency problems, and it is also assumed that the seller and the buyer have an equal bargaining power (IVSC, 2008).

Given the variation of the control premium across industries, we performed distinct regressions for companies that are active in services and those that are not. The signs of the variables included in the regression were identical to the ones applicable to the entire sample.

We also tested for the influence of different periods on the size of the control premium, but the results were not statistically significant. Moreover, it is possible that the financial crisis which started in 2008 influenced the levels of the control premium. Unfortunately, in this study we cannot offer a conclusive answer to this question, because our database includes only five transactions in the period 2008–2011 (i.e., less than 3% of the total number of transactions).

5. Conclusions

In Romania, the number of M&A transactions on the Bucharest Stock Exchange declined after the period of mass privatization. However, each successive year has confirmed that the process is still attractive to investors. To the best of our knowledge, this is the first empirical study to analyze the determinants of the control premium for Romanian listed companies.

In this study, we estimated the control premium based on the methodology of Barclay and Holderness (1989), but considering all transactions in which companies faced a change in ownership. The number of transactions recorded in each of the analyzed years (2000–2011) varies. Even though the mean and median values of the yearly control premiums are very volatile, we consider that a median of 25% is characteristic of the Romanian M&A market. However, we expect this control premium to be somewhat underestimated due to selection bias: agency problems may be higher in delisted companies, which were not taken into account in our study. This level can be considered a proxy for a high level of private benefits or synergistic effects, even for emerging markets. Benos and Weisbach (2004), using the control premiums estimated by Dyck and Zingales (2004), calculate the average private benefits for 22 emerging markets at 18.1%.

The determinants of the control premium for Romanian listed companies are similar to those identified in the previous financial literature for other countries. The control premium is directly related to the liquidity of the shares of the acquired company, the percentage share purchased in the transaction, and the ownership concentration degree. The control premium increases if the target company has a majority shareholder, or at least shareholders owning more than 33% of the equity capital, before the transaction, but decreases if the ownership is dispersed. Also, if the buyer is a company, the control premium will be higher. The control premium is inversely related to the size of the acquired company, the bargaining power of the buyer, and to the fact that the acquirer already owns shares in the target company.

The level of the control premium varies from one sector to another, but the signs of the determinants remain the same. Moreover, our analysis shows that the largest control premiums were paid to gain control of companies active in the services and machinery and equipment industries. In our view, a reasonable explanation might be the significant expansion of these sectors over the period analyzed, which attracted investors' attention. If the company is active in the food industry, chemicals industry, construction or agriculture, the influence is the opposite, as the control premium is lower. Also, there is evidence that investors have some psychic values.

Some of the results are promising, but questions still remain. What are the determinants of negative control premiums? Why do investors still wish to acquire more than 50% of the shares in the context of persistent agency problems? Some of these questions are challenging and are suitable topics for further research.

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