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ABSTRACT

This paper analyses some particular characteristics of merger and acquisition (M&A) transactions in an emerging market (Portugal) using a sample of 52 M&A targets between 1989 and 2001. Our evidence shows that the run-up effect in the Portuguese market is of a significantly larger magnitude (as a proportion of total abnormal returns for targets) than the one shown in studies for well developed capital markets (UK and US). In fact, the cumulative run-up target stock price abnormal increase in this emerging market is on average 13% in the 40 days before the M&A announcement, which corresponds to almost sixty percent of the entire cumulative abnormal return of 23% enjoyed by target shareholders around the announcement date (-40,+40). The presence of acquirers' toeholds in targets is positively related to the relative magnitude of such run-up effect, while hostility and the presence of large shareholders in the target have a negative impact. Evidence is also presented that abnormal returns for both bidders and targets are substantially lower in bearish markets as compared to bullish markets, with acquirers experiencing sizeable negative abnormal returns in bear markets but significantly positive ones in bull periods. Overall, our results caution for the existence of particularities of M&A transactions in emerging markets in comparison to well developed markets, and point to a number of research directions that are relevant both to emerging and developed markets.

1 Introduction

Mergers and Acquisitions (M&A) have been the subject of a large number of studies and intense academic debate. Such research, however, is almost all concerned with M&A transactions in well developed capital markets, with relatively few papers focusing on the particularities of such activity in emerging markets.

This study adds to the literature by analysing a sample of 52 M&A announcements from 1989 to 2001 in an emerging market (Portugal). We document a number of interesting results, some of which suggest or reinforce a degree of uniqueness for the M&A activity in less developed capital markets.

In particular, our evidence shows that the run-up effect we observed in the Portuguese market is of a significantly larger magnitude (as a proportion of total return for targets) than that shown in previous studies for well developed capital markets (UK and US). In fact, the run-up effect for the window (-40,0) before the M&A announcement in this emerging market is 13%, corresponding to almost sixty percent of the entire abnormal return of 23% enjoyed by target shareholders around the announcement date. At the same time, such total returns for target shareholders are lower than those observed in the US and UK markets, which may be explained by the usually large toeholds held by the bidder before the bid in the Portuguese market. In addition, we test and confirm Schwert's (1996) mark-up pricing hypothesis that the observed run-up effect does not reduce the premium offered at the announcement date, thereby increasing the total cost of the M&A transaction for bidders on a larger magnitude that in more developed markets. We also document that the presence of large shareholders in the acquiring firms and of toeholds in target firms significantly increases cumulative abnormal stock

returns (CARs) for bidders´ shareholders. Similarly, such toeholds reduce returns for targets, as well as the presence of large shareholders in such firms. These last results are in accordance with an agency theory perspective where large shareholders can play a monitoring role, both in the acquiring and target firms. Finally, we document that abnormal returns for both bidders and targets are substantially lower in bearish markets as compared to bullish markets, with acquirers experiencing sizeable negative abnormal returns in bear markets but significantly positive ones in bull periods.

This paper proceeds as follows. The next section provides a summary of the relevant M&A literature and the motivation for this study. Next, we describe the methodology used, the sampling procedures, and the data collection. Section 4 presents major empirical results. The last section summarises the findings and the limitations of this study, and suggests directions for future research.

2 Motivation and previous literature

M&A is one of the most researched areas in Finance (Weston et al, 2001). Still, existing studies have been concerned almost exclusively with a single market (the US). Only recently has the UK market been the subject of more intense research (see, for instance, Franks and Mayer, 1996, and Sudarsanam et al, 1996), and few studies exist on smaller, less developed markets. One of these few studies is that of Ocaña (1997), who studied M&A activity in Spain using a sample of transactions between 1990 and 1994.

The research on M&A has been mostly concerned with analyzing and measuring wealth effects for targets and bidders around announcement dates (Jensen and Ruback,

1983), gains for bondholders (Asquith and Kim, 1982), the impact of different methods of payment (Huang and Walking, 1987), efficiency issues (Scherer, 1988), run-up and mark-up returns (Schwert, 1996), long term performance (Agrawal and Jaffe, 2000), free riding problems (Schleifer and Vishny, 1986), managerial hubris (Roll, 1986) and agency problems (Jensen, 1986).

One major result of these studies is that abnormal returns are typically high for targets (30% according to Jensen and Ruback, 1983) while bidders tend to receive small or negative returns around the announcement of M&A transactions. The competitive nature of the market for corporate control has been seen as a likely cause for the small return for bidders (Bradley et al, 1983). There is no evidence of bondholders expropriation except, perhaps, in some extreme situations like leveraged buyouts (Warga and Welch, 1993). Weston et al (2001) conclude that the apparent overall wealth creation around the announcement date is mostly caused by the expectation of operating and financial synergies. However, Agrawal and Jaffe (2000) observe that, unlike tender offers which command long term non-negative abnormal returns for bidders, mergers tend to be followed by a long-term negative impact on the bidder's share price. Rau and Vermaelen (1998) suggest that a possible explanation for the somewhat unglamorous long term performance of bidders may be Roll's (1986) hubris hypothesis, while others take the view that agency costs associated with empire-building and other self-serving behavior from the part of acquiring managers might be blamed (Kaplan and Weisbach, 1992), coupled with poor corporate governance (Jensen, 1993).

Schwert (1996) documents that target prices tend to climb up some 42 days before an M&A announcement, with the largest increase happening in the last 21 days before

the event. Schwert reports that this run-up effect is on average 13.3%, or almost a third of the total target return (run-up plus mark-up), which amounts to 37% in the case of successful transactions.

Finally, the shareholder structure of both bidders and targets bidder toeholds seem to be an important influence on the observed returns. For Shleifer and Vishny (1986) only a large shareholder, in an otherwise disperse ownership structure, can facilitate the firm's acquisition. Slusky and Caves (1991) present evidence of a negative relation between large shareholders and the takeover bid premium. Grossman and Hart (1980) predict that the larger an initial toehold on a target company, the larger the gains to bidders, while in Hirshleifer and Titman's (1990) model an initial toehold increases the probability of a successful bid and will reduce the bid premium for target shareholders. Mikkelson and Ruback (1985) and Holderness and Shehan (1985), among others, present results in accordance with large shareholders monitoring managers' activities.

In an analysis of large M&A transactions in the European market, Goergen and Renneboog (2003) document a cumulative abnormal return of 23% for targets, with almost all of this return being observed before the announcement (run-up return). They also show some disparities in returns according to the countries where the transaction takes place, with returns being substantially higher when a UK target or bidder is present. In the case of Southern Europe (which includes Portugal) the authors document a run-up of 6.2% for domestic transactions and a total abnormal return of just 1.9%, but the small number of observations (only 7 transactions) does not allow reasonable inferences from such results.

Given that, as Becht and Roel (1999) document, the shareholder voting power in Europe is highly concentrated in comparison with the US and UK, one would expect that in an European emerging market like Portugal toeholds should be in general high before an M&A transaction therefore potentially leading to lower bid premiums.

Ocaña et al (1997) presents a study of M&A transactions in Spain for the period of 1990 to 1994. Ocanã et al's view their results as "quite similar to the pattern observed in the larger US and UK stock markets" (Ocaña et al, 1997, p.152), finding that target shareholders earn a cumulative abnormal return of 40% over the period (-40, 40), where about two thirds of this are earned before the announcement date. Ocanã et al (1997) do not present results for bidding firms nor provide any further analyses other than the computation of CARs for targets. In their study they concede that a limitation of their study is the fact that the mergers in their sample took place in a period of particular institutional change (that of the opening of the Spanish Economy to the EU)[1], making it difficult to generalize the results of their research.

3 Methodology and sample description

3.1 Methodology

Schwert's (1996) substitution hypothesis between Run-ups and Mark-ups

One of the objectives of this study is to analyse if, in the context of an emerging market, there is any information leakage about the tender offer before it is announced.

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[1] In Ocaña et al´s (1997) study no information is provided on the existence of initial toeholds by bidders on the target companies.

So, it is important to analyse, as in Schwert (1996), if any substitution effects exist between the increase of the stock price before the announcement of the tender offer (run-up) and the increase of the stock price after the announcement of the tender offer (mark-up) [2].

One way to test that substitution hypothesis is to consider the relation between the premium paid by the acquiring firm and the rise of the stock price before the announcement of the tender offer (run-up):

$$Premium_j = a + bRun\text{-}up_j + u_j$$

The Substitution Hypothesis of Schwert (1996) implies that the total premium[3] is not affected by the positive evolution of the stock price before the announcement of the tender offer (run-up) in a way that the b coefficient in the previous equation should be equal to zero. On the other hand, the Mark-up Pricing Hypothesis implies that the total premium increases in equal proportion of the increase in the stock price before the announcement of the tender offer (run-up) and, therefore, b coefficient in the previous equation should be equal to one. A b coefficient between zero and one implies a partial substitution, which means that the increase of the stock price before the announcement of the tender offer increases the total premium to be paid by the acquiring firm, but only by a fraction of the increase in the stock price, being that fraction represented by the b coefficient.

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[2] The abnormal returns were computed using the standard Market Model as presented by Weston et al (1998).
[3] Schwert (1996) considers the premium as the sum of the run-up and the mark-up.

Since the total premium is the sum of the run-up with the mark-up, the previous equation is equivalent to the regression of the mark-up over the run-up:

Mark-up$_j$ = a + (b-1)Run-up$_j$ + u_j

If the Substitution Hypothesis holds true then the *(b-1)* coefficient above should be equal to -1 (when the run-up is high, the mark-up is reduced by the same value), or alternatively, b should be equal to 0. If the Mark-up Pricing Hypothesis holds true then the *(b-1)* coefficient above should be equal to zero (the mark-up is not related to the run-up), that is, b should be equal to 1.

To determine the run-up and the mark-up we computed targets' abnormal returns in the periods (-40;0) and (+1;+40), respectively.

Test of the Hubris and Agency Hypotheses

Another objective of this study is to analyse the role of the hubris and agency hypotheses as motivations for mergers and acquisitions in the Portuguese market. For that purpose we used a regression of cumulative abnormal returns (CARs) over a number of independent variables related to the ownership structure, firm performance, hostility, relative size, among others, as will be explained later.

One of the mechanisms for controlling agency problems and align managers is large shareholders monitoring managers activities. A target firm that is efficiently monitored by large shareholders will be well valued before the announcement of the offer. Hence, the target value creation by the acquiring firm after the acquisition will

be smaller. This limits the premium that the acquiring firm can afford and it will be lower with the increase of the shares owned by a large shareholders. Slusky and Caves (1991) provide empirical evidence for the negative relation between large shareholders and the premium paid by acquiring firms, although Sudarsanam (1996) doesn't find any significant relation in the UK market.

For the acquiring firms, if monitoring activities by large shareholders are efficient then the acquiring firm shareholders should gain. If such monitoring is inefficient then managers will engage in value diminishing acquisitions, paying excessive premiums due to hubris, imposing losses to their shareholders.

Therefore, our first hypothesis is defined as

H1: Target firm shareholders lose (H1a), and bidders shareholders gain (H1b) with efficient monitoring by large shareholders.

Grossman and Hart (1980) propose toeholds as a solution for the free-riding problem. Their model suggests that toeholds help the acquiring firm in making good acquisitions, with the consequent gains for their shareholders. The larger the toehold the higher should then gains become for the acquiring firm shareholders. Additionally, the bigger the toehold the higher the likelihood of an offer (Shleifer and Vishny, 1986) and the higher the probability of a successful acquisition (Hirshleifer and Titman, 1990). In both models, an initial toehold decreases the premium paid to the target shareholders. Moreover, a higher toehold allows the acquiring firm to have better information about the target, thus reducing the possibility of hubris.

Our second hypothesis if thus formulated as

H2: The bigger the toehold the smaller the gains for target shareholders (H2a) and the higher the gains for bidder shareholders (H2b).

The Tobin's q ratio has been frequently used to assess the managers' performance or quality. Lang et al (1989) and Hasbrouck (1985), document that target firms usually have low Tobin's q ratios, which could be interpreted as the result of a poor quality managing team. For Lang et al (1989) and Servaes (1991) higher gains are achieved when well managed firms (high Tobin's q ratio) acquire firms that are managed inefficiently (low Tobin's q ratio). In our study, the Tobin's q ratio will be calculated as the ratio between the market capitalization added to the book value of debt (the "market value" of the assets) and the accounting value of equity added with the book value of debt (the "accounting value" of the assets). Thus, it will be calculated as the market value of the firm divided by its accounting value[4]. Although the method for the calculation of the Tobin's q ratio is a proxy for the more correct method, Chung and Pruitt (1994) report that a very similar method to the one proposed in this study explains at least 96.6% of the variability of the original model proposed by Lindenberg and Ross (1981)[5].

Our third hypothesis is then

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[4] For other definitions of the Tobin's q ratio see Perfect and Wiles (1994).
[5] Later we will analyse the variable Price/Book Value (PBV) as an alternative to the variable Tobin's q.

H3: Acquiring firms shareholders (H3a) and target firms shareholders (H3b) experience larger gains when the target firm has a low Tobin's q ratio and the acquiring firm has a high Tobin's q ratio.

The literature on M&A identifies a set of bid characteristics with a potential impact on abnormal returns for the acquiring and target shareholders. When testing the previous hypotheses we therefore control for the following variables: method of payment (Asquith et al, 1983; Huang and Walkling, 1987; Franks et al, 1988), hostility (Huang and Walkling, 1987; Datta et al, 1992; Weston et al, 1998), relative size (Ravenscraft and Scherer, 1989; Hasbrouck, 1985; Palepu, 1986; Morck et al, 1988, Shivdasani, 1993, Comment and Schwert, 1995; Schwert, 2000), industry proximity (Denis et al, 1997; Lang and Stulz, 1994; Berger and Ofek, 1995; Agrawal et al, 1992).

To determine the impact of the independent variables related to the hubris and agency theories over the abnormal returns for the shareholders we use a regression analysis of the CARs over the variables related to the ownership structure and the control variables[6]. Table 1 provides a summary of all the explanatory variables included in the model:

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[6] These control variables represent the process dynamics of the tender offer.

Table 1- Determinants of Target or Bidder Abnormal Returns

Variable	Description	Reason for Inclusion/Hypothesis
Ownership Structure		
ACQLS	Acquirer ownership by large shareholders	Monitoring mechanism on managers' activities (agency theory)
TARLS	Target ownership by large shareholders	Monitoring mechanism on managers' activities (agency theory)
TOEH	Existing toehold of acquirer on target before bid	Influence on probability of bid success / premium reduction effect / hubris reduction
Managing team		
ACQTOB	Acquirer's Tobin Q (Market capitalization of equity +Book value of Debt) / Book value of Net Assets	Acquirer management's quality measure
TARTOB	Target's Tobin Q (Market capitalization of equity +Book value of Debt) / Book value of Net Assets	Target management's quality measure
Performance		
ACQPERF	Acquirer's cumulative stock returns for the last 2 years before announcement	Acquirer's stock recent performance
TARPERF	Target's cumulative stock returns for the last 2 years before announcement	Target's stock returns recent performance
Other control variables		
HOST	Hostility (1-Hostile offer; 0-Non hostile offer)	Bargaining power of the acquirer
METPAY	Method of Payment (1-Cash only; 0-Other than cash only)	Information asymmetry
RELSIZE	Relative size of bidder versus target	Superior managing skills of acquirer / lower impact of acquisition on acquirer's returns when target is relatively small
INDREL	Industry Relatedness between bidder and target (1-Same industry sector; 0-Different industry sector)	Operating synergies / potential for market power
LEGIS	Legislation Dummy (1-Offer made during Sapateiro Law; 0-Offer not made during Sapateiro Law)	Stock market legislation impact

3.2 Sample Description

This study is based on an initial set of all 165 tender offers recorded in Portugal between 1989 and 2001. The data was collected from the Portuguese Stock Exchange (BVLP – Bolsa de Valores de Lisboa e Porto, now Euronext Lisbon) and from its historical database (Dathis).

From the 165 tender offers we selected those that were launched by, or that targeted, listed firms in the Portuguese stock market. We eliminated from the sample the so-called "potestativas" offers[7]. We also eliminated stocks that traded in less than 50% of the days of the estimation window (-200;-41). Only the stocks listed in the "Mercado de Cotações Oficiais (MCO)" (the major secondary market for equities in Portugal) were considered.

Therefore, for the acquiring companies our final sample is composed of 39 tender offers launched by 23 different firms. For target firms the sample is slightly larger, with 52 tender offers that aimed at 41 different firms.

Table 2 summarises how the sample was constructed:

Table 2 – Sample Tender Offers

	Targets	Bidders
Total number of tender offers	165	165
(-) Number of special "potestativas" offers	12	12
(-) Firms traded for fewer than 50% of days in estimation period	5	4
(-) Firms delisted in the period (-200, 40)	27	14
(-) Firms not listed in the main equity market ("Mercado de Cotações Oficiais")	69	96
Final number of firms in the sample	**52**	**39**

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[7] These "potestativa" offers are special tender offers of compulsory acceptance by target shareholders which can be launched in Portugal by a bidder that already holds 90% or more of the shares listed in the stock market and that aims to ensure the delisting of such firm.

3.3 Descriptive statistics

Table 3 summarizes the characteristics of the acquiring firms and their bids[8].

Table 3 – Summary of the characteristics of the acquiring firms and their bids

		Market Capitalization	Relative Size	Toehold
N	Valid	39	32	39
	Missing	0	7	0
Mean		1,064,714,468	12.625	41.205
Median		605,476,801	6.220	50.000
Std. Deviation		1,476,221,252	22.880	29.710
Skewness		2.190	3.500	-0.222
Std. Error of Skewness		0.378	0.414	0.378
Kurtosis		4.242	13.185	-1.102
Std. Error of Kurtosis		0.741	0.809	0.741
Minimum		11,050,000	0.240	0.000
Maximum		5,620,000,000	113.160	99.000

(Units: Market Capitalizations are in euros, Toeholds as percentages of existing shares).

As it can be seen from Table 3 the size of the bidding firms is quite variable. In terms of market capitalization, the average size is about 1 billion euros, with a maximum of 5.6 billion euros. It should be pointed out that some of the acquiring firms, namely financial institutions, with high market capitalizations make the sample distribution somewhat skewed. In terms of relative size the acquiring firm is, on average, 12.6 times larger than the target firm. Nevertheless, the median relative size is 6.2 times.

The bidder's initial toehold is particularly high (mean of 41.2% of the target's shares and a median of 50.0%), and this represents a significant difference relatively to the general empirical evidence for well developed markets like the US and UK. The highest toehold is 99.0%. According to Shleifer and Vishny (1986), for instance, the

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[8] In this descriptive statistics we didn't consider the fact that some firms launched more than one tender offer.

toehold of the biggest shareholder is 15.4%, and the toehold of the five biggest shareholders is 28.8%[9].

From the 39 tender offers only 6 were partial acquisitions, which represent 15.4% of the sample. Only 5 tender offers were hostile. On the other hand, cash was the main method of payment (26 tender offers), while shares were used in 8 acquisitions and a mix of cash and shares was used in 5 offers.

Table 4 summarizes the characteristics of the target firms and the offers received.

**Table 4 – Summary of the characteristics of
target firms and offers received**

		Market Capitalization	Relative Size	Toehold
N	Valid	52	25	52
	Missing	0	27	0
Mean		351,698,604	5.904	43.885
Median		107,860,057	2.650	51.000
Std. Deviation		551,860,771	6.119	31.258
Skewness		2.723	1.337	-0.154
Std. Error of Skewness		0.330	0.464	0.330
Kurtosis		8.562	1.296	-1.175
Std. Error of Kurtosis		0.650	0.902	0.650
Minimum		1,988,972	0.240	0.000
Maximum		2,855,736,000	23.330	99.000

(Units: Market Capitalizations are in euros; Toeholds as percentages of existing shares)

In terms of the target's market capitalization, the average size also shows a great variability. The average is 351 million euros, which represents about a third of the average size of the acquiring firms' sample. The relative size has a mean of 5.9 and a median of 2.6[10]. The relative size for this sample is about half the size of the sample for the acquiring firms.

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[9] The sample for this work was 456 firms included in Fortune 500.

The initial toehold is once again particularly high (mean of 43.9% and median of 51.0%). The highest toehold is 99.0%.

From the 52 tender offers only 6 were partial acquisitions, which represent 11.5% of the sample. We found 9 tender offers which were hostile, which represents 17.3% of the sample. On the other hand, cash was the main method of payment (46 tender offers), while shares were used in 2 acquisitions and a mix of cash and shares was used in 4 offers. This means that the cash method of payment was more predominant in this sample.

In summary, the sample of the acquiring firms is centred in a set of tender offers were the differences in size are much higher. In terms of toeholds the samples are very similar, but the high toehold is a distinctive factor in our sample in comparison to the evidence from well developed markets.

4   Empirical results

4.1 Bidder Shareholders' Abnormal Returns

The bidder shareholders' abnormal returns are presented in Table 5 [11]:

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[10] Since some firms were not listed in the Portuguese Stock Market it was impossible to determine the market capitalization, and thus the relative size for some acquisitions.

[11] For the tender offers that were launched by more than one firm it was considered the impact in those firms individually. On the other hand, bidders that launched, in the same day, more than one tender offer it was considered the impact in that particular firm. Thus, our sample is composed of 40 tender offers.

Table 6 – CARs for the bidder shareholders

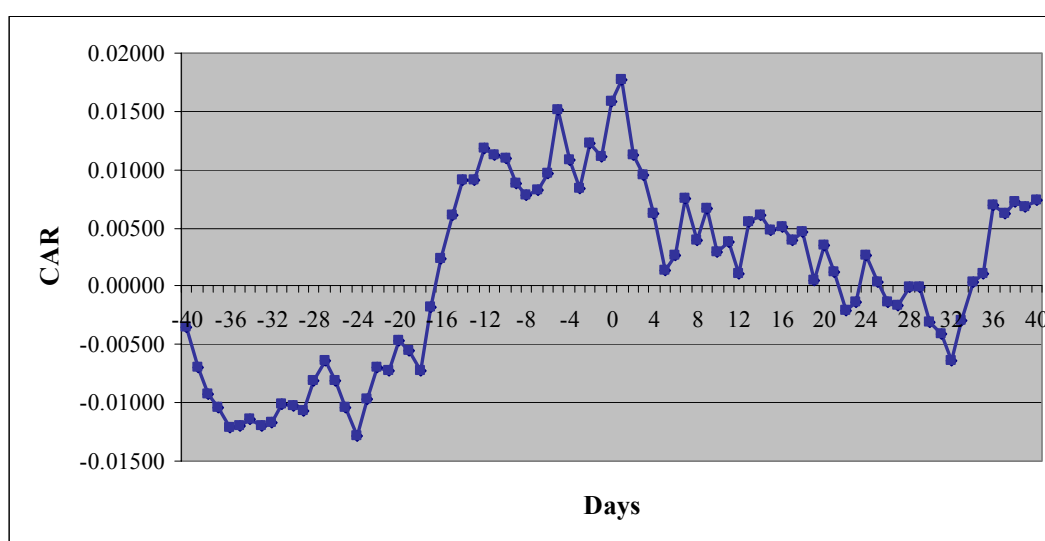| Window	CAR	var(CAR)	z
-40;+40	0.00743	0.0000074	2.73
-20;+20	0.01065	0.0000081	3.73
-10;+10	-0.00829	0.0000081	-2.90
-5;+5	-0.00836	0.0000085	-2.87
-5;+3	-0.00020	0.0000091	-0.07
-1;+1	0.00539	0.0000110	1.63
0;0	0.00479	0.0000004	8.09

The cumulative abnormal returns (CARs) for bidder shareholders for the largest window (-40;+40) are 0.74%, statistically different from zero. For the event window (-20;+20) the CARs are 1.07%, also statistically different from zero. In the periods around the announcement date, the abnormal returns are slightly negative, but it is not possible for the windows (-5;+3) and (-1;+1) to reject the null hypothesis that the returns for the bidders shareholders are equal to zero. Nevertheless, for the window (-1;+1) and for the announcement day of the offer they are positive (0.48%), which is consistent with the results of Asquith (1983). Our results, although inferior in value, are consistent with the work of Jensen and Ruback (1983), which reports that bidders' shareholder abnormal returns in tender offers are 4%, statistically significant. Also Bradley (1980) and Schipper and Thompson (1983) report increases in the value of the bidders firm. In a two day analysis, Dodd (1980) finds significant abnormal returns −1.09%, while Asquith (1983) and Eckbo (1983) refer slightly positive abnormal returns, but statistically insignificant. Our results are therefore consistent with the works of later authors.

In general terms, one could argue that the lack of economically significant positive returns for bidders at the announcement of acquisitions might be caused by the competitive nature of the market for corporate control. Such results contradict the

managerialism hypothesis (Mueller, 1969) where equity agency problems in the bidder explain the launching of bids, which would translate into negative returns for bidders at the launching of unanticipated acquisitions.

In Figure 1, the pattern of the bidders shareholders' CARs for the largest window (-40;+40) is presented:

Figure 1 – Bidder Shareholders' CARs.

4.2 Target Shareholders' Abnormal Returns

The target shareholders' abnormal returns are presented in Table 7:

Table 7 – Target Shareholders' CARs

Window	CAR	var(CAR)	z
-40;+40	0.22655	0.0000237	46.54
-20;+20	0.14975	0.0000300	27.34
-10;+10	0.13514	0.0000399	21.39
-5;+5	0.12465	0.0000654	15.42
-5;+3	0.12835	0.0000775	14.58
-1;+1	0.08181	0.0001562	6.55
0;0	0.01079	0.0000005	15.38

Target shareholders achieve high gains from offers. For the window (-40;+40) the abnormal returns are of 22.6%. For this period, target returns are considerably lower than the 40,0% reported by Ocaña et al (1997) for the Spanish market. For the window (-20;+20) the abnormal return is of 14.9%, also significantly below the 35.2% reported by Ocaña et al (1997). Additionally, our results are smaller than those reported in the survey of Jensen and Ruback (1983) which suggests abnormal returns of 30% for tender offers.

As it can be seen in Figure 2, most of the target shareholders' gain occurs before the announcement date of the tender offer. This observation is further exploited in the next section.

Figure 2 – Target Shareholders' CARs
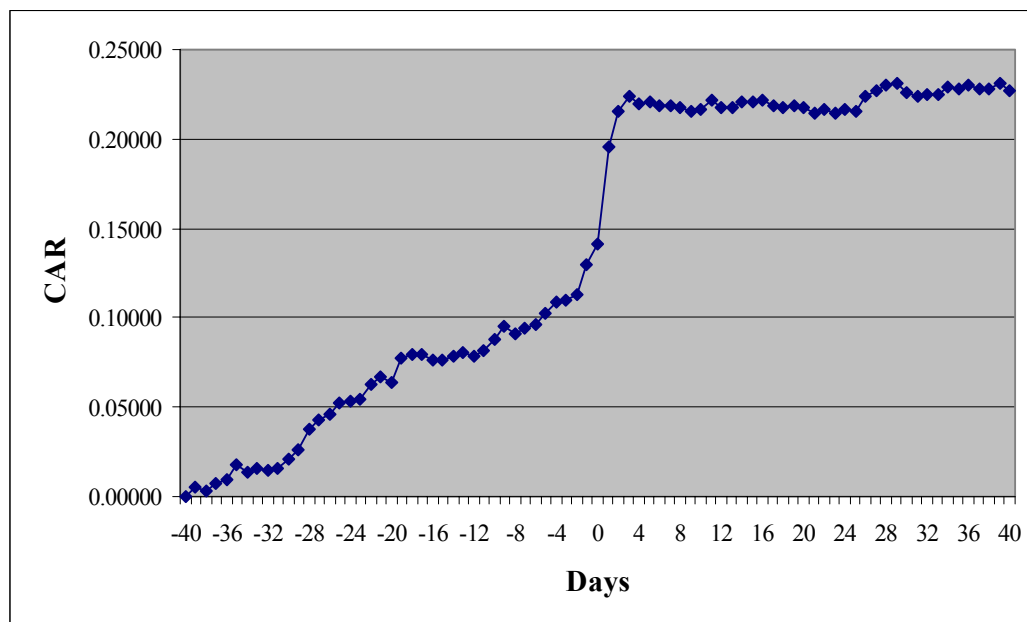
4.3 Information Leakage to the Market

In spite of the fact that the larger part of the gains for the target shareholders occur near the announcement date of the operation [12.5% for the window (-5;+5)], it can be seen that the upward movement in target share prices is initiated 40 days before that date. I fact a cumulative abnormal return for target shareholders of 13.1% occurs in the window (-40;0), of which 9.3% is concentrated in the period (-35;-5). These results are similar to those of Ocaña et al (1997) which detected that the CARs start to rise about 30 days before the announcement date. Our results are also consistent with Schwert (1996) that reports that the CARs start to rise 42 days (almost two months) before the tender offer is announced. These results seem to suggest that there is a leakage of information to the market about the tender offer before the announcement becomes public. Other possible explanation (which we cannot test) for the observed behaviour maybe the bidding firm buying shares in the target firm in order to increase its toehold before the tender offer is announced or simply the occurrence of rumours.

Regardless of possible explanations for this observation, one should stress the important relative magnitude of the observed run-up: for a total abnormal return of 22.6% for target shareholders, about sixty percent (or 13.1% out of 22.6%) of this takes place before the announcement date. This is in sharp contrast with results from more developed countries, namely those of Schwert (1996) who documents that the observed run-up accounts for about a third only of total abnormal return.

An interesting point is to analyse if a substitution effect exists between the increase in the stock price before the announcement of the tender offer (run-up) and the increase in the stock price after the announcement of the tender offer (mark-up). For that

purpose, and according to Schwert (1996), the following model was estimated by linear regression:

$$\text{Premium}_j = a + b\text{Run-up}_j + u_j$$

Table 8 provides the estimation results:

Table 8 – Results of the regression of the premium over the run-up.

b	1.047
t	8.421
Significance	0.000
R^2	0.586
R^2 adjust	0.578
F	70.918

The run-up coefficient (*b*) of 1.047 is extremely close to the one reported by Schwert (1996) for his main sample (1.075). Accordingly, the hypothesis that stands is the Mark-up Pricing Hypothesis. So, the increase in the stock price after the announcement of the tender offer (mark-up) doesn't seem to be related to the increase in the target stock price before the announcement of the tender offer. A consequence of this observation is that the run-up represents, from the bidders' point of view, an increased cost of the acquisition, since the premium is higher if a run-up effect exists before the announcement of the tender offer. For that reason it is of great importance for the bidder to control the flow of information to the market, with the purpose of minimizing the acquisition cost.

4.4 Total Abnormal Returns

The total return is the weighted average of the bidder and target shareholders' abnormal returns, where the weights are the market capitalization of each stock. Only tender offers where simultaneously the bidder and the target were publicly traded were considered in the computation of total returns. For that reason the sample is reduced to 22 tender offers. The results should therefore be interpreted with a degree of caution.

Table 9 shows the total returns for all the windows considered:

Table 9 – Total Returns.

Window	CAR	var(CAR)	z
-40;+40	0.02761	0.00000881	9.30
-20;+20	0.02762	0.00001019	8.65
-10;+10	0.01943	0.00001289	5.41
-5;+5	0.01981	0.00001824	4.64
-5;+3	0.02784	0.00002038	6.17
-1;+1	0.00891	0.00003940	1.42
0;0	0.00770	0.00000102	7.63

The table above shows that total abnormal returns are positive for all the periods considered. For the periods (-40;+40) and (-20;+20) the total abnormal returns are positive (2.8%), and in both cases they are statistically significant. These results lead us to conclude that potential losses for the bidder shareholders are more than compensated by the gains for target shareholders. Our results are consistent with the results of Bradley et al (1983), Lang et al (1989), Kaplan and Weisbach (1990), Sudarsanam et al (1996), among others, but inconsistent with the work of Firth (1980) who reports overall losses for the bidder and target firms.

Since our sample is composed of only 22 tender offers, we also provide sign test results, which are presented in Table 10:

Table 10 – Sign test for total abnormal return.

Window	Positive CARs	T. S.
-40;+40	12	0.43
-20;+20	13	0.85
-10;+10	12	0.43
-5;+5	11	0.00
-5;+3	12	0.43
-1;+1	14	1.28
0;0	13	0.85

From the results in Table 10 it is not possible to reject, for all the windows considered and for a p-value of 1%, the null hypothesis that the CARs have a null median.

4.5 Test of the Hubris and Agency Hypothesis

Acquiring Firms

Table 11 presents descriptive statistics for the independent variables used in the regression[12]:

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[12] For the tender offers that were launched by more than one firm we considered the impact in those firms individually. On the other hand, for bidders that launched, in the same day, more than one tender offer we considered the impact in that particular firm. Thus, our sample is composed of 38 tender offers.

Table 11 – Descriptive statistics for the independent variables in the analysis of returns for bidders.

	Mean	Std. Deviation	N
ACQLS	0.392	0.246	38
TOEH	0.438	0.295	38
ACQTOB	1.211	0.503	38
ACQPERF	0.354	0.643	38
RELSIZE	9.467	12.442	38
HOST	0.184	0.393	38
METPAY	0.763	0.431	38
INDREL	0.816	0.393	38
LEGIS	0.816	0.393	38

Legend:

    ACQLS – Acquirers equity owned by large shareholders;

    TOEH – Acquirers Toehold;

    ACQTOB – Acquirers Tobin's q;

    ACQPERF – Acquirers performance two years before the offer announcement;

    RELSIZE – Relative Size;

    HOST – Hostility;

    METPAY – Method of payment;

    INDREL – Industry relatedness;

    LEGIS – Legislation dummy.

The larger stockholders own, on average, 39.2% of the bidding firm. Such toehold is quite large, 43.8% on average. The bidding firm is on average 9.5 times bigger than the target firm. 18.4% of the tender offers were hostile. The method of payment more used was cash (almost 76% of the cases). About 81.6% of tender offers were industry related and 81.6% were launched during the period of the "Lei Sapateiro" legislation.

Correlation coefficients are presented in Table 12:

Table 12 – Pearson Correlation analysis for the explanatory variables of the CARs of the Bidders in the period (-40;+40).

	CARS	ACQLS	TOEH	ACQTOB	ACQPERF	RELSIZE	HOST	METPAY	INDREL	LEGIS
CARS	1.000	0.406	0.286	-0.168	-0.376	-0.214	-0.036	0.122	0.058	0.042
ACQLS	0.406	1.000	0.198	0.050	0.144	-0.204	-0.173	0.022	-0.167	-0.069
TOEH	0.286	0.198	1.000	0.044	-0.153	0.033	-0.554	-0.107	-0.163	-0.384
ACQTOB	-0.168	0.050	0.044	1.000	0.420	-0.019	-0.126	0.183	-0.329	-0.257
ACQPERF	-0.376	0.144	-0.153	0.420	1.000	-0.002	0.197	-0.061	-0.346	-0.113
RELSIZE	-0.214	-0.204	0.033	-0.019	-0.002	1.000	-0.192	-0.194	-0.052	0.224
HOST	-0.036	-0.173	-0.554	-0.126	0.197	-0.192	1.000	0.265	0.051	0.051
METPAY	0.122	0.022	-0.107	0.183	-0.061	-0.194	0.265	1.000	-0.265	-0.105
INDREL	0.058	-0.167	-0.163	-0.329	-0.346	-0.052	0.051	-0.265	1.000	0.300
LEGIS	0.042	-0.069	-0.384	-0.257	-0.113	0.224	0.051	-0.105	0.300	1.000

Legend:

        ACQLS – Acquirers equity owned by large shareholders;

        TOEH – Acquirers Toehold;

        ACQTOB – Acquirers Tobin's q;

        ACQPERF – Acquirers performance two years before the offer announcement;

        RELSIZE – Relative Size;

        HOST – Hostility;

        METPAY – Method of payment;

        INDREL – Industry relatedness;

        LEGIS – Legislation dummy.

The results of the regression of the independent variables over the dependent variable (CARs) for the bidders in the period (-40;+40) are in Table 13:

Table 13 – CARs regression for bidders during the period (-40;+40) around the announcement date of the tender offer.

	Coefficient (B)	Std. Error	t	Significance
(Constant)	-0.254	0.155	-1.634	0.113
ACQLS	0.288	0.101	2.848	0.008
TOEH	0.212	0.105	2.014	0.054
ACQTOB	0.019	0.056	0.333	0.742
ACQPERF	-0.114	0.046	-2.502	0.018
RELSIZE	-0.002	0.002	-0.784	0.439
HOST	0.127	0.080	1.596	0.122
METPAY	0.011	0.062	0.175	0.862
INDREL	-0.008	0.070	-0.108	0.915
LEGIS	0.084	0.070	1.199	0.241
R	0.683			
R²	0.467			
R² adjust	0.295			
F	2.721			

Legend:

ACQLS – Acquirers equity owned by large shareholders;

TOEH – Acquirers Toehold;

ACQTOB – Acquirers Tobin's q;

ACQPERF – Acquirers performance two years before the offer announcement;

RELSIZE – Relative Size;

HOST – Hostility;

METPAY – Method of payment;

INDREL – Industry relatedness;

LEGIS – Legislation dummy.

In the above model the explanatory power, R² adjusted, is 29.5%. The variables concerning the ownership structure, ACQLS and TOEH, are significant at a 1% level and near the 5% level, respectively. The positive coefficient of ACQLS suggests that the CARs for bidders increase with the stake owned by large shareholders. Therefore it is consistent with efficient monitoring by such shareholders, where equity agency problems arising from the relationship manager-shareholder are reduced. This is consistent with our hypothesis H1b, with the model of Shleifer and Vishny (1986),

and also with the work of Slusky and Caves (1991). The toehold of the bidding firm, TOEH, has a positive impact in the bidders' CARs, which is in accordance with our hypothesis H2b, and with the models of Hirshleifer and Titman (1990), but is not consistent with the results of Slusky and Caves (1991) and Sudarsanam et al (1996).

Regarding the variable ACQTOB, its coefficient is not significantly different from zero, although the positive coefficient is in agreement with our hypothesis H3a that acquiring firms have better quality management teams[13].

Somewhat surprisingly, the stock market performance of the acquiring firm in the two years preceding the announcement of the tender offer (variable ACQPERF) has a negative coefficient at a 5% level of significance[14]. In contrast to the results of Dodd and Ruback (1977), Asquith (1983) and Mueller (1987), the bidders in our sample with the worst performance achieve the highest abnormal returns from tender offers. A possibility might be that the market perceives that these particular bidders are more prone to benefit from their acquisitions, particularly if these aim at reaching operating or other relevant synergies instead of being the consequence of managerialism (Mueller, 1969) or hubris (Roll, 1986).

Regarding other control variables, the variable HOST presents a marginally significant positive coefficient, which seems to indicate that the bidders gain more

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[13] In another experiment, the variable related to the Tobin's q was replaced by the variable Price/Book Value. The results were similar (coefficient of 0.0112, t of 0.474 and significance of 0.64). In terms of the explanatory power of the model, R^2 adjusted, this is improved marginally to 29.8%.
[14] It was analysed the variable related to the acquiring firm performance during the three years that preceded the announcement of the tender offer. Consequently, our sample was reduced to 32 tender offers. The new variable presented a coefficient of -0.0043, t of 0.108 and significance of 0.954. Although the coefficient sign remains the same, the explanatory power of the model decreases significantly to 13.1%.

when the operation is hostile. These results are in contrast to the general empirical evidence (Bradley et al, 1988; Pound, 1988; Servaes, 1991), among others. Although the small number of hostile operations in our sample does not allow strong inferences regarding the hostility factor, a possible explanation for what we observe might be that in the particular context of an emerging market hostile acquisitions are undertaken only when the acquiring firm is convinced that these will bring clear benefits for the acquirer, which would then translate into higher abnormal returns in the stock market[15].

In what concerns the method of payment, variable METPAY, the results are consistent with those of Franks et al (1991), who refer that performance differences for the bidders in acquisitions paid in cash or stock exchange are not statistically significant. Nevertheless, these results are in contrast with the works of Asquith et al (1983), Travlos (1987), Eckbo and Langohr (1989) and Kaplan and Weisbach (1992), according to which bidders have poorer results when the acquisition is stock-financed, reflecting a low assessment of its assets-in-place. It is important to note that, as in the case of hostile offers, the small number of offers where the method of payment wasn't exclusively cash can be the reason for why these variables have a low explanatory power for the bidders' abnormal returns. Another explanation could be that, according to the Lei Sapateiro capital market regulations, stock offers should always have an alternative in cash, with investors being able to freely choose between the two. The variable LEGIS has a positive impact in the bidders' abnormal returns, although it is not significant at conventional levels.

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[15] For instance, if financial resources are not as freely available in emerging markets in comparison to more developed markets, companies might be more choosy when looking at hostile targets.

Target Firms

Table 14 shows the descriptive statistics for the independent variables used in the regression[16]:

**Table 14 – Descriptive statistics for the independent variables
for the target firms.**

	Mean	Std. Deviation	N
TARLS	0.512	0.243	49
TOEH	0.453	0.329	49
TARTOB	1.137	0.512	49
TARPERF	0.003	0.613	49
RELSIZE	6.138	4.274	49
HOST	0.122	0.331	49
METPAY	0.878	0.331	49
INDREL	0.837	0.373	49
LEGIS	0.714	0.456	49

Legend:

TARLS – Targets equity owned by large shareholders;

TOEH – Acquirers Toehold;

TARTOB – Targets Tobin's q;

TARPERF – Targets performance two years before the offer announcement;

RELSIZE – Relative Size;

HOST – Hostility;

METPAY – Method of payment;

INDREL – Industry relatedness;

LEGIS – Legislation dummy.

The larger shareholders own, on average, 51.2% of the target firm. Bidding firms have large toeholds in the targets, on average, 45.3%. The acquiring firm is 6.1 times bigger than the target firm. Only 12.2% of the tender offers were hostile. The method of

payment mostly used was cash (almost 88% of the cases). About 83.7% of tender offers were industry related and 71.4% were launched during the period of "Lei Sapateiro" legislation.

Correlation coefficients are presented in Table 15.

Table 15 – Pearson Correlation analysis for the explanatory variables of the CARs of the Targets in the period (-40;+40)

	CARS	TARLS	TOEH	TARTOB	TARPERF	RELSIZE	HOST	METPAY	INDREL	LEGIS
CARS	1.000	-0.566	-0.587	-0.320	-0.107	0.358	0.186	0.082	0.061	0.146
TARLS	-0.566	1.000	0.772	0.184	0.259	-0.126	-0.550	-0.090	0.111	-0.348
TOEH	-0.587	0.772	1.000	0.183	0.108	-0.170	-0.464	-0.089	0.061	-0.429
TARTOB	-0.320	0.184	0.183	1.000	0.384	-0.030	0.095	-0.004	-0.147	-0.081
TARPERF	-0.107	0.259	0.108	0.384	1.000	-0.083	-0.112	-0.036	-0.216	-0.161
RELSIZE	0.358	-0.126	-0.170	-0.030	-0.083	1.000	-0.059	0.148	-0.127	0.145
HOST	0.186	-0.550	-0.464	0.095	-0.112	-0.059	1.000	0.140	-0.172	0.236
METPAY	0.082	-0.090	-0.089	-0.004	-0.036	0.148	0.140	1.000	-0.165	-0.098
INDREL	0.061	0.111	0.061	-0.147	-0.216	-0.127	-0.172	-0.165	1.000	-0.035
LEGIS	0.146	-0.348	-0.429	-0.081	-0.161	0.145	0.236	-0.098	-0.035	1.000

Legend:

TARLS – Targets equity owned by large shareholders;

TOEH – Acquirers Toehold;

TARTOB – Targets Tobin's q;

TARPERF – Targets performance two years before the offer announcement;

RELSIZE – Relative Size;

HOST – Hostility;

METPAY – Method of payment;

INDREL – Industry relatedness;

LEGIS – Legislation dummy.

The results of the regression of the independent variables over the dependent variable (CARs) for the targets in the period (-40;+40) are shown in Table 16:

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[16] It wasn't possible for some firms to determine the variable ACQPERF. For this reason, our sample was slightly reduced from 52 offers to 49.

Table 16 – CARs regression for the targets during the period (-40;+40) around the announcement date of the tender offer.

	Coefficient (B)	Std. Error	t	Significance
(Constant)	0.693	0.260	2.667	0.011
TARLS	-0.595	0.304	-1.956	0.058
TOEH	-0.374	0.219	-1.707	0.096
TARTOB	-0.168	0.094	-1.790	0.081
TARPERF	0.085	0.081	1.052	0.299
RELSIZE	0.027	0.010	2.570	0.014
HOST	-0.064	0.164	-0.389	0.699
METPAY	-0.004	0.134	-0.032	0.975
INDREL	0.146	0.122	1.198	0.238
LEGIS	-0.121	0.105	-1.146	0.259
R	0.733			
R²	0.538			
R² adjust	0.431			
F	5.046			

Legend:

    TARLS – Targets equity owned by large shareholders;

    TOEH – Acquirers Toehold;

    TARTOB – Targets Tobin's q;

    TARPERF – Targets performance two years before the offer announcement;

    RELSIZE – Relative Size;

    HOST – Hostility;

    METPAY – Method of payment;

    INDREL – Industry relatedness;

    LEGIS – Legislation dummy.

The model has an explanatory power of 43.1%. The F statistic is sufficiently high to reject the null hypothesis that all independent variables have, simultaneously, a null effect on the dependent variable at a 1% level of significance. The variables of the ownership structure, TARLS and TOEH, are statistically significant at the 10% level and signed as predicted. The negative coefficient of the variable TARLS supports our hypothesis H1a that abnormal returns are smaller when the target has large shareholders, consistent with an efficient monitoring of the target in the period before

the announcement of the tender offer, leading to less inefficiencies for the bidder to correct, and therefore smaller returns for the target. Such results are consistent, among others, with the works of Jensen and Meckling (1976), Demsetz and Lehn (1985), Shleifer and Vishny (1986), Slusky and Caves (1991) and Sudarsanam et al (1996). The negative impact of TOEH[17] supports our hypothesis H2a that the higher the toehold the smaller the premium paid by the bidder for acquiring the target. This is in accordance with hubris problems being diminished by the better information that the bidder has about the value of the target (including synergies). These results are consistent with the conclusions of Hirshleifer and Titman (1990), and Stulz et al (1990). They are, however, in contrast with the model of Choudhry and Jegadeesh (1994) and the results of Franks and Harris (1989).

The target shareholders seem to gain more when their Tobin's q is lower, as it can be noticed by the negative coefficient of the variable TARTOB. This might be interpreted as being in accordance with the idea that mergers and acquisitions have a disciplinary role, but also with the theories that the target can be undervalued in the stock market. Our results are therefore consistent with hypothesis H3b and consistent with the works of Lang et al (1989), Hasbrouck (1985) and Servaes (1991). In such perspective, the market for corporate control disciplines target managers that have a bad performance, replaced them by a more capable management team.

Although it is not statistically significant at conventional levels, and contradicting the monitoring hypothesis for the occurrence of takeovers (Jensen, 1986), a good

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[17] In another experiment, the variable Tobin's q was replaced by the variable Price/Book Value. The results were similar (coefficient of -0.0573, t of -2.055 and significance of 0.047). In terms of the explanatory power of the model, R^2 adjusted, it improves marginally to 44.5%.

performance by the target in the two years preceding the announcement of the tender offer (TARPERF[18]) appears to have a positive impact in the target shareholders abnormal returns.

Regarding other control variables, one can notice that only the variable RELSIZE has a statistical significance (at the 5% level). Its coefficient suggests that target firms gain more when the relative size of the firms involved in the acquisition is more similar. Hence, these results are consistent with the works of Jarrell and Poulsen (1989) and Servaes (1991). As in the analysis of bidder returns, we could not find any statistically significant evidence of an impact of industry relatedness, hostility or method of payment in target returns. This implies that we found no strong support for the idea that bidders tend to pay with stock when they think their own stock price to be overvalued, with the market interpreting the choice of such method of payment as a negative sign for the acquiring firm. It is important to note, once again, that the reduced number of hostile offers and offers where the method of payment wasn't exclusively cash can be the reason for our results and also why they have such a low explanatory power of the targets abnormal returns. A future work on this issue would be of great importance for the case of emerging markets.

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[18] It was analysed the variable related to the acquiring firm performance during the three years that preceded the announcement of the tender offer. Consequently, our sample was reduced to 43 tender offers. The new variable presented a coefficient of 0.0057, t of 0.069 and significance of 0.946. Although the coefficient sign remains the same, the explanatory power of the model slightly improves to 50.0%.

Total Returns

Since our sample includes 21 tender offers[19] and the model has a high number of independent variables, the degrees of freedom of the regression are reduced. The results must therefore be interpreted cautiously.

Table 17 presents the descriptive statistics for the independent variables used in the total returns regression:

Table 17 – Descriptive statistics for the independent variables in the analysis of total returns.

	Mean	Std. Deviation	N
ACQLS	0.421	0.251	21
TARLS	0.527	0.212	21
TOEH	0.430	0.315	21
ACQTOB	1.234	0.401	21
TARTOB	1.182	0.475	21
ACQPERF	0.361	0.564	21
TARPERF	0.133	0.480	21
RELSIZE	5.776	6.172	21
HOST	0.191	0.402	21
METPAY	0.762	0.436	21
INDREL	0.810	0.402	21
LEGIS	0.762	0.436	21

Legend:

 ACQLS – Acquirers equity owned by large shareholders;

 TARLS – Targets equity owned by large shareholders;

 TOEH – Acquirers Toehold;

 ACQTOB – Acquirers Tobin's q;

 TARTOB – Targets Tobin's q;

 ACQPERF – Acquirers performance two years before the offer announcement;

 TARPERF – Targets performance two years before the offer announcement;

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[19] Starting from a sample of 22 tender offers, the model was applied to 21 offers, since it wasn't possible to collect all the data for one of the tender offers.

RELSIZE – Relative Size;

HOST – Hostility;

METPAY – Method of payment;

INDREL – Industry relatedness;

LEGIS – Legislation dummy.

The larger stockholders own, on average, 42.1% of the acquiring firm and 52.7% of the target firm. The toehold is once again large, on average 43.0%. The acquiring firm is 5.8 times bigger than the target firm. 19.1% of the tender offers were hostile. Cash was the preferred method of payment (76.2%). About 81.0% of the tender offers were industry related and 76.2% were launched during "Lei Sapateiro". Correlation coefficients are presented in Table 18.

Table 18 – Pearson Correlation analysis for the explanatory variables of the total abnormal returns in the period (-40;+40).

	CARS	ACQLS	TARLS	TOEH	ACQTOB	TARTOB	ACQPERF	TARPERF	RELSIZE	HOST	METPAY	INDREL	LEGIS
CARS	1.000	0.393	-0.047	0.081	0.290	0.265	0.054	0.076	-0.301	0.179	0.043	0.024	0.152
ACQLS	0.393	1.000	0.234	0.172	0.311	-0.289	0.102	0.123	-0.132	-0.233	0.156	-0.188	-0.189
TARLS	-0.047	0.234	1.000	0.203	0.236	0.086	-0.292	0.588	-0.125	-0.703	-0.055	0.072	-0.191
TOEH	0.081	0.172	0.203	1.000	0.133	0.179	-0.294	-0.242	-0.061	-0.195	-0.017	0.219	-0.502
ACQTOB	0.290	0.311	0.236	0.133	1.000	0.099	0.233	0.496	0.009	-0.116	0.158	-0.317	0.028
TARTOB	0.265	-0.289	0.086	0.179	0.099	1.000	-0.180	0.186	-0.012	-0.034	0.107	0.294	0.143
ACQPERF	0.054	0.102	-0.292	-0.294	0.233	-0.180	1.000	0.252	-0.085	0.196	-0.163	-0.454	-0.033
TARPERF	0.076	0.123	0.588	-0.242	0.496	0.186	0.252	1.000	-0.237	-0.371	0.068	-0.188	0.003
RELSIZE	-0.301	-0.132	-0.125	-0.061	0.009	-0.012	-0.085	-0.237	1.000	-0.176	0.062	-0.095	0.410
HOST	0.179	-0.233	-0.703	-0.195	-0.116	-0.034	0.196	-0.371	-0.176	1.000	0.271	-0.074	-0.014
METPAY	0.043	0.156	-0.055	-0.017	0.158	0.107	-0.163	0.068	0.062	0.271	1.000	-0.271	-0.050
INDREL	0.024	-0.188	0.072	0.219	-0.317	0.294	-0.454	-0.188	-0.095	-0.074	-0.271	1.000	0.298
LEGIS	0.152	-0.189	-0.191	-0.502	0.028	0.143	-0.033	0.003	0.410	-0.014	-0.050	0.298	1.000

Legend:

ACQLS – Acquirers equity owned by large shareholders;

TARLS – Targets equity owned by large shareholders;

TOEH – Acquirers Toehold;

ACQTOB – Acquirers Tobin's q;

TARTOB – Targets Tobin's q;

ACQPERF – Acquirers performance two years before the offer announcement;

TARPERF – Targets performance two years before the offer announcement;

RELSIZE – Relative Size;

HOST – Hostility;

METPAY – Method of payment;

INDREL – Industry relatedness;

LEGIS – Legislation dummy

The results of the regression of the independent variables over the dependent variable (CARs) in the period (-40;+40) are presented in Table 19:

Table 19 – Total CARs regression during the period (-40;+40) around the announcement date of the tender offer.

	Coefficient (B)	Std. Error	t	Significance
(Constant)	-0.408	0.374	-1.090	0.307
ACQLS	0.500	0.220	2.272	0.053
TARLS	0.066	0.421	0.156	0.880
TOEH	0.243	0.265	0.917	0.386
ACQTOB	-0.026	0.172	-0.151	0.884
TARTOB	0.174	0.113	1.533	0.164
ACQPERF	-0.061	0.120	-0.506	0.627
TARPERF	0.029	0.200	0.147	0.887
RELSIZE	-0.013	0.010	-1.384	0.204
HOST	0.253	0.195	1.296	0.231
METPAY	-0.142	0.134	-1.061	0.319
INDREL	-0.222	0.183	-1.209	0.261
LEGIS	0.325	0.186	1.747	0.119
R	0.805			
R²	0.648			
R² adjust	0.119			
F	1.226			

Legend:

ACQLS – Acquirers equity owned by large shareholders;

TARLS – Targets equity owned by large shareholders;

TOEH – Acquirers Toehold;

ACQTOB – Acquirers Tobin's q;

TARTOB – Targets Tobin's q;

ACQPERF – Acquirers performance two years before the offer announcement;

TARPERF – Targets performance two years before the offer announcement;

RELSIZE – Relative Size;

HOST – Hostility;

METPAY – Method of payment;

INDREL – Industry relatedness;

LEGIS – Legislation dummy.

The model has an explanatory power of just about 11.9%. Nonetheless, the variable ACQLS is statistically significant at a 5% level. Total returns appear therefore to be higher in the presence of a greater percentage owned by large shareholders in the acquiring firm. This suggests that the presence of such shareholders can increase the likelihood of a good assessment by the market of the prospects for an overall value creation following the announcement of the bid.

4.6 Additional tests

Returns in bull versus bear markets

An extension of our study was to explore the possibility that the observed returns may differ according to the particular climate of the stock market. Several authors have documented that capital market conditions are an importance influence in the volume of M&A activity (see for example Melicher et al, 1983) so an impact on returns is likely. Little research, however, has been produced in this regard. Table 20 reports our findings when we split returns between a "bull market" period (i.e., when overall stock market returns are positive, defined in our sample as from 1993 to 1999) and a "bear market" (i.e, when overall stock market returns are negative, defined in our sample as from 2000 to 2001):

Table 20 – Acquirer and Target Abnormal Returns during Bull (1993-99) and Bear Markets (2000-01)

Period	Acquirer CARs (-40,+40)	Target CARs (-40,+40)
Bull Market (1993-99)	9.39%	29.72%
Number of transactions	22	26
Bear Market (2000-01)	-14.69%	11.62%
Number of transactions	10	20

It can be observed in the above table not only that returns are generally higher for both targets and acquirers in the bull market period, but also that the overall (for both bull and bear markets) return close to zero for acquirers hides the fact that this seems to be the outcome of significantly positive returns in the bull market period and significantly negative returns during bear markets. For both targets and acquirers the return differentials in the two periods are statistically significant at the 1% level. Although the sample size is relatively small, the magnitude of the differential returns and its statistical significance strongly suggest that acquiring managers ought to seriously consider the timing of their acquisitions, given the strong negative impact of a bearish capital market environment, in sharp contrast with a bullish climate. Further research on this issue is clearly warranted[20].

Determinants for the weight of run-up returns in overall target returns

Given the importance of the run-up effect for target shareholders documented in this study, we also tried to investigate the determinants for the size of run-up returns as a fraction of total returns for targets. Since we are concerned with the instances where run-ups are significant, we limited our analysis to transactions where run-up returns exceed 1%. In this exploratory analysis, and given the limited literature on the determinants of the run-up relative size, we tentatively used as control variables basically the same variables as in the regression analysis above for total target returns,

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[20] To analyse if the regression results shown in Tables 13, 16 and 19 would be affected by the inclusion of a variable accounting for the bullishness of bearishness of stock market conditions at the time of the bid announcement, separate regressions were run with the inclusion of the dummy variable BULLBEAR (where 1-Bear Market and 0-Bull Market). No significant changes in the major results reported on those tables occurred, however, when such inclusion was done.

with the addition of the target CAR as an explanatory variable to control for a "CAR size effect" and the exclusion of industry relatedness[21]. Our major hypothesis, however, is that toeholds previously held by acquirers might be a significant determinant for the relative size of run-up returns. This can be due, for instance, to either (i) the building-up of the toehold position immediately before the announcement of the M&A transaction or (ii) a stronger incentive to avoid information leakage when an initial toehold is small given the potentially large cost that a strong run-up would imply considering the above documented result that run-up returns are an extra cost for acquirers. For these reasons we would thus expect a positive relationship between toeholds and the relative importance of run-up returns. Table 21 below presents the regression analysis results for the determinants of the ratio between run-up returns and total abnormal target returns where the relevant windows are (-40,0) and (-40,+40), respectively:

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[21] We excluded industry relatedness as a determinant for which we could not think of any reasonable justification for its impact on the relative size of the run-up. Such exclusion, however, does not alter the major results reported in table 21.

Table 21 – Regression Analysis of the determinants of the ratio of Target run-up CARs (-40,0) to total target CARs (-40,+40)

	Coefficient (B)	Std Error	t	Significance
(Constant)	-1.055	1.595	-0.66	0.515
TARCAR	0.736	0.900	0.82	0.422
TARLS	-3.427	1.748	-1.96	0.062
TOEH	2.611	1.434	1.82	0.081
TARTOB	0.906	0.679	1.33	0.195
TARPERF	-0.155	0.416	-0.37	0.713
RELSIZE	0.099	0.079	1.26	0.221
HOST	-1.832	0.781	-2.35	0.028
METPAY	0.435	1.008	0.43	0.670
LEGIS	0.142	0.566	0.25	0.804
R	0.627			
R^2	0.393			
R^2 adjust.	0.166			
F	1.730			

Legend:

TARCAR – Total CAR for target shareholders in the period (-40;+40);

TARLS – Targets equity owned by large shareholders;

TOEH – Acquirers Toehold;

TARTOB – Targets Tobin's q;

TARPERF – Targets performance two years before the offer announcement;

RELSIZE – Relative Size between acquirer and target;

HOST – Hostility;

METPAY – Method of payment;

LEGIS – Legislation dummy.

The results in the table above confirm our hypothesis that acquirers' toeholds are a major positive influence on the relative magnitude of run-up returns on total target abnormal returns. When larger toeholds are present, the run-up as a percentage of total target abnormal return is significantly larger (p-value of 0.08). In addition, our findings show that hostility in the M&A reduces the relative size of the run-up (possibly due to the greater care by hostile acquirers in avoiding information

leakages), while the existence of large shareholders in the target is a significantly negative influence on the relative importance of run-ups. This last effect is the result, perhaps, of smaller shareholder dispersion and liquidity or a lower degree of information leakage when larger shareholders dominate the ownership structure of the target.

Overall, and although our results here are exploratory, they point at a number of promising directions where little research has been made, not just in the context of emerging markets but also in more developed capital markets.

5 Summary and discussion of findings

This paper builds on the existing M&A literature, which is almost exclusively focused on well developed equity markets, by providing further evidence on some particularities of such transactions in an emerging market. Using a sample of 52 targets over a relatively long period of time (1989-2001) in the Portuguese market, our major results can be summarized as follows. First, we observe target abnormal returns of about 23% for tender offers for the window (-40;+40). Not only such returns are of smaller magnitude than those observed for the UK and US, but also below those shown by Ocaña et al (1997) for the Spanish market, for comparable windows. Possible explanations for this result may be either the presence, which we document, of large shareholders in both bidders (with an average of 39% held by such shareholders) and targets (51% held by those investors), or the existence of significant initial toeholds by the bidder (an average 45% of the target shares). Also we present evidence that abnormal returns for both bidders and targets are substantially lower in

bearish markets as compared to bullish markets, with acquirers experiencing sizeable negative abnormal returns in bear markets but positive ones in bull periods.

In addition, we confirm Ocaña et al's (1997) observation that the run-up effect seems to be quite high in emerging markets when comparing to the UK or US. In fact, we report evidence that the abnormal returns in the window (-40,0) before the announcement date correspond to 13%, or almost sixty percent of total returns for targets. Why this apparent information leakage is of such relative magnitude in emerging markets like Portugal or Spain (Ocaña et al, 1997) is a relevant concern, particularly since we observe, following Schwert (1996), that the existence of such run-up in target prices does not reduce the size of the return after announcement, therefore increasing the cost of the acquisition for bidders. To address such questions we undertook an exploratory analysis where we report evidence that acquirer toeholds are positively related to the relative magnitude of the run-up effect (as a fraction of total abnormal return), while hostility and the presence of large shareholders in the target have a negative impact on this. These are potentially important clues for the question of why run-ups are important in the context of M&A transactions, and particularly so in emerging markets.

Finally, we show evidence that the presence of large shareholders and toeholds in the target has a significant impact in both bidder and target returns. Specifically, we document that the presence of large shareholders in the bidding firms significantly increases returns for bidders, as well as acquirer toeholds in the target. In contrast, the existence of large shareholders in the targets and important bidder toeholds significantly reduce target abnormal returns. This is in accordance with existing models (Schleifer and Vishny, 1986, Hirshleifer and Titman, 1990), and strengthens at

the same time the argument that in emerging markets most M&A transactions seem to have distinct characteristics from those observed in well developed markets where toeholds and the presence of large shareholders are usually much smaller[22], helping to explain the differences in the size of target returns vis-à-vis those observed in well developed markets.

Some caveats should be kept in mind. Given the characteristics of the market in question (and indeed of most emerging markets), the size of the sample is relatively small, making it difficult do draw strong inferences. Also, we could not obtain enough data on managerial ownership which could be used to more refined tests on the impact of ownership structure on returns. In addition, for some smaller firms in the sample liquidity in the stock market is small, potentially affecting the ability of stock prices to reflect at all times the flow of new information to the market. Directions for future research would then naturally be the extension of this study for a larger number of emerging markets, but also an attempt to understand why in these markets the information leakage seems to be so high as compared to well developed markets, namely if this is due to insider trading, rumors, regulatory problems, the particular nature of informational asymmetries in such markets or other causes. A direction for this research was pointed out in our exploratory analysis where we uncovered the importance of toeholds and large shareholders in targets as possibly significant determinants of the relative magnitude of run-up returns. In addition, specific agency problems and corporate governance issues could also be addressed, considering the particular context of high ownership concentration, large initial toeholds, and potential conflicts with minority shareholders in M&A transactions in emerging markets.

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[22] For instance, Sudarsanam et al (1996) report that the average toehold is of 6% in the UK, while large shareholders do not exceed 11% in bidders and 16% in targets.

Finally, an also largely unaddressed question is the timing of tender offers in such markets, namely the issue of why and when do firms which to a large extent already control a listed firm suddenly decide to increase their stake by launching a tender offer for the remaining shares.

6 References

Agrawal, A. and J. Jaffe (2000), "The Post-merger Performance Puzzle." In C. Cooper and A. Gregory, eds., *Advances in Mergers and Acquisitions*, Volume 1, Stanford, CT: JAI Press, 7-41.

Agrawal, A., J. Jaffe and G. Mandelker (1992), "The Post-Merger Performance of Acquiring Firms: A Re-examination of an Anomaly", *Journal of Finance*, 47 (4), 1605-1621.

Asquith, P. (1983), "Merger Bids, Uncertainty, and Stockholders Returns", *Journal of Financial Economics*, 11, 51-83.

Asquith, P., R. Bruner and D. Mullins (1983), "The Gains to Bidding Firms from Merger", *Journal of Financial Economics*, 11, 121-139.

Asquith, P. and E. Kim (1982), "The Impact of Merger Bids on the Participating Firms' Security-holders", *Journal of Finance*, 37 (5), 1209-1228.

Becht, M., and A. Roel (1999), "Blockholdings in Europe: An International Comparison", *European Economic Review*, 43, 1049-1056.

Berger, P. and E. Ofek (1995), "Diversification's Effect on Firm Value", *Journal of Financial Economics*, 37 (1), 39-65.

Bradley, M. (1980), "Interfirm Tender Offers and the Market for Corporate Control", *Journal of Business*, 53 (4), pp. 345-376.

Bradley, M., A. Desai and E. Kim (1988), "Synergistic Gains From Corporate Acquisitions and Their Division Between the Stockholders of Target and Acquiring Firms", *Journal of Financial Economics*, 21 (1), pp. 3-40.

Chowdhry, B. and N. Jegadeesh (1994), "Pre-tender Offer Share Acquisition Strategy in Takeovers", *Journal of Financial and Quantitative Analysis*, 29 (1), 117-129.

Chung, K. and S. Pruitt (1994), "A Simple Approximation of Tobin's Q", *Financial Management*, 23 (3), 70-74.

Comment, R. and G. Schwert (1995), "Poison or Placebo? Evidence on the Deterrence and Wealth Effects of Modern Anti-takeover Measures", *Journal of Financial Economics*, 39 (1), 3-43.

Datta, D., G. Pinches and V. Narayanan (1992), "Factors Influencing Wealth Creation from Mergers and Acquisitions", *Strategic Management Journal*, 13 (13), 67-84.

Demsetz, H. and K. Lehn (1985), "The Structure of Corporate Ownership. Causes and Consequences", *Journal of Political Economy*, 93 (6), 1155-1177.

Denis, D., D. K.Denis and A. Sarin (1997), Agency Problems, Equity, Ownership and Corporate Diversification", *Journal of Finance*, 52 (2), 135-160.

Dimson, E. (1979), "Risk Measurement When Shares are Subject to Infrequent Trading", *Journal of Financial Economics*, 7, 197-226.

Dodd, P. and R. Ruback (1977), "Tender Offers and Stockholder Returns: An Empirical Analysis", *Journal of Financial Economics*, 11, 351-373.

Eckbo, B. E. (1983), "Horizontal Mergers, Collusion, and Shareholder Wealth", *Journal of Financial Economics*, 11 (1), 241-273.

Eckbo, B. E. and H. Langohr (1989), "Information Disclosure, Method of Payment and Takeover Premiums: Public and Private Tender Offers in France", *Journal of Financial Economics*, 24, 363-403.

Firth, M. (1979), "The Profitability of Takeovers and Mergers", *Economic Journal*, 89, 316-328.

Firth, M. (1980), "Takeovers, Shareholder Returns and the Theory of the Firm", *Journal of Economics*, (Mar), 235-260.

Franks, J., R. Harris and S. Titman (1988), "Means of Payment in Takeover: Results from the United Kingdom and the United States", *in Corporate Takeovers: Causes*

and Consequences, A. Auerbach (editor), National Bureau of Economic Research, Chicago.

Franks, J., R. Harris and S. Titman (1991), "The Postmerger Share-price Performance of Acquiring Firms", *Journal of Financial Economics*, 29, 81-96.

Franks, J. and C. Mayer (1996), "Hostile Takeovers and the Correction of Managerial Failure", *Journal of Financial Economics*, 40, 163-181.

Goergen, M. and L. Renneboog (2003), Shareholder Wealth Effects of European of Domestic and Cross-border Takeover Bidders, ECGI Working Paper Series in Finance Nº 08/2003.

Grossman, S. and O. Hart (1980), "Takeover Bids, The Free-rider Problem and the Theory of the Corporation", *Bell Journal of Economics*, 11, 42-64.

Hasbrouck, J. (1985), "The Characteristics of Takeover Targets: q and other Measures", *Journal of Banking and Finance*, 9 (3), 351-362.

Hirshleifer, D. and S. Titman (1990), "Share Tendering Strategies and the Success of Hostile Takeover Bids", *Journal of Political Economy*, 98 (2), 295-324.

Holderness, C. and D. Sheehan (1985), "Raiders or Saviors? The Evidence on Six Controversial Investors", *Journal of Financial Economics*, 14 (4), 555-579.

Huang, Y. and R. Walkling (1987), "Target Abnormal Returns Associated With Acquisitions Announcements: Payment, Acquisition Form, and Managerial Resistance", *Journal of Financial Economics*, 19, 329-349.

Jarrell, G. and A. Poulsen (1989), "The Returns to Acquiring Firms in Tender Offers: Evidence from Three Decades", *Financial Management*, 18,12-19.

Jensen, M. and W. Meckling (1976), "Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure", *Journal of Financial Economics*, 3 (4), 305-360.

Jensen, M. and R. Ruback (1983), "The Market for Corporate Control: The Scientific Evidence", *Journal of Financial Economics*, 11 (1), 5-50.

Kaplan, S. and M. Weisbach (1992), "The Success of Acquisitions: Evidence from Divestitures", *Journal of Finance*, 47 (1), 107-138.

Lang, L. and R. Stulz (1994), "Tobin's q, Diversification, and Firm Performance," *Journal of Political Economy*, 102, 1248-1280.

Lang, L., R. Stulz and R. Walkling (1989), "Managerial Performance, Tobin's *Q*, and the Gains from Successful Tender Offers", *Journal of Financial Economics*, 24 (1), 137-154.

Lindenberg, E. and S. Ross (1981), "Tobin's Q and Industrial Organization", *Journal of Business*, 54 (1), 1-32.

Malatesta, P. (1983), "The Wealth Effect of Merger Activity and the Objective Functions of Merging Firms", *Journal of Financial Economics*, 11 (1), 155-181.

Mandelker, G. (1974), "Risk and Return: The Case of Merging Firms", *Journal of Financial Economics*, 1 (4), 303-335.

Melicher, R., J. Ledolter and L. D'Antonio, 1983, "A Time-Series Analysis of Aggregate Merger Activity", Review of Economics and Statistics, 65, 423-430

Mikkelson, M. and R. Ruback (1985), "An Empirical Analysis of the Interfirm Equity Investment Process", *Journal of Financial Economics*, 14 (4), 523-553.

Morck, R., A. Shleifer and R. Vishny (1988), "Management Ownership and Market Valuation", *Journal of Financial Economics*, 20, 293-315.

Mueller, D. (1987), "The Corporation: Growth, Diversification and Mergers", Harwood Academic Publishers.

Myers, S. and N. Majluf (1984), "Corporate Finance and Investment Decisions When Firms Have Information That Investors Do Not Have", *Journal of Financial Economics*, 13 (2), 187-221.

Ocaña, C., J. Peña and D. Robles (1997), "Preliminary Evidence on Takeover Target Returns in Spain", *Journal of Business Finance & Accounting*, 24 (1), 145-153.

Palepu, K. (1986), "Predicting Takeover Targets: A Methodological and Empirical Analysis", *Journal of Accounting and Economics*, 8, 3-35.

Perfect, S. and K. Wiles (1994), "Alternative Constructions of Tobin's q: An Empirical Comparison", *Journal of Empirical Finance*, 1 (3/4), 313-341.

Pound, J. (1988), "The Information Effects of Takeover Bids and Resistance", *Journal of Financial Economics*, 22 (2), 207-227.

Ravenscraft, D. and F. Scherer (1989), "The Profitability of Mergers", *International Journal of Industrial Organization*, 7, 101-116.

Safieddine, A. and S. Titman (1999), "Leverage and Corporate Performance: Evidence from Unsuccessful Takeovers", *Journal of Finance*, 54 (2), 223-253.

Scherer, F. and D. Ross (1990), "*Industrial Market Structure and Economic Performance*", (3ª ed.), Houghton Mifflin.

Schipper, K. and R. Thompson (1983), "Evidence on the Capitalized Value of Merger Activity for Acquiring Firms", *Journal of Financial Economics*, 11, 85-119.

Scholes, M. and J. Williams (1979), "Estimating Betas from Nonsynchronous Data", *Journal of Financial Economics*, 5, 309-327.

Schwert, W. (1996), "Mark-up Pricing in Mergers and Acquisitions", *Journal of Financial Economics*, 41, 153-192.

Schwert, W. (2000), "Hostility in Takeovers: in the Eyes of the Beholder", *Journal of Finance*, 55 (6), 2599-2640.

Servaes, H. (1991), "Tobin's q and the Gains from Takeovers", *Journal of Finance*, 46 (1), 409-419.

Scherer, F. (1988), "Corporate Takeovers: The Efficiency Arguments", *Journal of Economic Perspectives*, 2, 69-82.

Shivdasani, A. (1993), "Board Composition, Ownership Structure, and Hostile Takeovers", *Journal of Accounting and Economics*, 16, 167-198.

Shleifer, A. and R. Vishny (1986), "Large Shareholders and Corporate Control", *Journal of Political Economy*, 94 (31), 461-488.

Slusky, A. and R. Caves (1991), "Synergy, Agency, and the Determinants of Premia Paid in Mergers", *The Journal of Industrial Economics*, 39 (3), 277-296.

Stulz, R., R. Walkling and M. Song (1990), "The Distribution of Target Ownership and the Division of Gains in Successful Takeovers", *Journal of Finance*, 45 (3), 817-833.

Sudarsanam, S. (1996), "Large Shareholder, Takeovers and Target Valuation", *Journal of Business Finance & Accounting*, 23, 295-314.

Sudarsanam, S., P. Holl and A. Salami (1996), "Shareholder Wealth Gains in Mergers: Effect of Synergy and Ownership Structure", *Journal of Business Finance & Accounting*, 23, 673-698.

Travlos, N. (1987), "Corporate Takeover Bids, Methods of Payment, and Bidding Firms' Stock Returns", *Journal of Finance*, 42 (4), 943-963.

Warga, A. and E. Welch (1993), "Bondholder Losses in Leveraged Buyouts", *Review of Financial Studies*, 6 (4), 959-982.

Weston, F., Chung, K. and Siu, J., (1998), "Takeovers, Restructuring and Corporate Governance", 2nd ed., Prentice Hall.