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VALUE CREATION IN M&A: EVIDENCE FROM POLAND

MASTER'S THESIS IN FINANCE

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BIOGRAPHY NOTE

Born in Cracow, Poland, 8th March 1983. Graduate in Finance and Banking from Cracow University of Economics in July 2007. The final degree dissertation concerned the significance of the banking sector in financing environmental protection in Poland and other EU countries. During the academic career several times granted with awards – founded by Bank Ochrony Środowiska S. A., for outstanding results in studies and best final course thesis – and scholarships, such as Socrates/Erasmus (Spain), Leonardo da Vinci (UK) and Cracow University of Economics scholarship for outstanding results in studies. The curricular part of the Master's degree at the University of Porto concluded in one year in portuguese with the final average of 16.

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ABSTRACT

This study sheds light on the particularities of mergers and acquisitions (M&A) transactions in Poland, thus contributing to the existing literature on these transactions in emerging markets. It extends previous studies on the Polish market for corporate control by focusing on a very recent period from 2004 to 2007. During this time period the Polish economy and capital markets suffered significant changes and rapid growth, among others, due to the accession to the European Union. Using a sample of 96 transactions, the value creation and distribution process for bidder and target companies is analyzed, and a detailed study on target companies is provided. The results obtained for target CAR are positive and statistically significant, but lower than those reported for other markets. A more analytical view on the target CAR, considering bid characteristics (premium, industry proximity) or acquirer characteristics (origin, listed), provides some additional findings. One of most interesting ones is that the Polish capital market apparently values more favourably M&A transaction between Polish companies. Another concerns some evidence that was uncovered of underreaction and overreaction in the Polish market, respectively in the behaviour of the shares of the target or of the bidder following the announcement of an M&A transaction. Although the CAR results are statistically different from zero for all subsamples of transactions sharing some additional particular characteristics that were analysed, the differences between sample means are not, however, statistically significant.

RESUMO

O presente estudo apresenta um conjunto de resultados relevantes para a compreensão das particularidades das transacções de fusão e aquisição (F&A) na Polónia, contribuindo deste modo para a literatura existente sobre estas operações em mercados emergentes. Este trabalho desenvolve uma extensão de estudos anteriores sobre o Mercado de controle empresarial Polaco através da focalização num período muito recente que vai de 2004 a 2007. Durante esse período a economia e mercados de capitais Polacos sofreram alterações significativas e um rápido crescimento, entre outros motivos, devido à adesão à União Europeia. Com base numa amostra de 96 transacções, a criação de valor e o processo da sua distribuição para os adquirentes e alvos são analisados e um estudo mais detalhado sobre as empresas-alvo é apresentado. Os valores obtidos para o RAC (Retorno Anormal Acumulado) do alvo são positivos e estatisticamente significativos, mas inferiores aos que têm sido evidenciados para outros mercados. Uma análise mais detalhada do RAC do alvo considerando diversas características da transacção (prémio, proximidade sectorial) ou do alvo (origem, cotação em bolsa) revela alguns resultados adicionais. Um dos mais interessantes é que o mercado de capitais Polaco aparentemente valoriza de forma mais favorável as transacções de F&A entre empresas Polacas. Adicionalmente, é apresentada evidência de *underreaction* e *overreaction*, respectivamente no comportamento das acções do alvo ou do adquirente após o anúncio de uma operação de F&A. Apesar dos resultados dos RAC serem estatisticamente diferentes de zero para todos os grupos de operações analisadas segundo diversas características adicionais, as diferenças entre as respectivas médias amostrais não se revelaram todavia estatisticamente significativas.

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1. Introduction

The market for corporate control in Poland has not been the subject of a large number of investigations and academic studies. One of the most important reasons is the fact that a remarkable intensification of M&A activities in Europe appeared at the beginning of the 90's, which was the result of a globalization process and of the expectation that the European market would expand. M&A activities were typical not only for the developed countries but became more and more popular around developing economies, being for a long time dominated by privatization process. Many studies from the early 1990s explore the restructuring effects of privatization in so-called transition economies.

The "Renaissance" of the private sector and the national stock exchange was largely determined by the development of the Polish economy and foreign investments coming to Poland. The transition process involved the redefinition of the role of private property, creation of a new architecture of ownership and a control system based on a competitive market. These were the most important pillars that later allowed the institutional and private investor to initiate their strategies of acquisitions directly on the market.

In case of all emerging markets, the adhesion to the European Union was an important factor that accelerated the process of convergence to western developed economies. Particularly in Poland it could be observed that from 2004 GDP growth reached rates between 4% to 5%, in 2007 even exceeding 5%. The restructuring process and the execution of the reform package contributed to the global favorable environment for the private sector growth. Many start-ups appeared on the Polish market, many companies found themselves expanding their business in a short time generating substantial profits. For many of them it was the best time to join other listed companies on the Warsaw Stock Exchange with a view to capture additional capital from investors.

The most active period in terms of the number of the IPOs (initial public offers) on the Warsaw Stock Exchange was 2007, when 81 new national companies and 12 foreign

ones were listed on the stock exchange. These numbers, contrasted with previous years, are quite astonishing. In 2002 and 2003, before the EU adhesion, 5 and 6 companies respectively joined the Warsaw Stock Exchange listed companies. In the following years, 2004, 2005 and 2006 there were 36, 35 and 38 IPOs respectively. The Polish capital market became more efficient, deeper, more competitive and attractive. This implies that the Polish M&A market could have become in recent years more similar to the western developed markets, which now can have a significant impact on the characteristics of M&A transactions.

The modernization of Polish economy, creation of a capital market structure and the adhesion to the European Union gave an impetus to a rapid development of the capital market and intensified private sector activity on the Warsaw Stock Exchange. Even though Polish M&A market has a relatively short history, in the last years we could witness its fast growth, especially in terms of the number and value of transactions.

The general panorama of the evolution of the Polish market for corporate control from 2004 to 2007 was marked by a constant growth in terms of the number of transactions and its value (PwC Reports 2004, 2005 ,2006). In 2004 the number of M&A transaction grew by 20% and its total value grew by 120%. The most attractive sectors for the investors were production, financial services and telecommunications. The total value of the M&A market in Poland was estimated to be 6.22 billion USD. The consolidation process observed after Polish adhesion to the EU was hugely determined by the threat of the competition from other EU markets. The structural funds also contributed to the acceleration of the consolidation process (in the form of mergers and acquisitions) in the Polish economy. In 2005 the number of transactions grew by 10% and its total value by 26%. Investors were more interested in the production, financial services, food and IT sectors to initiate their transactions. The total value of the M&A market in Poland was estimated to be 7.8 billion USD. In 2005 many Polish companies decided to conquer foreign markets and there was a significant growth in the number of outward transactions. In 2006 the M&A market grew by 24% in terms of the number of transactions. Still, one of the most attractive industries remained financial services and IT, but the Energy and Public Utility sector became the most important ones in terms of

the transactions value. In 2007 the value of the M&A transaction grew by 27%, the total value of the market being estimated as 10.7 billions USD. Still, the majority of bidders, like in the previous years, were foreign companies.

Given the existence of other studies that analyzed Polish Mergers and Acquisitions for the period 1995-2002, this study concentrates on the subsequent transactions that occurred from 2004 to 2007. In particular, this investigation focuses on the evolution and development of the Polish market for corporate control, exploring the characteristics of bidders and targets and the transactions. There are some new analysis that haven't been made in previous studies for the Polish market or that are more detailed in terms of methodology than existing ones (many of them not presenting statistical significance in the results obtained). The results are analyzed with reference to the evidence obtained in previous studies in order to discover any tendencies or other phenomena important for the M&A market participants. It also adds to the literature by extending the existing analysis for the Polish market for corporate control by studying the distribution of abnormal returns for bidders and targets depending on the characteristics of the firms involved and the transaction itself.

The reminder of the paper is organized as follows. Section 2 provides a summary of the relevant M&A literature, with special attention to the contributions that marked the investigation in the M&A area and the research dedicated to the particularities of the market for corporate control in Poland. Section 3 presents the most important legal regulations in Poland for M&A transactions for companies listed on the Warsaw Stock Exchange. Section 4 describes the data collection and sampling procedure and the methodology used. Section 5 presents the major empirical results. The final section concludes the findings and the limitation of this study and suggests directions for further research.

2. Prior Literature

2.1. International Studies Review

The broadest investigation on M&A market exists for US and UK markets due to its level of development and long tradition in event studies and market research. Anglo-Saxon studies provided the most relevant methodologies, today's standard investigation tools. Together with the development of the financial theory, these studies gave the explanation of the value creation phenomenon and its drivers in M&A transactions.

M&A literature mainly concentrates on the process of value creation and its subsequent redistribution, as well as on the market reaction in a short and long term perspectives. Different authors investigated different potential sources of value creation. Their research, although sometimes with ambiguous results, point out that there are various drivers for value creation and redistribution process occurs in different ways in M&A transactions.

The total heritage of M&A investigations can be divided in three groups. The first one focuses on the ownership variables (in terms of the participants characteristics), the second one concentrates on the transactions' characteristics and the third one on the synergy variables.

The most important findings in the first research group is Grossman and Hart (1980) study evidencing that the toehold helps bidder to make profitable acquisition and gain from the transaction. It is also a solution for the free-rider problem via a dilution mechanism. Therefore, the bidder's toehold reduces gains to target shareholders. It is in accordance with the study of Shleifer and Vishny (1986) stating that the larger the toehold, the larger the probability of a bid. Additionally, these authors reveal the importance of a large shareholder in a takeover bid. They argue that a single large shareholder in an otherwise widely dispersed shareholder structure facilitates an M&A transaction. They observe that the target is already subject to efficient monitoring from

the large shareholder, thus the value creation in post-merger period is smaller but on the other hand the premium paid is lower. The existence of a large shareholder has a negative effect on both, bidder's and target's wealth gains. Also, Stulz, Walking and Song (1990) find evidence that management shareholding has a positive impact on target shareholder wealth gains. Song and Walking (1993) conclude that lower managerial ownership increases the probability of a takeover bid, but on the other side decreases the probability of a successful bid. Another important finding is that the managerial equity has a positive impact on target shareholder wealth gains only when it is used to negotiate the terms of the acquisition, not to block it.

The ownership structure variables are linked to the agency problems. Jensen (1986) explains the relationship between the agency problems and takeovers. Extending the agency theory (Jensen and Meckling, 1976) the author analyses which mergers and takeovers are more likely to destroy rather than create value. Jensen (1986) takes the view that takeovers can be seen as evidence of the conflicts of interests between shareholders and managers, but on the other side these can be a solution for the agency problems as they play a disciplinary role. However, there is some evidence questioning the disciplinary role of M&A, for example Agrawal and Jaffe (2003) study. Mueller (1969) presents a *managerialism* hypothesis stating that M&A are the consequence of agency problems in the bidder company.

Another group of studies has focused on different transaction characteristics. One of the important finding in the study of Bradley, Desai and Kim (1988) is that hostile takeovers are more likely to create value than a friendly takeover bid. On the other side, the payment method according to Huang and Walking (1987) can have a different impact on the value creation process. They find that cash transactions create more wealth than in case of the transactions that involve payment in stock. One of the explanation is that cash transaction transmits the confidence in the success of the takeover, reduces the probability of an anti-takeover defense and the appearance of multiple bidders. Several authors document that capital market overall performance has an important impact on the frequency of M&A transactions, thus in fact giving the indication about the timing for M&A in terms of value creation. Several papers, for

example Melicher, Ledolter and D' Antonio (1983), conclude that bidders are more likely to experience positive abnormal returns in bullish markets as compared with bearish markets.

The third area of research of interest to our study is that which analyses synergy variables in the value creation process. Sudarsanam, Holl and Salami (1996) investigate the effects of synergy and ownership structure in mergers. They find that operational, financial and managerial synergies create value for both bidders and targets. They pay attention to the value increments that can be obtained when one of the companies has an imbalance between its resources and growth opportunity, and the second one has an opposite and complementary profile in terms of resources and opportunities. This is an extension to Myers and Majluf (1984) work on synergies in M&A. Another study, Lang and Stulz (1994), evidences that industry proximity has an impact on the wealth gains in M&A transactions. Companies belonging to the same sector typically experience higher abnormal returns than their counterparts in conglomerate transactions.

One issue that has to be highlighted is that, especially in case of bidders, is that the premium to be paid is very important for the value creation process. In his study, Roll (1986) presents the Winner's Curse and Hubris hypothesis. He argues that in a situation of high uncertainty, multiple bidders and bidder's self-confidence, there is a high probability of a huge dispersion of the bid values, and in consequence the risk for the winner to overpay. He concludes that there is no value creation in M&A, just a valuation error, and consequently there is a simple transfer of value between the bidder and the target.

In general terms, the vast majority of studies in M&A (Jensen and Ruback, 1983) reveals that shareholders of target companies in takeover bids experience substantial wealth gains, whereas bidders experience small positive gains or at worst wealth losses. The results are ambiguous for bidders, in case of target companies there is a consensus between the researchers that they register positive abnormal results. Bruner (2001) provides evidence that there is a general tendency for the abnormal returns to decrease as time goes by, but this does not apply to the banking sector. When it comes to a

detailed observation of market reaction to takeover bids, some authors focus on the short-term reaction, exploring, like Jarrell and Poulsen (1989), the potential existence of run-up and mark-up effects. Schwert (1996) finds no correlation between run-up and mark-up effects, which means that it is essential to maintain the bid in secret as the immediately prior performance of the target is an additional cost for the bidder. Some of the researchers argue that the short-term analysis has serious limitations. They opt for the investigations in terms of long-term effects, especially in terms of value creation and synergies. Morck et al. (1990) argue that if the acquiring company in the two years preceding the announcement of the tender offer performs poorly, the gains are lower. Agrawal et al. (1992) finds evidence that in the long-term perspective bidders suffer negative returns in the post-merger period. However, Franks et al. (1991) state that the results depend on the methodology applied.

When it comes to a geographical review of the research undertaken in the M&A area, as mentioned before, the vast majority of studies concentrates basically on the US market and recently on the UK market. Only a few studies exist on small, emerging markets, probably as a result of recent but growing interest of investors in investing and/or expanding their businesses in other markets. There are some studies on M&A in Spain, that of Ocaña, Peña and Robles (1997) who investigated the Spanish market for corporate control using a sample of transaction between 1990 and 1994. The authors stress that their work suffers from a limitation due to the fact that M&A transactions in their sample occurred in a period of particular institutional change. For the Portuguese market, still considered as an emerging market due to its level of development, there is a research done by Farinha and Miranda (2003). The authors document a larger magnitude of the run-up effect, that constitutes almost 60% of the entire abnormal returns. Their results show that some of the particularities of M&A transactions can differ in emerging markets when compared to the developed ones.

A global investigation concerning the European M&A market was carried out by Georgen and Renneboog (2003). The authors focused on large transactions that took place in Europe between 1993 to 2000. They analyzed abnormal returns for bidders and targets dividing the sample into geographical areas: England and Ireland, Germany and

Austria and Switzerland, France, Scandinavian countries, Benelux, Southern Europe, Central Europe. The results obtained are in accordance with the literature – there is a strong evidence that targets experience positive abnormal returns, whereas for bidders the conclusion is ambiguous – some of the acquiring companies experience positive abnormal returns, others negative ones. They conclude that in a situation when a UK target or bidder is involved, the abnormal returns are almost twice as high as bids involving both a target and a bidder from Continental Europe.

The interest in transition economies is constantly growing as these are attractive for many foreign investors. There is some research on the young economies from Central and Eastern Europe that shed light on its capital market peculiarities. A very recent investigation of Pop (2006) on the Romanian market for corporate control shows that such market is of an atypical kind. The result of the study cannot be generalized as it is focused on the companies that have been privatized. The result of the study is that the targets' abnormal returns in the announcement period are not statistically significant. The author concludes that the possible explanation is that investors include in their valuations information about the scope of expropriation potential via pre-event insider trading, as well as the effective corporate restructuring perspective.

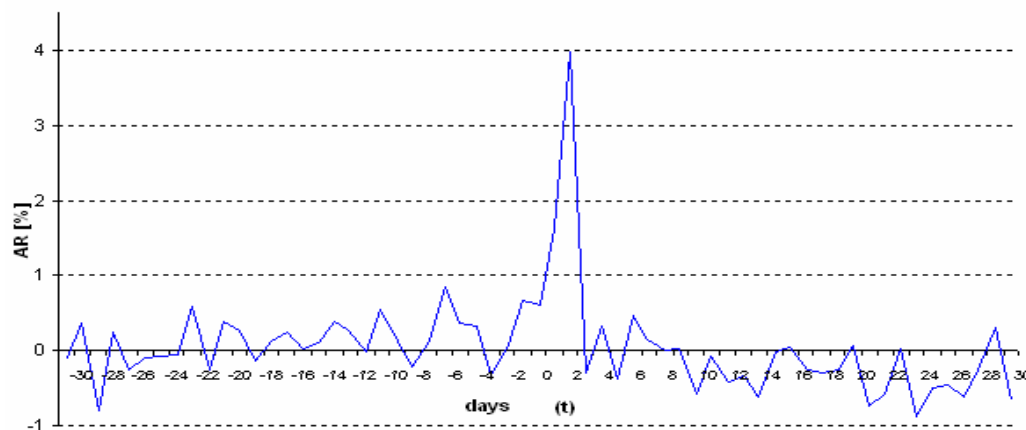
2.2. M&A in Poland – Review of Previous Studies

The Polish market for corporate control in the past has not received a lot of attention in the academic research. One of the most relevant investigations on M&A transactions in Poland was made at Poznań University of Economics. Lewandowski (2001) analyzed a sample of transactions that occurred between 1998-1999 and 1998-2000 and confirm the results obtained in similar studies for Western Europe and USA that targets experience positive abnormal returns. Another conclusion the author came to was that in the case of the American market when the transaction succeeded, the CAR is typically quite stable, around + 20%. If the transaction failed, the CAR was falling. On the contrary, the reaction of Polish capital market showed positive and stable CAR levels irrespective of the final result of the transaction. The explanation provided is that in the

American case the market reaction transmits the disappointment of the investors, but in the Polish case it could be viewed as a simple speculation activity.

Another relevant academic investigation was carried out by Zygula (2004) in his PhD thesis at the Cracow University of Economics. The author analyzed a sample of transactions that involved target companies listed on the Warsaw Stock Exchange. The M&A transactions took place between 1995 and 2001. The same methodology was applied as in Poznań University of Economics research in order to maintain the comparability of the results obtained in both studies. The abnormal returns were calculated for five different event windows: -2 to +2, -5 to +5, -30 to +30, -10 to 0 and -5 to 0. The final results are presented on the following figures and subsequent tables.

Figure 1. Average Abnormal Return for Targets for the Event Window -30 to +30



Source: Zygula, A. (2004), Fuzje i przejęcia spółek giełdowych w Polsce, PhD, Cracow University of Economics, p. 148

Table 1. Average Cumulative Abnormal Returns for Targets

Event window	CAR	% cases with positive CAR	t-statistics
(-30;+30)	3,08	56%	1,27
(-5; +5)	6,97	68%	4,42*
(-2;+2)	6,95	75%	5,22*
(-10; 0)	3,12	61%	2,52*
(-5; 0)	1,72	59%	1,62

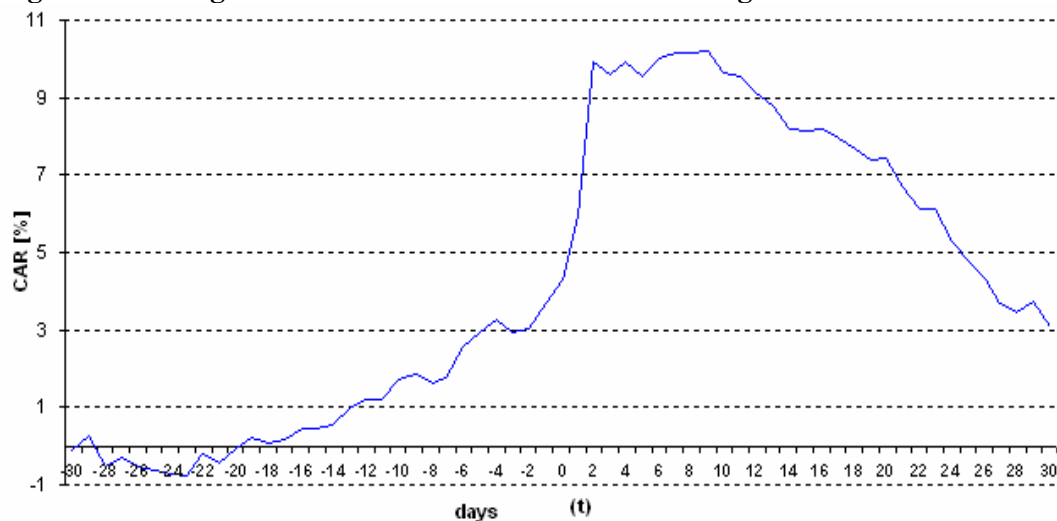
*CAR for $\alpha = 0,05$

Source: Zygula, A. (2004), Fuzje i przejęcia spółek giełdowych w Polsce, PhD, Cracow University of Economics, p. 148

The results obtained are unambiguous – targets experience positive abnormal results regardless of the event window. It is important to highlight the fact that the CAR of 3% for the event window -30 to +30 is lower and contrasts with the result of 18% for the same event window in the Portuguese market. One significant particularity that can also be observed is that the highest abnormal returns are registered in narrower time intervals, in this case between -5 to 5 and -2 to +2. The author concludes that from its evidence that the Polish capital market reaction is stronger in the short run, immediately after the announcement day. This is in accordance with previous studies carried out by Lewandowski (2001), Kamiński and Lewandowski (1998, 2000) but in contrast to the findings of Piecek (2004c).

Another peculiarity evidenced in the research is that the target cumulative abnormal return systematically rises until the moment $t=9$ days. Afterwards the tendency reverts and CAR falls. This is inconsistent with the tendency observed on other European or US markets where before the announcement date the cumulative abnormal returns are constant, around zero, and suddenly rise immediately before the event. The Polish market particularity in terms of the CAR evolution is interpreted by the author who argues that investors derive from their investment during longer time interval.

Figure 2. Average Cumulative Abnormal Return for Targets



Source: Zygula, A. (2004), Fuzje i przejęcia spółek giełdowych w Polsce, PhD, Cracow University of Economics, p. 150

Table 2. Analytical View of the Average Cumulative Abnormal Return for Targets

Year	Event window	CAR	% cases with positive CAR	t-statistics
1998	(-30;+30)	9,78	69%	0,804
	(-5; +5)	8,71	69%	1,352
	(-2;+2)	9,27	92%	1,864**
	(-10; 0)	8,60	54%	2,043**
	(-5; 0)	6,76	77%	2,282*
1999	(-30;+30)	0,87	49%	0,212
	(-5; +5)	2,86	57%	2,054*
	(-2;+2)	2,95	73%	1,879**
	(-10; 0)	3,50	65%	2,152*
	(-5; 0)	1,28	54%	1,189
2000	(-30;+30)	7,12	59%	1,772**
	(-5; +5)	6,77	77%	2,279*
	(-2;+2)	4,49	64%	2,268*
	(-10; 0)	5,61	64%	2,388*
	(-5; 0)	4,03	64%	1,714
2001	(-30;+30)	-1,71	56%	0,043
	(-5; +5)	11,48	76%	2,716*
	(-2;+2)	13,57	80%	3,909*
	(-10; 0)	-1,62	56%	-0,522
	(-5; 0)	-2,07	56%	-0,705

*CAR for $\alpha = 0,05$ **CAR for $\alpha = 0,1$

Source: Zyguła, A. (2004), Fuzje i przejęcia spółek giełdowych w Polsce, PhD, Cracow University of Economics, p. 151

The Cracow University of Economics study presents also an interesting and detailed analysis of CAR in different years. The results of such decomposition is that for the shortest event window -2 to +2, in almost all years, investors experienced high positive abnormal returns, 2000 excluded. Another conclusion is that 2001 was not favorable for long-term investments in the time interval -30 to 30 or -10 to -5, as investors experienced negative abnormal returns.

In the most recent research (Piecek 2004c) on Polish M&A transactions from 1998 to 2002 are analyzed. The results are presented for three event windows: -60 to +60, -30 to +30 and -5 to +5 evidencing that Polish capital market reaction is weaker in the short time interval after and before the announcement date (Table 3).

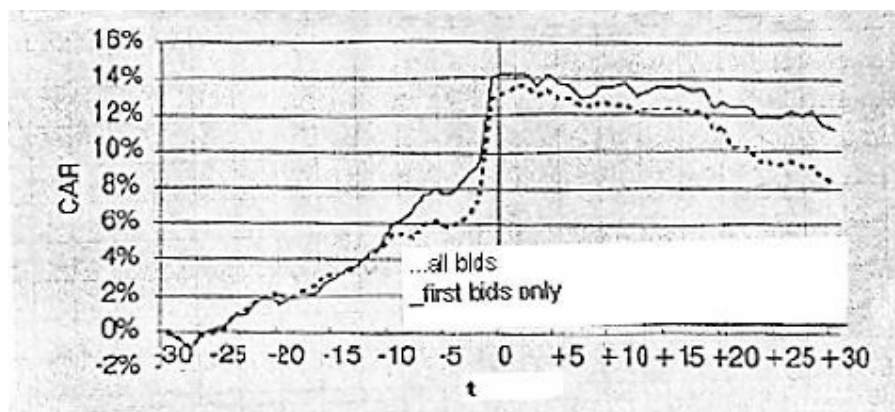
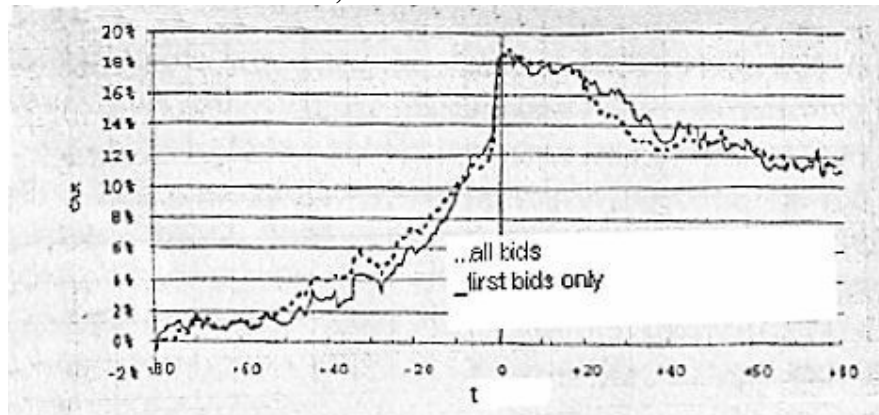
Table 3. Average Cumulative Abnormal Returns for Targets

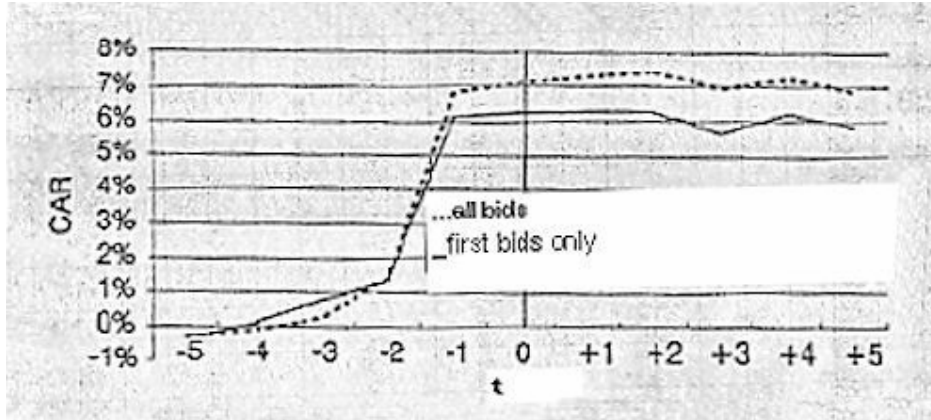
Event window	CAR
-5 to +5	6,86%
-30 to +30	8,38%
-60 to +60	11,15%

Source: Piecek, G. (2004c), Analiza ponadprzeciętnych stóp zwrotu w wyniku reakcji na informację o przejęciach i fuzjach – badania dotyczące polskiego rynku kapitałowego, *Nasz Rynek Kapitałowy*, 4/5, p. 88

The CAR evolution for the event window -80 to +80, -30 to +30 and -5 to +5 are illustrated on the following figure.

Figure 3. Average Cumulative Abnormal Returns for Target Companies for the Event Window -80 to +80, -30 to +30 and -5 to +5

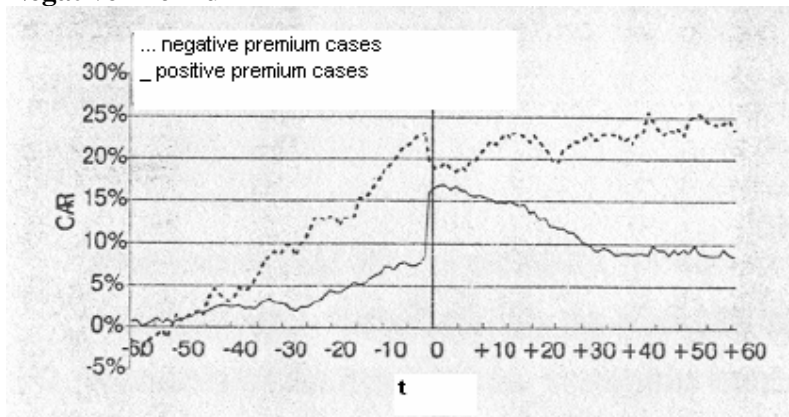


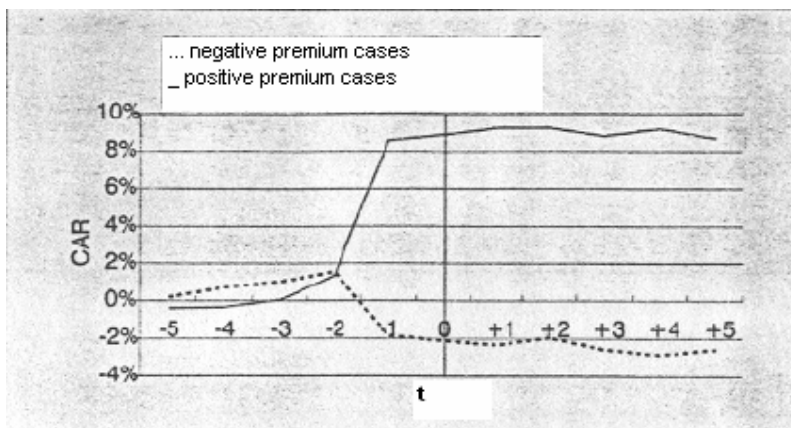
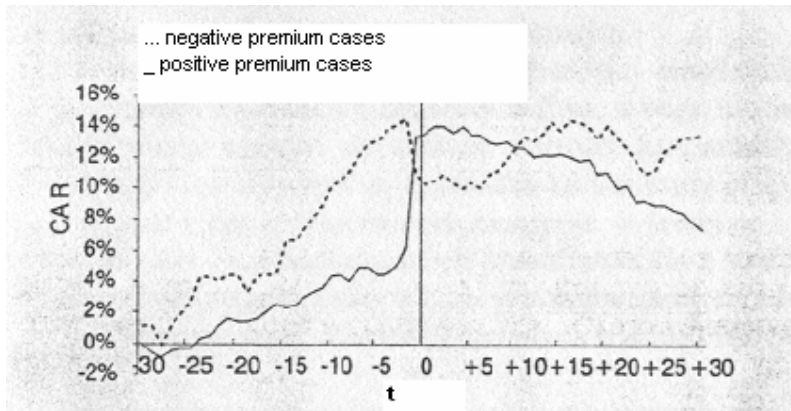


Source: Piecek, G. (2004c), Analiza ponadprzeciętnych stóp zwrotu w wyniku reakcji na informację o przejęciach i fuzjach – badania dotyczące polskiego rynku kapitałowego, *Nasz Rynek Kapitałowy*, 4/5, p. 89

Piecek also carries out the analysis on CAR dividing the sample into positive and negative premium transactions. The results show that for the positive premium cases 7-8% abnormal return is registered, both in short and medium term. The most significant growth is evidenced between $t = -20$ to $t = +5$. The author emphasizes that in the short term the capital market normally tends to reflect the bid price. The conclusion is supported by the positive CAR experienced in the positive premium transactions and negative CAR in the negative premium bids. However, in the medium and long term perspective, the CAR can be positive and significant, irrespective of the premium sign. The following figure illustrates the result obtained for the event window -60 to +60, -30 to +30 and -5 to +5.

Figure 4. Average Cumulative Abnormal Return for Targets with Positive and Negative Premium

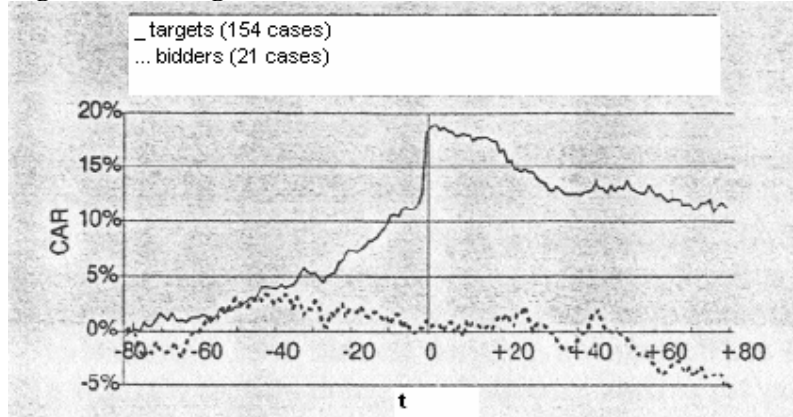




Source: Piecek, G. (2004c), Analiza ponadprzeciętnych stóp zwrotu w wyniku reakcji na informację o przejęciach i fuzjach – badania dotyczące polskiego rynku kapitałowego, *Nasz Rynek Kapitałowy*, 4/5, p. 90

When it comes to the CAR distribution between the bidder and target companies, the results are presented on the following figure (Figure 5). The analysis evidence that bidders in the short term experience almost no abnormal return ($CAR = -0,09$ for $t = -5$ to $t = +5$), while in the medium and long term perspective register losses ($CAR = -5\%$ for $t = -80$ to $t = +80$).

Figure 5. Average Cumulative Abnormal Return for Bidders and Targets



Source: Piecek, G. (2004c), Analiza ponadprzeciętnych stóp zwrotu w wyniku reakcji na informację o przejęciach i fuzjach – badania dotyczące polskiego rynku kapitałowego, *Nasz Rynek Kapitałowy*, 4/5, p. 90

The author also points out some other important aspects and particularities of the market for corporate control. Piecek (2004a, 2004b) has driven its attention to the redistribution of the value in M&A transactions highlighting that the process transmits the level of risk associated to the bidder and target in terms of the probability and certainty of the wealth gains from operational or financial synergies. Also, the author argues that conglomerate transactions are considered to be less risky than the ones focused on the diversification and that the probability of success is higher when the bidder acquires smaller companies from the same sector, rather than larger ones. These results are in accordance with the literature on M&A. However, the author does not present any statistical test for his hypothesis and results. In the long term perspective, according to the author, the investors' final assessment of the transaction is influenced by the actions of large investors. Large investors may lead to an inefficient exploitation of the company's value at the expense of the remaining investors. This leads to the apparent lack of efficiency of the takeover, but gives a substantial wealth gain to the large shareholders. Some similar conclusion, however more reserved, were presented in Trojanowski (2005) investigation that studies the equity block transfers in Poland in M&A transactions.

The research on Polish M&A transactions concludes that the Polish capital market reacts in a weaker way to the tender offer announcement, if compared with other

European or US market. The authors argue that probably in many transactions the real transfer of control occurred outside the Stock Exchange and there was a significant bidder toehold in target companies. Thus the takeover bid announcement should be seen as a fulfillment of a formal regulation. This contributed to the weaker market reaction as the announcement date did not necessarily match the date the information about the takeover leaked.

Other part of research concentrates on the premiums paid in the M&A transactions in Poland. Expected synergies justify the premium in every market, but they can differ in levels. Lewandowski and Stryzik (2000a, 2000b) conclude that on the Polish market for corporate control there are normally lower premiums, between 0% and 20%, compared to the mature markets where the premium rounds on average 40%. According to the authors' view one of the possible explanations are that the vast majority of transactions investors were increasing their toehold or even control stake, the lower level of competitiveness of Polish market for corporate control, which implies few transactions and investors being cautious when establishing the bid price or existing legal obligations that force bidders to make certain and sometimes repetitive announcements.

In the light of previous literature on M&A transactions the Polish market for corporate control reveals itself as of an atypical kind when compared with the most developed markets, having many characteristics observed in other emerging markets. However it is worth noting that the vast majority of studies occurred before 2004, that is before Poland adhered to the European Union. This paper focuses on the transactions that occurred after 2004, especially on potential changes on the M&A market due to the fast growth of the Polish economy, the tendency in the value creation process and its distribution and premium levels paid by bidders initiating a takeover transaction. It is extremely important for investors to have the information about the existence and range of the Polish convergence process to other developed markets as it may influence the interest in this market.

3. Legal Background

3.1. General European Legislation for M&A

The European standards for M&A transactions regarding public companies are stipulated in the XIII Directive (Directive nr 2004/25/WE) of the European Parliament and Council. According to the essence of a directive as a legal document, it plays an important role of guidance for all member countries when establishing their own law. The XIII Directive basically brings up the most important issues concerning M&A transactions in all EU countries. It highlights the fact that it is crucial for the community to have a homogeneous regulation and that there is a necessity to protect the investors, as well as to guarantee free capital flows. The Directive focuses on small investor protection, whose market power is limited. Thus, the EU regulation suggests that minority shareholders cannot be prejudiced in any public offer, especially in terms of price. Therefore it indicates a general rule for the bid price calculation, as well as the necessity of the existence of compensation mechanisms, should the small shareholders' rights be violated in any form. Another fundamental aspect for small investors is the protection against insider trading. The Directive emphasizes the importance of the existence of a legal obligation for bidders to inform other market participants and supervisory institution about the intention to acquire another company. Thus, it draws member countries' attention to the significance of the prompt announcement of a bid offer as well as the establishment of a minimum content of a public offer. In accordance to the Directive, a public offer should at least contain the information about the conditions of the offer, identification of the bidder, stock indication the offer refers to, remuneration and possible compensation should any rights be violated, minimum and maximum stake the bidder is ready to acquire, existing toehold, bidder's intentions, expiration date of the offer, source of financing of the offer, entities dependent to the bidder, qualified investors, and an indication of the country's law that regulates the bid offer. In case of the bid price and the validity of the offer, the time interval is defined to be finally adapted by member countries in their local legislation. In order to protect the minority shareholders the Directive imposes also information obligation on the target company. The target company is obliged to issue in written from its own opinion about

the bid offer, stating, first and foremost, whether a successful bid can influence the company's performance and its development in the future, as well as the impact on the employment. On the other hand, the Directive emphasizes that the legislation of M&A transactions in all member countries should consider the necessity to protect the right to acquire other companies on the public market, but always guaranteeing the compensation mechanism, should any rights of the target be violated or suspended. Another relevant issue is the existence of the right to oblige/force the target/bidder to sell/buy its shares in order to facilitate the rights' transfer. The percentage differential proposed in the Directive is 90%-95% stake to be eligible to exercise this right.

3.2. M&A Legal Regulations in Poland

In general terms, the acquisition of shares and assets in Poland is regulated by the provisions of the Civil Code and in the case of shares, partly by the applicable regulations of the Code of Commercial Companies. In practice the general continental European trend of M&A influenced the Polish market for corporate control. The vast majority of M&A agreements are drafted following the Anglo - American model, setting out in detail all guarantees, indemnifications and exceptions. It became common practice, in the course of negotiating the deal between non listed companies, first to sign a letter of intent, a mainly non-binding legal document describing the projected scheme and the main terms of the transaction. This document often includes binding provisions for example on the exclusivity period, confidentiality protection provisions and dispute resolution, or is accompanied by separate documents regulating these issues. These documents create a certain type of legal relationship and commitment. Similarly, for the M&A transactions concerning listed companies, the official bid offer also creates a certain type of legal responsibility, explicitly defined in the law. A transparent regulation of M&A transactions of public companies is crucial in order to prevent any distortions on the capital market. The concern of Polish authorities is to provide the protection of the investors' rights as well as the stability and efficiency of the market for corporate control.

There are several relevant regulations in Polish law that apply to M&A transactions. As mentioned above, the Code of Commercial Companies (Ustawa z dnia 15 września 2000r. Kodeksu Spółek Handlowych) incorporates EU law into Polish legal system and it draws on the experience of economically advanced countries. The Code determines what kind of companies, in terms of its legal personality, can merge or be acquired. According to the Code (art. 491), private and public limited companies and limited liability companies can merge with other private and public limited companies and limited liability companies or partnerships, but the acquiring company or a newly formed company cannot be a partnership. Additionally, if a partnership merges with another partnership, a newly formed company's legal personality can be private or public limited company or limited liability company.

The XIII Directive indicates a general framework for M&A legislation in all member countries. According to the EU recommendations, the Directive has been incorporated into Polish legislation, specifying in detail all the rules binding companies participating in public bid offers. Following the EU standards, the statutory framework of acquisitions stipulates the principles according to which an investor can obtain certain levels of voting power. The relevant regulation can be found in the Act no. 184, pos.1539 of 29 July 2005 on Public Offering, Conditions Governing the Introduction of Financial Instruments to Organized Trading, and Public Companies (Ustawa z dnia 29 lipca 2005 r. o ofercie publicznej i warunkach wprowadzania instrumentów finansowych do zorganizowanego systemu obrotu oraz o spółkach publicznych). This legal act defines thresholds for which a Mandatory Bid Rule applies: 33%, 66% and 90%. These thresholds are not unique levels that oblige bidders to make a mandatory bid. The Act states that the acquisition of equities that give more than 10% of voting rights in minimum 60 days by an entity that already has more than 33% voting rights, can only be done via mandatory bid. Also, the acquisition of equities that give more than 5% of voting rights in minimum 12 months by an entity that already has at least 33% can only be done via mandatory bid. The 90% threshold applies to the forced sell/acquisition in order to transfer all control rights to a unique party. Polish regulation of M&A transactions of public companies aims to establish an equal treatment of all shareholders and eliminate any premium for any partial sales. If the bidder acquires part of the stake

in the target with a higher price than the one defined in the bid, is obliged to pay the difference to all investors that sold their stakes on the conditions stipulated in the bid. As a consequence, all target shareholders receive the same offer and have the right to benefit from any increase of the bidding price. According to the legislation, an effective acquisition process on the bid offer basis can start after seven days from the announcement day. There is no possibility to withdraw the bid offer unless another bid offer from a different bidder appears against the same target company and regarding the same type of shares. The offer document has to contain the same information as specified in the Directive. The regulation does not determine any specific rules applicable to various classes of shares. Additionally the act forbids the bidder, once the bid offer is made, to acquire the target's shares in any other way than the one described in the bid and to sell or enter into agreements or contracts that could imply the obligation to sell the target's shares during the time period the bid remains open. Furthermore, the regulation imposes the rules for bid price determination. The bid price cannot be lower than the average market price from last 6 months the equities were traded on the main market preceding the announcement date. If the shares have been trading for less than 6 months, the minimum price cannot be lower than average market price from this shorter than 6 months time period. Additionally, the bid price cannot be lower than the maximum price paid (or cash equivalent of the value of rights or things exchanged for shares) by the bidder, dependent entities, or any entities that the bidder is dependent during 12 months preceding the announcement date. Finally, the bid price cannot be lower than the average market price in the last 3 months the equities were traded on the regulated market before the announcement date. The target's obligation is to officially give its opinion about the bid offer, in two days before the acquisition can formally take place. In accordance to the Directive, Polish regulations stipulate that the acquisition of shares that give more than 90% voting rights, gives the right to the major shareholder of target to buy out all available shares and transform the company into a privately-held company. The minority shareholders are also entitled to demand the acquisition of their shares by the majority shareholder (more than 90% voting rights). In both cases, the bidding price is established according to the rules presented above.

When it comes to M&A transaction in the banking sector, another regulation applies, namely, Banking Law (Ustawa z dnia 29 sierpnia 1997 r. Prawo bankowe). The art. No. 25 states that if anyone intends to buy more than 10%, 20%, 25%, 33%, 50%, 66% and 75% of shares of a bank or if the acquisition of shares exceeds these thresholds, is obliged to obtain an approval from the Financial Supervision Authority* in order to be able to exercise its voting rights. The same applies to the situation when a bank shareholder wants to sell its shares. Another important peculiarity is that the Banking Sector Supervisory Committee can refuse its approval if there is any risk that the acquirer's influence can provoke unfavorable actions for the financial sector stability or if the financial resources provided as a payment method come from debt instruments or from unidentified origin or the residence of the acquirer that can cause difficulties to the supervision actions of the Financial Supervision Authority. Some similar regulations exist for insurance companies, namely in the Insurance Activity Act (Ustawa z dnia 22 maja 2003 r. o działalności ubezpieczeniowej). The art. No. 239 establishes similar thresholds as for banking sector but less restrictive: 10%, 25%, 50%, 75%. For the acquisition of 10% stakes, it is only necessary to inform the Financial Supervision Authority, for the remaining thresholds an adequate approval has to be issued. Also, the supervisory body can refuse its approval if the same circumstances occur as mentioned above. In the case of investment funds, the relevant regulation (Ustawa z dnia 27 maja 2004 r. o funduszach inwestycyjnych) determines the thresholds that trigger the obligation to inform the Financial Supervision Authority about the acquisitions. The thresholds are the following: 10%, 20%, 33% and 50% (art. 54). Moreover, apart from banking, insurance or investment funds sector, M&A transactions in specific areas, such as, broadcasting and air transport are subject to specific regulatory and supervisory authorities. The last relevant regulation for M&A process in Poland is the one that aims to establish rules for industrial concentration and consumer protection (Ustawa z dnia 16 lutego 2007 r. o ochronie konkurencji i konsumentów). The art. No. 13 states that M&A transactions are subject to the concentration control if the total combined (national and international) turnover of both companies, bidder and target, in the year preceding the transaction was superior than 1 000 000 000 euros or if the total combined national turnover of both companies in the year preceding the transaction was superior than

* In January 2009 Financial Supervision Authority substituted Banking Supervision Authority

50 000 000 euros. These regulations apply to mergers, acquisitions, establishment of a new company by other companies or stake acquisition in another company, if this stake provided a turnover exceeding 10 000 000 euros on the Polish territory for the year preceding the transaction. The Polish Antimonopoly Office has to give its approval for the transaction to take place.

The European Commission has an exclusive jurisdiction for mergers between companies with a combined worldwide turnover of at least €5 billion and a turnover within the European Economic Area of more than €250 million each. In consequence, the approval of the merger can be done in a single procedure, without the necessity to resort to the individual EU countries procedures (the "one stop shop" principle). The EU companies can take advantage of the "one stop shop" principle when they would be legally obliged to notify about the merger the Supervisory Institution in three or more Member States. The "One stop shop" principle is of great benefit as it contributed to the cost and bureaucracy reduction and diminishes the legal uncertainty of the merger process.

In general terms, foreign involvement in M&A transactions in Poland receives the same legal treatment as equivalent Polish undertakings. However, there are some restrictions if the transaction involves direct or indirect acquisition of real estate. For this special cases specific rules apply - foreign investors as well as Polish companies controlled by foreign investors, who intend to acquire real estate in Poland or a majority stake in a Polish company, owner of real estate, should obtain a special permit from the Ministry of Internal Affairs and Administration (Art. 1, Act on acquisition of real estate by foreigners of 24 March 1920, Journal of Laws of the Republic of Poland 1996 no. 54 pos. 245 with posterior changes (Ustawa z dnia 24 marca 1920 r. o nabywaniu nieruchomości przez cudzoziemców, Dz. U. 1996 nr 54 poz. 245 z późniejszymi zmianami). The purpose of this restrictive regulation is to protect the Polish real estate market. However, it does not apply to companies from the European Economic Area (EEA), unless the transaction involves the acquisition of agricultural or forest land, or second houses. In that case, the official approval from the Ministry of Internal Affairs and Administration is still required.

The legal and institutional environment for M&A transactions in Poland attained a very high degree of compliance with European standards. More transparent regulations contribute for the progress in the harmonization of Polish corporate law and create favorable conditions for the private sector activity and promotes efficiency and competitiveness to determine its future evolution, existence and role on the market for corporate control.

4. Data and Methodology

4.1. Methodology Applied

The analysis of the market reaction to the announcement of M&A in Poland follows the standard approach for event studies. The existence of statistically significant positive cumulative abnormal returns means that M&A transactions produce wealth gains for the shareholders.

The general framework for event studies consists of three important pillars: the sampling process, the determination of the announcement date and the determination of the event window to capture all the effects of the event on the share price. The first step is to calculate the abnormal returns, which means to determine the difference between the return recorded during the event and the “normal” return in a situation of event inexistence. In other words, the abnormal return AR is calculated for each day and for each company as the difference between the realized return R and the expected return $E(R)$.

$$AR = R - E(R)$$

The determination of R is straightforward as it implies only a simple calculation of the share market price change during the event. The estimation process for $E(R)$ is based on the market model. The model describes the relation between the returns from company shares and the return from the market portfolio. As the market portfolio is unobservable, the best solution is to consider a general market index as a proxy. The following formula presents the market model.

$$R_{it} = \alpha_i + \beta_i R_{mt} + e_{it}$$

where:

R_{it} – expected return of the share;

R_{mt} – return of the market index (in this case WIG, Warsaw Stock Exchange Index) for day t ;

β_i – measure of the sensibility of the company i towards the market;

α_i – measure of the average return during the period not explained by the market;

e_{it} – stochastic error, $\sum e_{it} = 0$.

The equation above presents the expected return from the share in two components. The first one is linearly dependent on the market index return, the second one is the idiosyncratic component that does not depend on the market. It is assumed that the effect of the event is totally described by the independent component α_i and the AR does not influence the return from the market index. In other words, if there was no event, the expected difference between the realized return and estimated return for the day t would equal zero.

In consequence, the abnormal return from the share i on the day t is calculated as the difference between realized return on that day (R_{it}) and the expected return from the share, determined on the basis of the regression estimates of α_i and β_i . These are estimates of the parameters using ordinary least squares which are the result of the regression of R_{it} over R_{mt} during the estimation window. It is assumed that the parameters are constant during the estimation and event window. The formula for the AR computation is presented below.

$$e_{it} = AR_{it} = R_{it} - (\alpha_i + \beta_i R_{mt})$$

The next step is to determine for each day of the event window the average abnormal returns for all companies, being N the number of companies in the sample:

$$AR_t = \frac{\sum_{i=1}^N AR_{it}}{N}$$

The following procedure is to calculate the cumulative abnormal return (CAR) from the day d_1 to d_2 .

$$CAR_{d_1, d_2} = \sum_{d_1}^{d_2} AR_t$$

The CAR represents the average total effect of the event for all companies during the event window. If it is statistically significant, it is a measure of the average value creation effect of the event.

To verify the CARs statistical significance, a test hypothesis approach is used. It is assumed that the CARs have normal distribution. Considering a null hypothesis that the event has no impact on the return from the shares, that is, CAR equals zero, it is possible to use a t-Student statistic for testing.

$$CAR_{d_1, d_2} \sim N(0, \sigma)$$

$$t = \frac{CAR_{d_1, d_2}}{S} \sqrt{n-1}$$

where:

σ – standard deviation in the population;

S – standard deviation of the sample, assumed to be the best estimation of σ ;

t-Student statistic has t-Student distribution with n-1 degrees of freedom;

n – number of companies in the sample.

For the final decision concerning the rejection of the null hypothesis for the admitted significance level α , the critical interval $(-\infty; -t_{\alpha/2}); (t_{\alpha/2}; +\infty)$ is defined and the critical value is determined. An optimal decision is the rejection of the null hypothesis, which means that the critical value belongs to the critical interval and finally that the event influences the CAR.

For the purpose of comparability with previous studies, namely the one carried out by Zygula (2004), the same sampling process is applied, the same computational methods and the same estimation and event windows are chosen.

For the determination of the parameters of the market model and for the estimation of abnormal returns the following formulas apply:

$$R_{it} = \frac{P_t - P_{t-1}}{P_{t-1}};$$

$$R_{mt} = \frac{I_t - I_{t-1}}{I_{t-1}}$$

where:

P_t – market price of the i share for the day t ;

P_{t-1} – market price of the i share for the previous day;

I_t – WIG market index value for the day t ;

I_{t-1} – WIG market index value for the day.

Having into consideration that the buy-sell transactions of shares on the Warsaw Stock Exchange can be unsynchronized and that the announcements on the market appear in different moments, the market price of the shares and the WIG market index value chosen are always the closing session values.

The estimation window length is the same as in the research mentioned above, that is on the basis of 240 returns, from $t=-300$ to $t=-61$. The selection of the estimation window has to consider two important aspects. On the one hand, more observations imply major robustness of the estimation. On the other hand, extending the horizon can challenge the hypothesis of the constancy of the parameters of the event window so that the parameters' constancy assumption could be admitted as met.

The event window chosen for analysis are the following: $t=-30$ to $t=+30$; $t=-5$ to $t=+5$; $t=-2$ to $t=+2$; $t=-10$ to $t=0$ and $t=-5$ to $t=0$. The announcement day is the event day $t=0$.

For a detailed analysis for target companies in section 5.2., formal statistical tests for differences between sample means are used. We employ two tests, depending on the size of the subsamples in the target companies sample. According to the methodology for such tests, a non-parametric test of Mann-Whitney is used if one of the subsamples counts less than 30 observations. If both subsamples have more than 30 observations, a standard parametric test is done.

4.2. Sample Description

This study is based on an initial set of 96 tender offers recorded in Poland between 2004 and 2007. The relevant data was gathered from the Warsaw Stock Exchange Annual Bulletins (Reports), and the archive of official mandatory announcements of listed companies during the same time period. The historical series for all companies and for the WIG market index were downloaded from the Thomson DataStream Database. The transactions selected for this study are the ones that involve target companies listed on the Warsaw Stock Exchange. The reason underlying the sample selection decision is that only in the case of listed targets is it possible to determine the event day, that is $t=0$. The sample includes full and partial acquisitions. Foreign bidders were excluded from the sample for two reasons. First, in the vast majority of cases, foreign bidders were international corporations or their subsidiaries, which creates difficulties for the determination of the market price of its shares. They are quoted on different stock exchanges worldwide. Second, the acquisitions of Polish companies were probably insignificant for their market value. Additionally, private investors or unlisted companies making a bid offer were eliminated, as it is very difficult to obtain relevant information about the value of their assets.

Form a methodological point of view, it is crucial to precisely identify the event day. The event date in this study corresponds to the announcement day of the bid, officially registered by the Supervisory Institution. Bearing in mind the importance of the event day for the final results and conclusion of the research, mergers are not taken into consideration. This is because the day of the formal announcement of the transaction

was preceded by various months of press speculations about the mergers. The exclusion of mergers guarantees that distortions can be minimized in the final result.

As mentioned above, 96 transactions have been identified for the period between 2004 and 2007 (4 years). For each of these, first, the event day was precisely identified, and next, a subsequent sample revision was made, described as follows. First of all, if the event window -30 to +30 overlapped with another event window of the same length for the same company but for a different transaction, the company was removed from the sample (criterion A). This resulted in 9 cases being deleted from the sample. Second, if the announcement day was not sufficiently distant from the Initial Public Offer of the company, that company was removed from the sample, if the requirement for a minimum of 100 returns of the estimation window was not met (criterion B). This resulted in 8 cases being removed from the sample. Also, the additional requirements had to be met for the firm to be kept in the sample: the stock was continuously quoted on the Warsaw Stock Exchange, shares were traded for more than 50% of the estimation window (criterion C), the company was not involved in the mandatory buy-sell offer (criterion D) and the offer was a single bid (criterion E). Due to the criterion C one case was eliminated. Additionally, if the stock listings were suspended during the time period overlapping the event window, the company was removed from the sample (criterion F). This resulted in one case being excluded. Also, in accordance with the standard methodology, the final sample is reduced if during the event window the targets or the bidders (listed ones) are subjected to other events, such as share-capital changes (criterion G) or dividend payment announcements (criterion H). Bearing in mind these two requirements the final sample is reviewed and no exclusions have to be made.

The following table presents all the steps of the sampling procedure.

Table 4. Sample Tender Offers Selection Criteria

	Targets	Bidders
Total number of tender offers	96	96*
(-) criterion A	8	6
(-) criterion B	6	2
(-) criterion C	1	0
(-) criterion D	0	0
(-) criterion E	0	0
(-) criterion F	1	0
(-) criterion G	0	0
(-) criterion H	0	0
Final number of firms in the sample	80	88

Source: own calculations

Therefore, in the final sample 80 transactions are considered. They are presented in the following table 5 with a general information, as well as in the appendix with a detailed description of both bidder and target companies.

Table 5. M&A Sample Transactions

Announc. Date	Bidder Full Name	Listed (Y/N)	Bidder Nationality	Target Full Name	Listed (Y/N)	Target Nationality
2004-01-26	BE4 Sp z o. o.	N	Poland	07NFI	Y	Poland
2004-02-03	Zakłady Chemiczne i Tworzyw Sztucznych Boryszew S.A.	Y	Poland	Oława	Y	Poland
2004-02-05	Hosta International AG	N	Switzerland	Wawel	Y	Poland
2004-02-13	Powen S. A.	N	Poland	WAFAPOMP	Y	Poland
2004-02-18	Zbigniew Jakubas	N	Poland	Polna	Y	Poland
2004-03-08	Carlsberg Breweries	N	Denmark	OKOCIM	Y	Poland
2004-04-08	Recordati Mediolan	N	Italy	POLFAKUTNO	Y	Poland
2004-05-12	Toruńskie Zakłady Mat. Opatrunkowych	N	Poland	POLLENAE	Y	Poland
2004-05-13	Powen SA	N	Poland	WAFAPOMP	Y	Poland
2004-06-01	LC Corp. B.V.	N	Netherlands	TUEUROPA	Y	Poland
2004-06-08	Eastbridge N.V.	N	Netherlands	NFIEMF	Y	Poland
2004-06-24	Ulma C y E S Coop.	N	Spain	BAUMA	Y	Poland
2004-07-08	WIKA Systems GmbH	N	Switzerland	MANOMETRY	Y	Poland
2004-07-28	Ulma C y E S Coop.	N	Spain	BAUMA	Y	Poland
2004-08-13	Credit Agricole Deveurope	N	France	EFL	Y	Poland

* Listed and not listed bidders. For some analysis only listed bidders are considered.

2004-09-17	Saturn Nordic Holding AB	N	Finland	SOKOLOW	Y	Poland
2004-10-27	CAIB Fund Management	N	Poland	02NFI	Y	Poland
2004-10-27	CAIB Fund Management	N	Poland	04PRO	Y	Poland
2004-10-27	CAIB Fund Management	N	Poland	09KWIAT	Y	Poland
2004-11-17	CAIB Fund Management	N	Poland	02NFI	Y	Poland
2004-11-17	CAIB Fund Management	N	Poland	04PRO	Y	Poland
2004-11-17	CAIB Fund Management	N	Poland	09KWIAT	Y	Poland
2004-11-19	Ivax Corporation	N	United States	POLFAKUTNO	Y	Poland
2005-03-02	Gloria S.a.r.l	N	Luxembourg	ENERGOPN	Y	Poland
2005-03-22	PEF V Zelmer Holding	N	Luxembourg	ZELMER	Y	Poland
2005-04-18	ZPS Lubiana	N	Poland	IRENA	Y	Poland
2005-04-22	SigmaKalon NV	N	Denmark	POLIFARBC	Y	Poland
2005-05-09	PEF V Zelmer Holding	N	Luxembourg	ZELMER	Y	Poland
2005-05-12	ZPS Lubiana, Wistil	N	Poland	IRENA	Y	Poland
2005-07-12	OPG Groep NV	N	Netherlands	ORFE	Y	Poland
2005-08-02	Ziolopec	N	Poland	JUTRZENKA	Y	Poland
2005-08-11	RR Donnelley Europe	N	United States	POLIGR	Y	Poland
2005-09-12	SEB AB	N	Sweden	BOS	Y	Poland
2005-09-21	RR Donnelley Europe	N	United States	POLIGR	Y	Poland
2005-10-04	AKJ Management S.A.	N	Poland	PEKAES	Y	Poland
2005-10-26	Forum Heat Sp z o o	N	Poland	MPECWRO	Y	Poland
2005-12-14	Manchester Securities Corp.	N	United States	08OCTAVA	Y	Poland
2005-12-17	Novator Telecom Poland	N	Island	NETIA	Y	Poland
2006-01-11	Zabrzańskie Zakłady Mechaniczne SA	N	Poland	KOPEX	Y	Poland
2006-01-18	NFI im. Eugeniusza Kwiatkowskiego SA	Y	Poland	MIDAS	Y	Poland
2006-01-20	UniCredito Italiano S.p.A	N	Italy	BANKBPH	Y	Poland
2006-01-27	Comp S.A.	Y	Poland	NOVITUS	Y	Poland
2006-01-27	Fortum Heat Polska Sp. z o.o.	N	Poland	FORTWRO	Y	Poland
2006-02-06	Logis Partners Sp. z o.o.	N	Poland	JELFA	Y	Poland
2006-02-27	Sanitas Polska Sp. z o.o.	N	Poland/Lithuania	JELFA	Y	Poland
2006-03-06	Wojciech Wajda	N	Poland	WASKO	Y	Poland
2006-03-07	KBC Verzekeringen N.V	N	Belgium	WARTA	Y	Poland
2006-03-28	PBG S.A.	Y	Poland	HYDROBUD	Y	Poland
2006-03-28	Supernova Capital S.A.	N	Poland	14ZACH	Y	Poland
2006-04-03	Saturn Nordic Holding AB	N	Finland	SOKOLOW	Y	Poland
2006-05-05	Vitkovice Holding oraz VTK Cylinders S.R.O.	N	Czech Republic	MILMET	Y	Poland
2006-06-24	Acciona S.A.	N	Spain	MOSTALWAR	Y	Poland
2006-07-04	Ansell Healthcare Europe N.V.	N	Belgium	UNIMIL	Y	Poland
2006-07-05	Narodowy Fundusz Ochrony Środowiska i Gospodarki Wodnej	N	Poland	BOS	Y	Poland
2006-07-17	Przedsiębiorstwo Hydrauliki Siłowej "Hydrotor" SA	Y	Poland	PONARFEH	Y	Poland
2006-07-26	Toruńskie Zakłady Materiałów Opatrunkowych SA	N	Poland	POLLENAE	Y	Poland

2006-08-02	TVN S.A.	Y	Poland	GRUPAONET	Y	Poland
2006-08-09	Computerland S.A.	Y	Poland	EMAX	Y	Poland
2006-09-18	Prokom Investments S.A.	N	Poland	POLNORD	Y	Poland
2006-09-21	Computerland S.A.	Y	Poland	EMAX	Y	Poland
2006-09-21	Zlomrex	N	Poland	CENSTALGD	Y	Poland
2006-09-25	Cersanit S.A.	Y	Poland	OPOCZNO	Y	Poland
2006-10-05	Shot Acquisitions Sp. z o.o.	N	Poland	POLMOSLBN	Y	Poland
2006-10-16	Carey Agri International - Poland Sp. z o.o.	N	Poland	POLMOSBIA	Y	Poland
2006-10-27	Bauer Media Invest GmbH	N	Germany	RMFFM	Y	Poland
2006-11-23	Banco Comercial Portugues S.A.	N	Portugal	Millennium	Y	Poland
2006-11-24	NFI Midas S.A.	Y	Poland	SUWARY	Y	Poland
2006-12-11	Shot Acquisitions sp. z o.o. oraz Jablonna SA	N	Poland	POLMOSLBN	Y	Poland
2006-12-21	Ansell Healthcare Europe N.V.	N	Belgium	UNIMIL	Y	Poland
2007-01-17	Carey Agri International - Poland Sp. z o.o.	N	Poland	POLMOSBIA	Y	Poland
2007-01-23	Michał Solowow	N	Poland	SYNTHOS	Y	Poland
2007-01-30	Koelner S.A.	Y	Poland	SRUBEX	Y	Poland
2007-01-31	Nutrilux s.a.r.l.	N	Luxembourg	PROVIMROL	Y	Poland
2007-02-01	Zakłady " Lentex" SA	Y	Poland	NOVITA	Y	Poland
2007-02-02	Lucjan Piłśniak	N	Poland	BEEFSAN	Y	Poland
2007-02-22	Roman Krzysztof Karkosik	N	Poland	KREZUS	Y	Poland
2007-02-23	Pamapol S.A.	Y	Poland	WILBO	Y	Poland
2007-03-27	Michał M. Lisiecki	N	Poland	POINTGROUP	Y	Poland
2007-04-17	ComArch S.A.	Y	Poland	INTERIA.PL	Y	Poland
2007-04-26	Avallon MBO SA, Kuźnia Polska Sp. z o.o	N	Poland	ZETKAMA	Y	Poland
2007-05-07	Polimex Mostostal S.A.	Y	Poland	ENERGOPN	Y	Poland
2007-05-10	Bauer Media Invest GmbH	N	Germany	INTERIA.PL	Y	Poland
2007-05-18	Nutrilux s.a.r.l.	N	Luxembourg	PROVIMROL	Y	Poland
2007-07-04	Atlantia S.A.	N	Italy	STALEXP	Y	Poland
2007-08-30	Leszek Jędrzejewski, Krzysztof Jędrzejewski, Anna Jędrzejewska	N	Poland	KOPEX	Y	Poland
2007-10-01	BBI Capital NFI S.A.	Y	Poland	ZEG	Y	Poland
2007-10-04	MIH Poland Holdings BV	N	Netherlands	GADUGADU	Y	Poland
2007-10-09	BVF Czech a.s.	N	Czech Republic	PERMEDIA	Y	Poland
2007-10-16	SIA Alta Capital Partners	N	Lithuania	MIESZKO	Y	Poland
2007-10-24	Koelner S.A.	Y	Poland	SRUBEX	Y	Poland
2007-10-30	Buskot Trading Limited	N	Cyprus	13FORTUNA	Y	Poland
2007-11-30	Keystar Holdings Limited	N	Cyprus	05VICT	Y	Poland
2007-11-30	PAI Media S.A.	N	Poland	ELEKTRIM	Y	Poland
2007-12-03	Bauer Media Invest GmbH	N	Germany	INTERIA.PL	Y	Poland
2007-12-14	Dalkia Polska S.A.	N	Poland	PRATERM	Y	Poland
2007-12-24	Desislava Investments S.a.r.l.	N	Luxembourg	ORZBIALY	Y	Poland

cases excluded from the sample

Source: Warsaw Stock Exchange Annual Bulletins, 2005, 2006, 2007, 2008

On the basis of the sample transactions, samples of listed bidder and target firms have been determined. They are presented in the following tables 6 and 7.

Table 6. Final Sample of Listed Target Companies

2004	2005	2006	2007
18 cases	10 cases	28 cases	24 cases
07NFI	ENERGOPN	KOPEX	POLMOSBIA
Oława	IRENA	MIDAS	SYNTHOS
Wawel	POLIFARBC	BANKBPH	SRUBEX
WAFAPOMP	ORFE	FORTWRO	PROVIMROL
OKOCIM	JUTRZENKA	JELFA	NOVITA
POLFAKUTNO	POLIGR	WASKO	BEEFSAN
POLLENAE	BOS	HYDROBUD	KREZUS
WAFAPOMP	PEKAES	14ZACH	WILBO
TUEUROPA	08OCTAVA	SOKOLOW	POINTGROUP
NFIEMF	NETIA	MILMET	INTERIA.PL
BAUMA		MOSTALWAR	ZETKAMA
MANOMETRY		UNIMIL	ENERGOPN
EFL		BOS	PROVIMROL
SOKOLOW		PONARFEH	STALEXP
02NFI		POLLENAE	KOPEX
04PRO		GRUPAONET	ZEG
09KWIAT		EMAX	PERMEDIA
POLFAKUTNO		POLNORD	MIESZKO
		EMAX	SRUBEX
		CENSTALGD	13FORTUNA
		OPOCZNO	05VICT
		POLMOSLBN	ELEKTRIM
		POLMOSBIA	INTERIA.PL
		RMFFM	PRATERM
		Millennium	
	SUWARY		
	POLMOSLBN		
	UNIMIL		

Table 7. Final Sample of Listed Bidder Companies

2004	2005	2006	2007
1 case	0 cases	7 cases	6 cases
Boryszew		PBG	Koelner
		Hydrotor	Lentex
		TVN	Comarch
		Computerland	Polimexms
		Computerland	BBI Capital NFI
		Cersanit	Koelner
		Midas	

Source: Warsaw Stock Exchange Annual Bulletins, 2005, 2006, 2007, 2008

The following table presents a summary of the characteristics of listed bidders and targets. Market capitalization and total assets are considered and the relevant descriptive statistics are computed in order to verify the most important characteristics of the sample.

Table 8. Summary of the Characteristics of the Acquiring Firms (Polish and Listed Companies)

	Market Capitalization	Total Assets
N	14	14
Mean	1744,66	625603,47
Std. Deviation	1874,47	630851,32
Median	1349,18	437867,50
Kurtosis	2,85	2,11
Skewness	1,72	1,62
Min	95,92	66119,00
Max	6844,74	2233914,00

(Market Capitalization expressed in mln PLN; Total Assets expressed in thousands PLN)

Source: own calculations based on the Thomson DataStream

As it can be seen from table 7, the size of the bidding firms is quite variable. In terms of market capitalization, the average size is about 1744,66 million PLN, with a maximum of 6844,74 million PLN. Due to the presence of the largest private media company, the sample is somewhat skewed. In terms of total assets, the skewness is provoked by the presence of one of the biggest construction companies.

Table 9. Summary of the Characteristics of the Target Companies

	Market Capitalization	Total Assets
N	80	80
Mean	746,39	1591637,93
Std. Deviation	2599,50	6976504,22
Median	203,41	212662,00
Kurtosis	64,45	52,78
Skewness	7,77	6,97
Min	14,85	6981,00
Max	22657,09	57349760,00

(Market Capitalization expressed in mln PLN; Total Assets expressed in thousands PLN)

Source: own calculations based on the Thomson DataStream

Also, in the sample of target companies, a great variability in market capitalization can be observed. The average is 746,39 million PLN, which represents almost 43% of the average size of the acquiring firm. The sample is very skewed both in terms of market capitalization and total assets. The companies that contribute for this high skewness are financial institution and media and telecommunications firms.

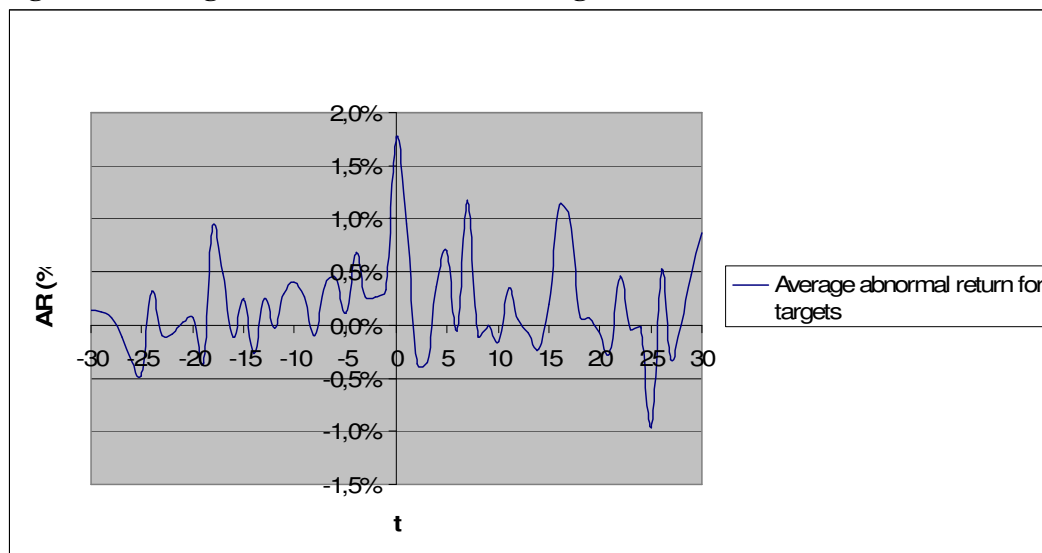
5. Empirical Results

5.1. General Results

We conducted an empirical study on CARs for both bidder and target companies. Given the fact that the sample of listed companies is more numerous for targets than for bidders, more detailed analysis can be done for target companies.

The evolution of the average abnormal return for targets can be observed on the following figure.

Figure 6. Average Abnormal Return for Targets for the Event Window -30 to +30



Source: own elaboration

As it can be seen in the Figure 6, the highest average abnormal return occurs around the announcement date. It is also worth noticing that around the 7th day before the announcement day the average abnormal return has a general growing tendency with some oscillations, and after the announcement day the average abnormal return is decreasing significantly to reach negative results around 2nd/3rd day after the announcement.

The target shareholders' abnormal returns are presented in Table 10.

Table 10. CAR for the Target Shareholders

Event window	CAR	% cases with positive CAR	t-statistics
(-30;+30)	11,66%	61,25%	3,0946*
(-5; +5)	4,53%	52,50%	2,2943*
(-2;+2)	3,07%	60,00%	1,9380**
(-10; 0)	4,27%	58,75%	2,3611*
(-5; 0)	3,21%	51,25%	2,0217*
(0;+30)	7,09%	53,75%	2,3726*

*CAR for $\alpha = 0,05$

**CAR for $\alpha = 0,1$

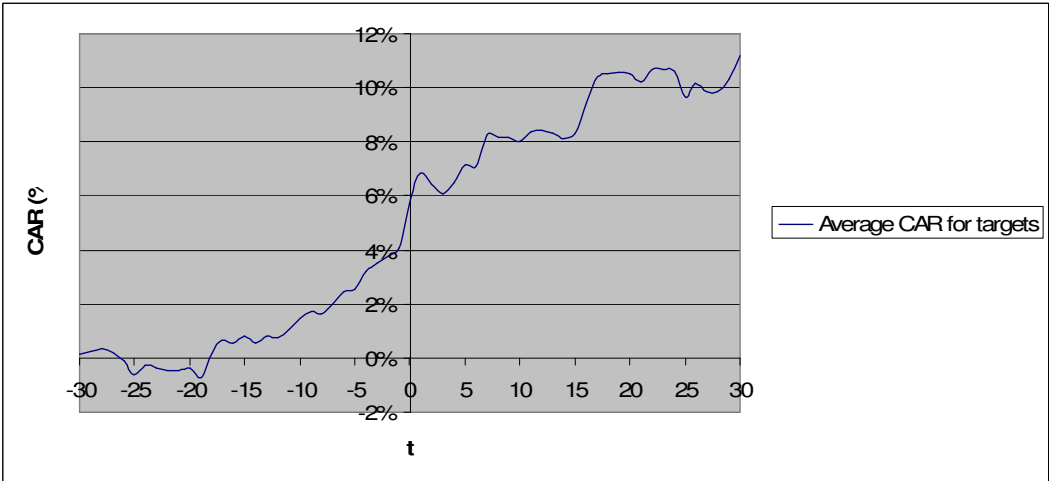
Source: own calculations

Target shareholders achieve positive gains for all event windows considered in this study. All results are statistically different from zero. In general terms, the results are smaller than those reported for developed markets where CAR normally oscillates around 30% and even smaller than those reported for other emerging markets (around 18%). Although the results are inferior in value, they are consistent with the literature.

The highest cumulative abnormal return occurs for the event window (-30; +30). The result obtained is higher than the one reported by Piecek (2004c) who documents CAR of 8,38% for the same event window. When it comes to the event window (-5; +5) the CAR of 4,53% is lower than the 6,86% reported by Piecek (2004c) and Zyguła's (2004) 6,97% result. Following Piecek (2004c) conclusion, it can be argued that target companies suffer higher positive gains in the long term, the conclusion being at the same time inconsistent with Zyguła's conclusion (2004).

The following figures 7 and 8 present CAR for target companies for different event windows. As it can be seen in the figure, the upward movement in target share prices is initiated 18 days before the announcement. However, close to the announcement day there is no such an abrupt increase as the one observed in other markets. It can be suggested that there is a leakage of information to the market about the tender offer before the announcement officially becomes public.

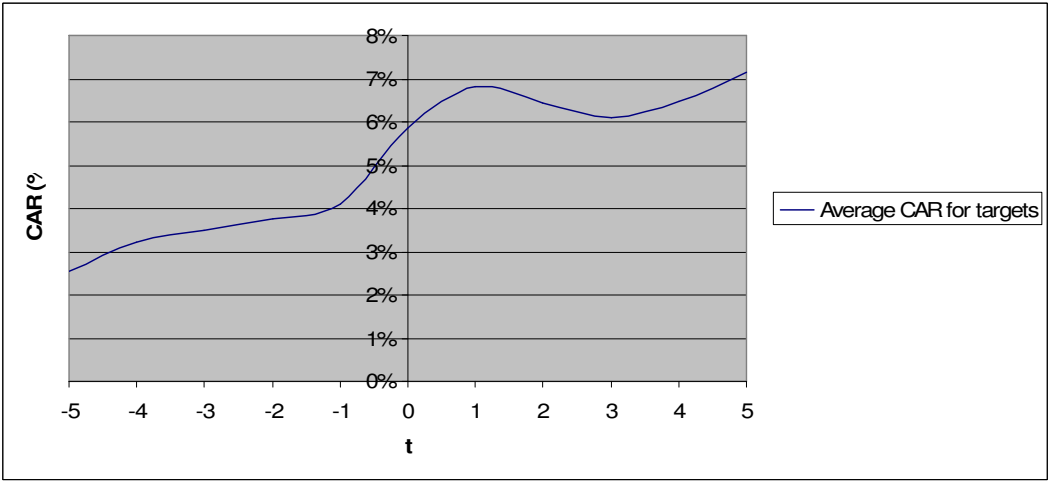
Figure 7. Average Cumulative Abnormal Return for Targets for the Event Window -30 to +30



Source: own elaboration

From figure above and from table 10 we can conclude that there is an evidence of underreaction. It can be observed that the increase seems to be of relevant magnitude and extends over time. Investors that are buying target shares immediately after the announcement and selling them 30 days after experience abnormal gains of 7% (statistically significant).

Figure 8. Average Cumulative Abnormal Return for Targets for the Event Window -5 to +5



Source: own elaboration

Taking into consideration the analytical point of view, a decomposition of previous results in separate time intervals (4 years) has been made. This way it is possible to verify in which year target shareholders experience the highest positive gains, statistically different from zero. The table below shows that in 2005 and 2006 target shareholders suffered significant positive gains (around 20%) in the event window (-30; +30). Also in 2006 and 2007 it was possible for targets to record positive gains (around 6-8%) for shorter time intervals.

Table 11. Analytical View of the Average Cumulative Abnormal Return for Targets

Year	Event window	CAR	% cases with positive CAR	t-statistics
2004	(-30;+30)	-4,33%	33,33%	-0,5060
	(-5; +5)	-3,54%	38,89%	-1,4388
	(-2;+2)	-3,08%	33,33%	-1,3196
	(-10; 0)	-2,26%	22,22%	-0,8660
	(-5; 0)	-1,90%	33,33%	-1,0911
2005	(-30;+30)	19,51%	80,00%	2,2003**
	(-5; +5)	6,87%	60,00%	1,6466
	(-2;+2)	5,18%	80,00%	1,7732
	(-10; 0)	4,12%	70,00%	1,4981
	(-5; 0)	3,20%	60,00%	1,2251
2006	(-30;+30)	21,71%	67,86%	3,4538*
	(-5; +5)	8,06%	53,57%	1,7007**
	(-2;+2)	7,08%	71,43%	1,8300**
	(-10; 0)	6,54%	35,71%	1,6674
	(-5; 0)	6,91%	57,14%	1,7242**
2007	(-30;+30)	8,09%	66,67%	1,0662
	(-5; +5)	6,36%	58,33%	2,4805*
	(-2;+2)	1,86%	58,33%	1,0778
	(-10; 0)	6,74%	66,67%	1,9756**
	(-5; 0)	3,57%	54,17%	1,8960**

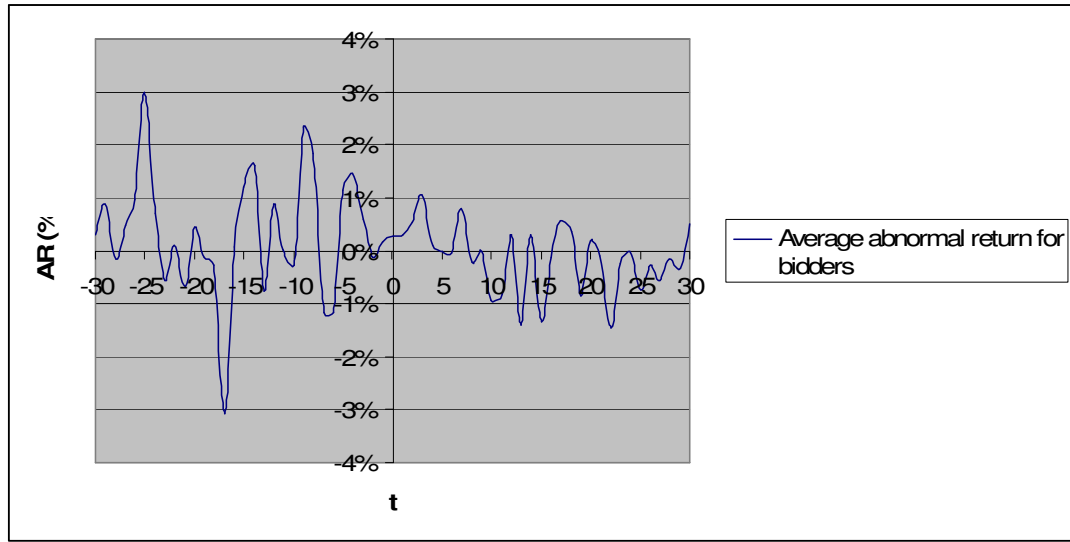
*CAR for $\alpha = 0,05$

**CAR for $\alpha = 0,1$

Source: own calculations

In what refers to bidder companies, the evolution of the average abnormal return is more variable in terms of the magnitude of changes before the announcement day. Immediately after and before the announcement day there is almost no significant increase.

Figure 9. Average Abnormal Return for Bidders



Source: own elaboration

The bidder shareholders' abnormal returns are presented in Table 12.

Table 12. CAR for the Bidder Shareholders

Event window	CAR	% cases with positive CAR	t-statistics
(-30;+30)	5,43%	42,86%	0,5828
(-5; +5)	5,46%	57,14%	1,5168
(-2;+2)	1,14%	50,00%	0,5712
(-10; 0)	5,03%	78,57%	1,7756**
(-5; 0)	3,49%	57,14%	1,3214
(0;+30)	-7,95%	21,43%	-1,9216*

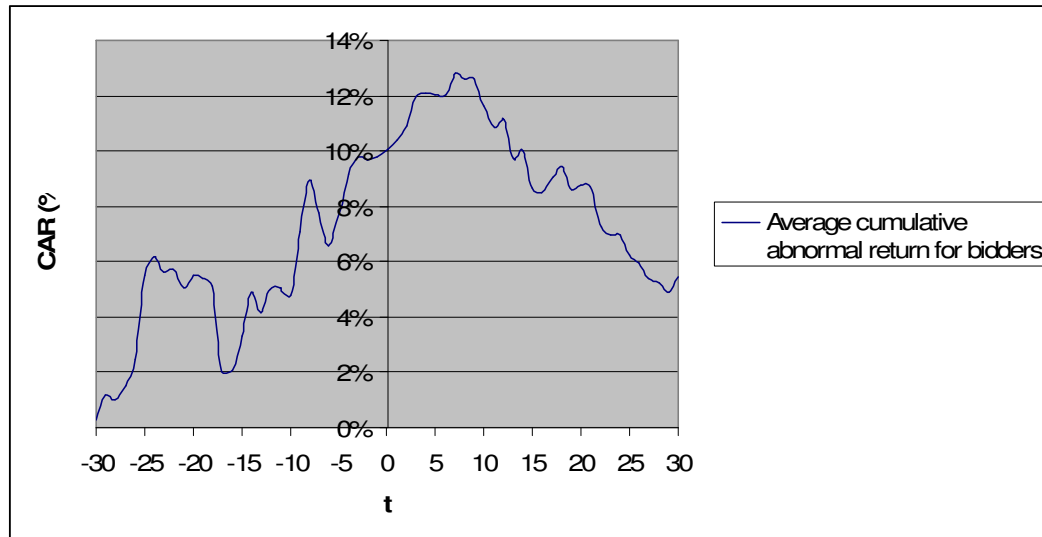
**CAR for $\alpha = 0,1$

Source: own calculations

The cumulative abnormal return for bidder shareholders for the event window (-10; 0) is statistically different from zero. Bidder shareholders experience positive gains of around 5%. For the remaining event windows the null hypothesis that the returns are equal to zero cannot be rejected. The result is consistent with the ones reported in literature, although in some studies authors report negative or null CARs for bidder companies (for example Piecek, 2004c).

The following figure presents the average cumulative return for bidders for the largest event window.

Figure 10. Average CAR for Bidders for the Event Window -30 to +30



Source: own elaboration

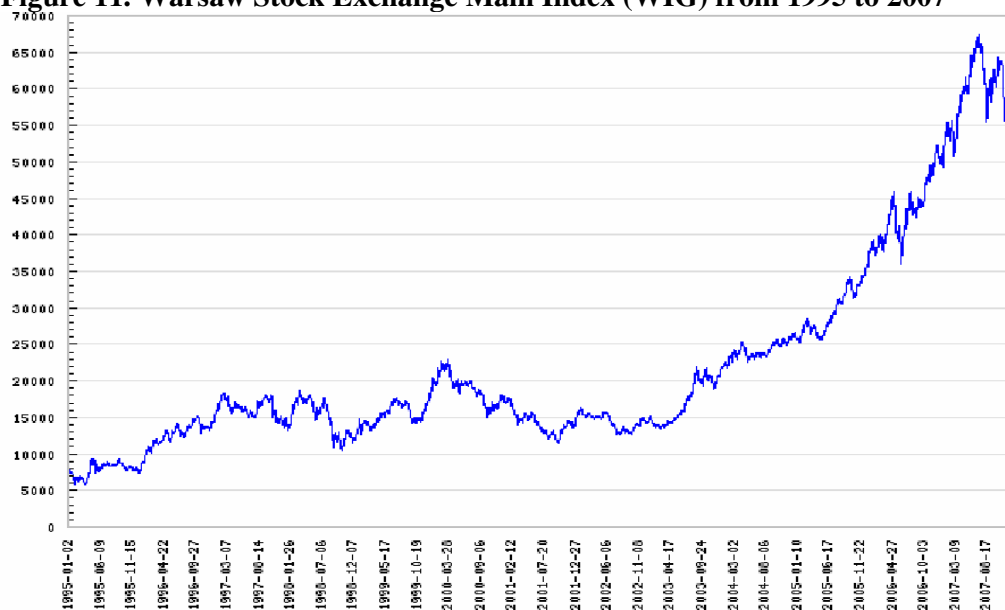
From the figure above and from table 12 we can conclude that there is some evidence of overreaction. It can be observed that a strategy of short-selling the target shares immediately after the announcement and buying them back on the market after 30 days would provide investors with a gain of almost 8% (statistically significant).

On the basis of this study and with reference to the results obtained by other authors in their studies on M&A transactions in Poland, an interesting point is to analyze any evolution, changes and tendencies occurring in the market. From the results reported in previous studies and the ones obtained in present study, it can be observed that CARs both for bidders and targets increase. In the case of bidders, the results previously reported by Piecek (2004c) were negative or null returns, whereas in this study it is documented that bidders experience positive gains. The same occurs for target companies. For the largest event window, target companies suffer higher gains. The increase is of around 3% if Piecek`s (2004c) study is considered, and 11% if compared with non statistically significant result for the event window (-30; +30) in Zyguła

(2004). On the other hand, for shorter event windows, for example (-5; +5), a decreasing tendency in CARs for targets is registered. There can be many different possible explanations to the CAR increase. The first one is that the information leakage in the most recent transactions may be lower. The second one is that the motivations underlying the M&A bids could be different (ex. synergies are less important). The third one could be linked to the major presence of international bidders in the Polish market or to the favourable climate of the stock market. Another possible explanation could arise if changes in the industry structure or in the financing of the transactions were explored. Due to the lack of access to the data of previously mentioned studies, no formal statistical test for differences between sample means can be done and none of the hypothesis suggested can be confirmed. These possible explanations are thus best left for future research.

Similarly, an analysis exploring the possibility that the observed returns may differ according to the particular climate of the stock market, cannot be done as the period analyzed in this study can be classified as “bull market” (Figure 11). The time period from 1995 to 2003/2004 can be defined as a “bear market” and we do not have data for this time period to analyze in detail.

Figure 11. Warsaw Stock Exchange Main Index (WIG) from 1995 to 2007



Source: own elaboration

5.2. Other Analysis

As mentioned above, a more detailed analysis can be carried out for target companies as the final sample contains more listed companies. The objective of the additional analysis is to verify if Polish M&A transactions have similar characteristics as their counterparts in other markets.

The literature reports that M&A transactions, whose objective is to diversify the business are more risky, thus shareholders can suffer lower gains. When the bid offer is made by the company in the same sector as that of the target company, the market reaction is typically more favourable (Lang and Stulz, 1994).

The following table presents the results obtained for target companies when their industry proximity with bidders is considered.

Table 13. CARs for Targets in Conglomerate and Non-conglomerate Transactions

Transaction type	Event window	CAR	% cases with positive CAR	t-statistics
Conglomerate	(-30;+30)	20,57%	75,00%	2,7335*
	(-5; +5)	11,06%	62,50%	1,9654**
	(-2;+2)	5,01%	62,50%	1,0637
	(-10; 0)	8,83%	66,67%	1,6573
	(-5; 0)	7,55%	58,33%	1,5542
Non-conglomerate	(-30;+30)	7,12%	55,36%	1,6700**
	(-5; +5)	1,94%	48,21%	1,3836
	(-2;+2)	2,07%	58,93%	1,9124**
	(-10; 0)	2,05%	55,36%	1,6663
	(-5; 0)	1,62%	48,21%	1,7838**

*CAR for $\alpha = 0,05$

**CAR for $\alpha = 0,1$

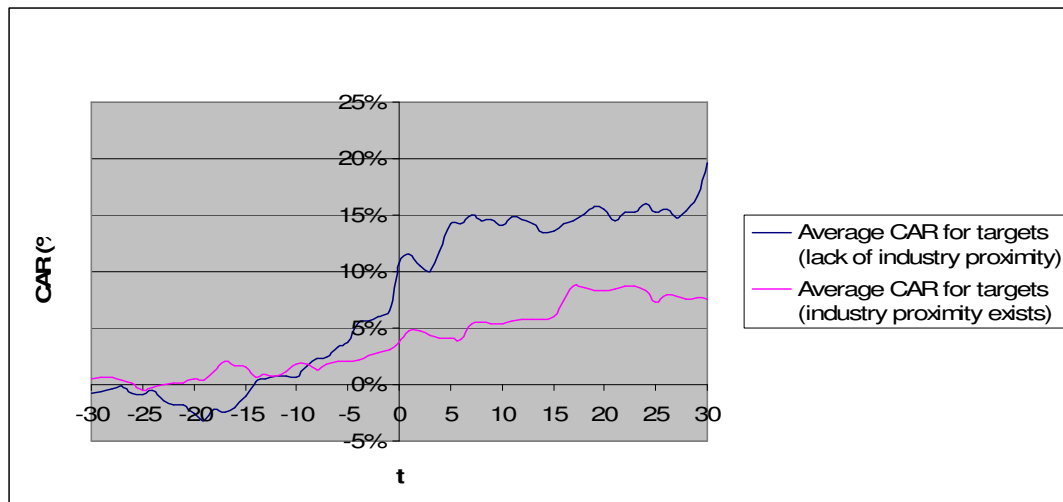
Source: own calculations

The results obtained are not consistent with the literature. Target shareholders involved in a conglomerate transaction type experience higher gains, around 20% for the largest event window, whereas their counterparts in non-conglomerate transactions around 7%.

A possible explanation of this observation is that the EU accession forced the consolidation process in the Polish market to make it possible for Polish companies to compete with other European companies entering on our market. The necessity and will to face the competition and build the potential of Polish companies as well as to diversify the business portfolio is transmitted positively by the Polish capital market. Due to the EU accession, Polish companies have more challenges, the business risk is higher, thus all the actions that aim to diversify the risk are considered by the capital market as positive ones. It can also be argued that the financial synergies enabled by the presence in a conglomerate are particularly important in Poland as it was easier for larger companies to finance their business in the banking sector or via capital market. This is in accordance with Sudarsanam et al (1996) that argue that financial synergies dominate operational synergies in a sample of M&A transactions for the UK market. This phenomenon should be subjected to further analysis in the future, bearing in mind that with the introduction, implementation and popularization in a major extent in Poland of the EU programmes and funding for small firms and micro-entrepreneurs, the situation can be reverted.

In figure 12 , the pattern of the target shareholders` CAR for the largest event window (-30; +30) is presented.

Figure 12. Average CAR for Targets in Conglomerate and Non-Conglomerate Transactions



Source: own elaboration

The analysis and interpretation of the results needs to be supported by a formal statistical test on the differences between sample means for both groups in the sample. In this case, a non-parametric test applies as one of the group counts less than 30 observations. The following table provides the relevant test statistics.

Table 14. Test Statistics for the Non-parametric Test on Differences in Sample Means (Conglomerate vs. Non-conglomerate)

	wind30	wind5	wind2	wind_10	wind_50
Mann-Whitney U	527,000	525,000	672,000	626,000	638,000
Wilcoxon W	2123,000	2121,000	972,000	2222,000	2234,000
Z	-1,522	-1,543	,000	-,483	-,357
Asymp. Sig. (2-tailed)	,128	,123	1,000	,629	,721

a. Grouping Variable: ind_prox

Source: own calculations (using SPSS software)

According to the results, there is no reason for rejecting the null hypothesis that the means are equal. Thus, the differences presented in the table 14 are not statistically significant.

The CAR experienced by target shareholders can be analysed in terms of the bidder's origin. If previous explanation for higher gains in conglomerate transaction is true, the Polish capital market should react better to the bids made by a national bidder, worse if the bidder is a foreign company. Table 15 presents the result of the analysis on the impact of bidder's origin on target shareholder's gains.

Table 15. CARs for Targets in Transactions with International and National Bidders

Bidder's origin	Event window	CAR	% cases with positive CAR	t-statistics
International	(-30;+30)	6,56%	43,48%	1,2934
	(-5; +5)	2,68%	50,00%	1,3403
	(-2;+2)	3,17%	67,65%	2,1904*
	(-10; 0)	1,81%	50,00%	1,1769
	(-5; 0)	1,20%	41,18%	1,0236
National	(-30;+30)	14,54%	63,04%	2,6650*
	(-5; +5)	6,15%	54,35%	1,9810*
	(-2;+2)	2,79%	54,35%	1,0945
	(-10; 0)	5,77%	65,22%	1,9691*
	(-5; 0)	5,02%	58,70%	1,9269**

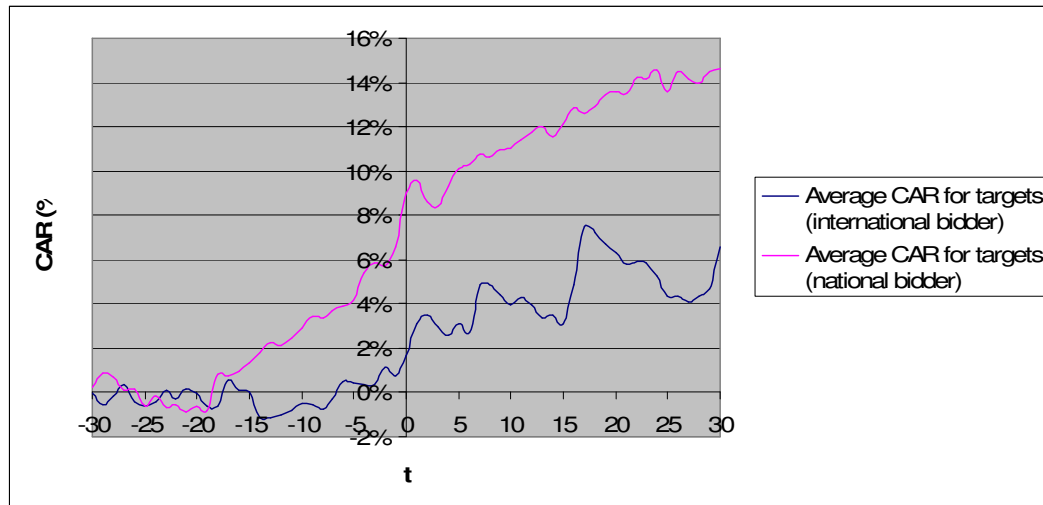
*CAR for $\alpha = 0,05$; **CAR for $\alpha = 0,1$

Source: own calculations

As it can be observed, the Polish market apparently prefers M&A transaction between Polish companies. In fact, targets involved in national transactions experience higher gains – around 14,5% for the largest event window and 5-6% for smaller ones. International transactions, where only 3% CAR statistically significant from zero can be reported for the event window (-2; +2). These results are in accordance with previous hypothesis about the Polish business local integration.

In figure 13, a graphic presentation of the pattern of the target shareholders` CAR is shown.

Figure 13. CARs for Targets in Transactions with International and National Bidders



Source: own elaboration

Also, a formal statistical test on the differences between sample means is done and results are presented in the following table. Both samples count more than 30 observations, thus a parametric test on differences in sample means is applicable.

Table 16. Test Statistics for the Parametric Test on Differences in Sample Means (National Bidder casus vs. International Bidder Cases)

		Independent Samples Test								
		Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
wind1	Equal variances assumed	1,466	,230	1,140	78	,258	,0857142	,0752066	-,0640106	,2354389
	Equal variances not assumed			1,176	77,291	,243	,0857142	,0728747	-,0593892	,2308175
wind2	Equal variances assumed	,774	,382	,930	78	,355	,0367231	,0394943	-,0419039	,1153502
	Equal variances not assumed			1,008	72,886	,317	,0367231	,0364223	-,0358683	,1093145
wind3	Equal variances assumed	,335	,564	-,098	78	,922	-,0031202	,0317923	-,0664138	,0601735
	Equal variances not assumed			-,108	68,847	,914	-,0031202	,0289448	-,0608657	,0546253
wind4	Equal variances assumed	1,416	,238	1,208	78	,231	,0436730	,0361609	-,0283178	,1156638
	Equal variances not assumed			1,336	66,148	,186	,0436730	,0326789	-,0215699	,1089159
wind5	Equal variances assumed	2,640	,108	1,245	78	,217	,0393483	,0316069	-,0235761	,1022727
	Equal variances not assumed			1,394	61,477	,168	,0393483	,0282285	-,0170893	,0957859

Source: own calculations (using SPSS software)

The results presented in the table are unambiguous - the null hypothesis that the means are equal cannot be rejected. Thus, the differences presented in the table 16 are not statistically significant.

The analysis of target CARs in relation to bidder`s characteristics can also be carried out taking into consideration whether the acquiring company is a listed one or not. Given the limited access to the data, only Polish bidders are considered. Table 17 presents the results for all event windows.

Table 17. CARs for Targets in Transactions with Listed and Unlisted Polish Bidders

Bidder	Event window	CAR	% cases with positive CAR	t-statistics
Listed	(-30;+30)	23,84%	60,00%	1,9726**
	(-5; +5)	10,00%	40,00%	1,0702
	(-2;+2)	8,66%	53,33%	1,1012
	(-10; 0)	11,17%	53,33%	1,4205
	(-5; 0)	11,17%	44,44%	1,0543
Unlisted	(-30;+30)	10,81%	62,50%	1,9004**
	(-5; +5)	4,59%	59,38%	2,2892*
	(-2;+2)	0,29%	53,13%	0,2070
	(-10; 0)	3,83%	68,75%	1,5031
	(-5; 0)	3,64%	62,50%	2,2579*

*CAR for $\alpha = 0,05$; **CAR for $\alpha = 0,1$

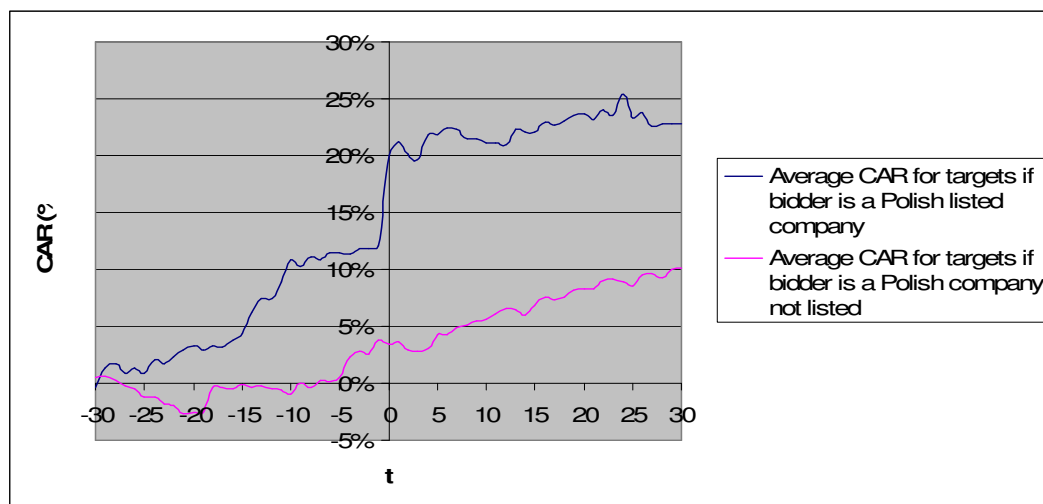
Source: own calculations

The results obtained are consistent with those reported in other studies (ex. Bargerón et al., 2007). Target shareholders in Poland experience higher gains (about 23%) if the acquiring company is a listed company. When the bidder firm is not listed, the targets' gain is close to 11%. There are different possible explanations provided by the literature. Most of these point out that the genesis of higher gains for targets if the bidder is a listed company is related to the existence of significant agency problems in listed bidder companies arising from the separation of ownership and control (Jensen and Meckling, 1976) – leading these to pay more for target companies. Bargerón et al (2007) highlight the ownership concentration as a key variable, which at the same time is consistent with the cost of failure of the bid hypothesis presented in other studies.

No coincidence between the transaction type (conglomerate/non-conglomerate) and the bidder's characteristics (listed/unlisted) exists. The variables are independent, thus there is a lack of relationship and no explanation can be provided on the basis of the transaction type.

Figure 14 presents the evolution of target shareholders' CAR for the event window (-30; +30)

Figure 14. CARs for Targets in Transactions with Listed and Unlisted Polish Bidders



Source: own elaboration

A formal confirmation of the results for both groups requires a non-parametric test on differences in sample means. Again, none of the differences in means is statistically significant.

Table 18. Test Statistics for the Non-parametric Test on the Differences in Sample Means (Listed Polish Bidder Casus vs. Unlisted Polish Bidder Cases)

	wind1	wind2	wind3	wind4	wind5
Mann-Whitney U	210,000	203,000	222,000	218,000	212,000
Wilcoxon W	771,000	308,000	783,000	779,000	317,000
Z	-,489	-,651	-,209	-,302	-,442
Asymp. Sig. (2-tailed)	,625	,515	,834	,762	,659

a. Grouping Variable: listed

Source: own calculations (using SPSS software)

Dividing the sample into positive and negative premium transactions, similar results as of Piecek (2004c) are obtained. For the largest event window, target with positive bid premiums experience gains of around 8%. In case of negative premium transactions, the targets` gain is the double of that. This result is in accordance with the long term market correction argument.

Table 19. CARs for Targers with Positive and Negative Premium Offers

Premium	Event window	CAR	% cases with positive CAR	t-statistics
Positive	(-30;+30)	8,22%	60,00%	2,3032*
	(-5; +5)	5,74%	62,22%	3,7733*
	(-2;+2)	4,09%	75,56%	3,9848*
	(-10; 0)	2,88%	62,22%	2,7177*
	(-5; 0)	2,21%	48,89%	1,8022**
Negative	(-30;+30)	16,09%	62,86%	2,1619*
	(-5; +5)	3,68%	40,00%	0,8935
	(-2;+2)	1,62%	40,00%	0,4776
	(-10; 0)	6,20%	54,29%	1,5727
	(-5; 0)	5,09%	54,29%	1,5490

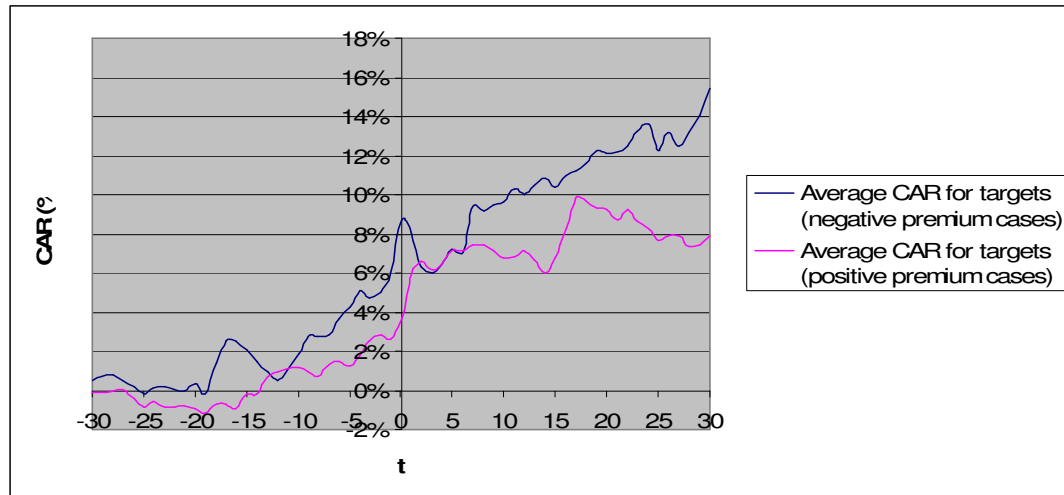
*CAR for $\alpha = 0,05$; **CAR for $\alpha = 0,1$

Source: own calculations

As it can be observed in the following figure, the market reaction in the short term is different from the long term reaction, as reported by Piecek (2004c). The positive

premium CAR pattern exceeding the negative one in the short term shortly after the announcement date reflects the market transmission of the bid price.

Figure 15. CARs for Targets with Positive and Negative Premium Offers



Source: own elaboration

Next, a parametric test on differences between sample means is done in order to verify the statistical significance of the results obtained.

Table 20. Test Statistics for the Parametric Test on Differences in Sample Means (Positive Premium casus vs. Negative Premium Cases)

		Independent Samples Test								
		Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
wind1	Equal variances assumed	8,898	,004	,996	78	,322	,0748131	,0750886	-,0746769	,2243030
	Equal variances not assumed			,932	49,997	,356	,0748131	,0803091	-,0864927	,2361189
wind2	Equal variances assumed	3,920	,051	-,551	78	,583	-,0217554	,0394969	-,1003877	,0568769
	Equal variances not assumed			-,504	43,418	,617	-,0217554	,0431599	-,1087714	,0652607
wind3	Equal variances assumed	3,380	,070	-,797	78	,428	-,0251598	,0315547	-,0879804	,0376608
	Equal variances not assumed			-,721	40,327	,475	-,0251598	,0348769	-,0956309	,0453113
wind4	Equal variances assumed	8,087	,006	,907	78	,367	,0328018	,0361796	-,0392263	,1048300
	Equal variances not assumed			,816	38,984	,419	,0328018	,0402015	-,0485143	,1141180
wind5	Equal variances assumed	1,910	,171	,903	78	,369	,0285773	,0316427	-,0344184	,0915730
	Equal variances not assumed			,827	43,559	,413	,0285773	,0345601	-,0410938	,0982485

Source: own calculations (using SPSS software)

The results obtained from the test clearly indicate that the null hypothesis cannot be rejected, therefore, none of the differences is statistically different from zero.

6. Summary and Conclusions

Due to the lack of a professional and complete database for M&A transactions in Poland providing detailed information on all the characteristics of the bids, this study has its limitations. Above all, a regression analysis of CARs over the variables related to the value creation process for bidder and target companies is difficult to be done, as it implies finding and reviewing all the documents regarding the announcement of a bid as well as the ownership structure changes during the period preceding the bid offer, also stated in the announcements of listed companies. Another obstacle is the fact that many companies do not reveal all the bid characteristics important for academic studies. The study is also limited by the fact that the official announcements of the M&A transactions where the bidder is a listed company and the target is unlisted are also spread in many different official documents, which creates difficulties in gathering the relevant data and in determination of the announcement date (the official documents contain only the conclusion date).

Bearing in mind all the existing limitations, this study nonetheless extends the literature on M&A transactions in emerging markets for transition economies. The major contribution is a detailed analysis of the Polish market for corporate control in the moment of fast growth of the economy as a whole. It can be argued that the Polish M&A market is of an atypical kind. Perhaps the most important peculiarity is the fact that the average CAR for target is lower than that reported for other emerging markets. Another surprising result is provided by the analysis of target companies' returns where evidence was found that returns are essentially the same regardless of the nationality (Polish or international) of the bidder. It is also reported evidence of both overreaction and underreaction in the Polish M&A market, respectively in the behaviour of the bidder and target shares following the announcement of the transaction. These pieces of evidence are important information for the potential participants on the Polish market for corporate control.

In addition, this study is consistent with other international evidence that unlisted firms seem to pay substantially lower premiums in the acquisition of listed targets. A more in-

depth understanding of the reasons for this fact would certainly be interesting, potentially enabling important insights on the nature of agency problems in listed versus unlisted firms in an emerging market setting such as the Polish one.

Further research can also consider a more detailed analysis on the information leakage, significant for M&A transactions in Poland, and its impact on the value creation process for bidder and target companies. It could provide an explanation why the information leakage is so high as compared to well developed markets.

Also, a more Sisyphean work could be done in order to gather the data spread in obligatory announcements provided by listed companies to the Warsaw Stock Exchange and undertake more refined tests on the significance of different variables on the stock returns by constructing a regression model.

Another interesting study on the market for corporate control could be done for other emerging markets from Western and Central Europe region. One of the possible areas to be explored is the potential impact of the EU accession on the value creation process in M&A transactions.

Appendix – M&A Sample Transactions Detailed Description

Announc. Date	Bidder Full Name	Listed (Y/N)	Bidder Nationality	Bidder Business Description	Target Full Name	Listed (Y/N)	Target Nationality	Target Business Description
2004-01-26	BE4 Sp z o. o.	N	Poland	Investment holding company	07NFI	Y	Poland	Investment fund
2004-02-03	Zakłady Chemiczne i Tworzyw Sztucznych Boryszew S.A.	Y	Poland	Chemicals, plastics, polymer additives manufacturer. Products include plastificators, adhesives, coolant and heating fluids, floor tiles, stabilizers and lubricants	Oława	Y	Poland	Primary nonferrous metals manufacturer
2004-02-05	Hosta International AG	N	Switzerland	Confectionery manufacturer	Wawel	Y	Poland	Confectionery manufacturer
2004-02-13	Powen S. A.	N	Poland	Pump and compressor manufacturing	WAFAPOMP	Y	Poland	Pump and compressor manufacturing
2004-02-18	Zbigniew Jakubas	N	Poland	Private Investor	Poła	Y	Poland	Manufacturer of industrial and heat engineering automation control devices such as valves, regulators and motor operators
2004-03-08	Carlsberg Breweries	N	Denmark	Beer manufacturing	OKOCIM	Y	Poland	Beer manufacturing.
2004-04-08	Recordati Mediolan	N	Italy	It researches, develops and manufactures pharmaceutical chemicals and diagnostics	POLFAKUTNO	Y	Poland	Pharmaceuticals manufacturer and wholesaler
2004-05-12	Toruńskie Zakłady Mat. Opatrunkowych	N	Poland	Bandages and dressings manufacturing	POLLENAE	Y	Poland	Cosmetics manufacturing
2004-05-13	Powen SA	N	Poland	Pump and compressor manufacturing	WAFAPOMP	Y	Poland	Pump and compressor manufacturing

2004-06-01	LC Corp. B.V.	N	Netherlands	Investment fund	TUEUROPA	Y	Poland	Insurance provider
2004-06-08	Eastbridge N.V.	N	Netherlands	Investment holding company with interests in media distribution	NFIEMF	Y	Poland	Investment Fund
2004-06-24	Ulma C y E S Coop.	N	Spain	Construction company	BAUMA	Y	Poland	Construction services provider
2004-07-08	WIK A Systems GmbH	N	Switzerland	IT solutions	MANOMETRY	Y	Poland	Pressure gauges and thermometers manufacturer
2004-07-28	Ulma C y E S Coop.	N	Spain	Construction company	BAUMA	Y	Poland	Construction services provider
2004-08-13	Credit Agricole Deurope B.V.	N	France	Banking Group	EFL	Y	Poland	Insurance provider
2004-09-17	Saturn Nordic Holding AB	N	Finland	Holding company	SOKOLOW	Y	Poland	Diversified food processing and manufacturing company, specializing in processed and packaged meats such as canned hams, kielbasa and pre-packaged sliced meats
2004-10-27	CAIB Fund Management	N	Poland	Investment Fund Management	02NFI	Y	Poland	National Investment Fund
2004-10-27	CAIB Fund Management	N	Poland	Investment Fund Management	04PRO	Y	Poland	National Investment Fund
2004-10-27	CAIB Fund Management	N	Poland	Investment Fund Management	09KWIAT	Y	Poland	National Investment Fund
2004-11-17	CAIB Fund Management	N	Poland	Investment Fund Management	02NFI	Y	Poland	National Investment Fund
2004-11-17	CAIB Fund Management	N	Poland	Investment Fund Management	04PRO	Y	Poland	National Investment Fund
2004-11-17	CAIB Fund Management	N	Poland	Investment Fund Management	09KWIAT	Y	Poland	National Investment Fund

2004-11-19	Ivax Corporation	N	United States	Pharmaceutical company	POLFAKUTNO	Y	Poland	Pharmaceutical company
2005-03-02	Gloria S.a.r.l	N	Luxembourg	Construction and other building instalation company	ENERGOPN	Y	Poland	Engineering and construction company
2005-03-22	PEF V Zelmer Holding	N	Luxembourg	Enterprise Investors Fund	ZELMER	Y	Poland	Manufacturer of mechanised household equipment and vacuum cleaners
2005-04-18	ZPS Lubiana	N	Poland	Polish producer of porcelain	IRENA	Y	Poland	Poland based producers of crystal glasses made of soda glass
2005-04-22	SigmaKalon NV	N	Denmark	Paint manufacturing	POLIFARBC	Y	Poland	Manufactures paints and varnishes as well as producing and selling synthetic resins, dyes and varnishes and other chemicals
2005-05-09	PEF V Zelmer Holding	N	Luxembourg	Enterprise Investors Fund	ZELMER	Y	Poland	Manufacturer of mechanised household equipment and vacuum cleaners
2005-05-12	ZPS Lubiana, Wistil	N	Poland	Polish producer of porcelain	IRENA	Y	Poland	Poland based producers of crystal glasses made of soda glass
2005-07-12	OPG Groep NV	N	Netherlands	Specialist in pharmaceutical wholesaling and logistics services, retail activities on the pharmacy market, as well as the marketing and distribution of medical disposables	ORFE	Y	Poland	Pharmaceuticals wholesaler
2005-08-02	Ziolopex	N	Poland	Polish producer and improter/exporter of spices, dry fruits and tea	JUTRZENKA	Y	Poland	Confectionery producer

2005-08-11	RR Donnelley Europe	N	United States	Provides printing and related services to the merchandising, magazine, book, directory, and financial markets	POLIGR	Y	Poland	Newspaper publishing and office supplies wholesaler
2005-09-12	SEB AB	N	Sweden	Commercial and investment banking services	BOS	Y	Poland	Commercial bank specialising in serving ecological projects. It offers credit, loans, securities, credit guarantees, currency exchange and brokerage services
2005-09-21	RR Donnelley Europe	N	United States	Provides printing and related services to the merchandising, magazine, book, directory, and financial markets	POLIGR	Y	Poland	Newspaper publishing and office supplies wholesaler
2005-10-04	AKJ Management S.A.	N	Poland	Transportation and logistics company	PEKAES	Y	Poland	Transportation company
2005-10-26	Forum Heat Sp z o o	N	Poland	Fortum core activity is generation, distribution and sale of power and heat, operation and maintenance of power plants as well as energy-related services. The main products are power, heat and steam	MPECWRO	Y	Poland	Heat producer for Wroclaw city
2005-12-14	Manchester Securities Corp.	N	United States	Security Brokers, Dealers and Flotation Companies	08OCTAVA	Y	Poland	National Investment Fund
2005-12-17	Novator Telecom Poland	N	Island	Private equity	NETIA	Y	Poland	Provider of telecommunications services

2006-01-11	Zabrzeńskie Zakłady Mechaniczne SA	N	Poland	Specializes in production of machines and equipment, providing services and hire of machinery for the mining industry. Company's production line contains: longwall shearer-loaders, cutting drums, bit blocks, filters for spraying systems, creepers, suspension gears and capels, pit shafts equipment, crushers and shears to concrete	KOPEX	Y	Poland	Trading company
2006-01-18	NFI im. Eugeniusza Kwiatkowskiego SA	Y	Poland	National Investment Fund	MIDAS	Y	Poland	Open-end investment fund
2006-01-20	UniCredito Italiano S.p.A	N	Italy	Multi-bank holding company. Commercial banking, security brokerage, currency swaps and other related financial services	BANKBPH	Y	Poland	Commercial bank
2006-01-27	Comp S.A.	Y	Poland	IT solutions provider	NOVITUS	Y	Poland	Manufacturer of cash registers and distributor of computer equipment
2006-01-27	Fortum Heat Polska Sp. z o.o.	N	Poland	Fortum core activity is generation, distribution and sale of power and heat, operation and maintenance of power plants as well as energy-related services. The main products are power, heat and steam	FORTWRO	Y	Poland	Heating utility

2006-02-06	Logis Partners Sp. z o.o.	N	Poland	Enterprise Investors Fund	JELFA	Y	Poland	Production of pharmaceuticals, medical chemical substances, plant derivatives and other chemical products
2006-02-27	Sanitas Polska Sp. z o.o.	N	Poland/Lithuania	Pharmaceutical producer	JELFA	Y	Poland	Production of pharmaceuticals, medical chemical substances, plant derivatives and other chemical products
2006-03-06	Wojciech Wajda	N	Poland	Private Investor	WASKO	Y	Poland	Provider of advanced data communications systems intended for fixed telephony operators and electric energy and gas distributors
2006-03-07	KBC Verzekeringen N.V	N	Belgium	Holding company for commercial banking, insurance and investment banking group	WARTA	Y	Poland	Insurance services provider
2006-03-28	PBG S.A.	Y	Poland	Construction of infrastructure for gas, petrochemical, heating and sewerage sectors	HYDROBUD	Y	Poland	Contracts and sub-contracts to the construction industry as well as being involved in civil and hydro engineering
2006-03-28	Supernova Capital S.A.	N	Poland	Investment company	14ZACH	Y	Poland	National Investment Fund

2006-04-03	Saturn Nordic Holding AB	N	Finland	Holding company	SOKOLOW	Y	Poland	Diversified food processing and manufacturing company, specializing in processed and packaged meats such as canned hams and pre-packaged sliced meats
2006-05-05	Vitkovice Holding oraz VTK Cylinders S.R.O.	N	Czech Republic	Manufactures and exports metallurgical and engineering products	MILMET	Y	Poland	Gas cylinders and cylinder valves manufacturing
2006-06-24	Acciona S.A.	N	Spain	Construction company, energy provider and logistics service provider	MOSTALWAR	Y	Poland	Construction company
2006-07-04	Ansell Healthcare Europe N.V.	N	Belgium	Ansell Healthcare is a global leader in the design, development, manufacture and marketing of barrier protective products	UNIMIL	Y	Poland	Manufactures rubber products including condoms
2006-07-05	Narodowy Fundusz Ochrony Środowiska i Gospodarki Wodnej	N	Poland	Polish national fund for environmental protection and water management	BOS	Y	Poland	Poland based retail bank focused on investments and financial services to the environment protection sector
2006-07-17	Przedsiębiorstwo Hydrauliki Siłowej "Hydrotor" SA	Y	Poland	Hydraulic components producer	PONARFEH	Y	Poland	Machinery manufacturer
2006-07-26	Toruńskie Zakłady Materiałów Opatrunkowych SA	N	Poland	Bandages and dressings manufacturing	POLLENAE	Y	Poland	Cosmetics manufacturing
2006-08-02	TVN S.A.	Y	Poland	Television station	GRUPAONET	Y	Poland	Internet Service Provider

2006-08-09	Computerland S.A.	Y	Poland	Provider of computer services, producer and designer of computer systems, trader of software and hardware products	EMAX	Y	Poland	Data communication systems integrator
2006-09-18	Prokom Investments S.A.	N	Poland	Construction company	POLNORD	Y	Poland	Construction company
2006-09-21	Computerland S.A.	Y	Poland	Provider of computer services, producer and designer of computer systems, trader of software and hardware products	EMAX	Y	Poland	Data communication systems integrator
2006-09-21	Zlomrex	N	Poland	Trades in steel scrap	CENSTALGD	Y	Poland	Wholesale of steel
2006-09-25	Cersanit S.A.	Y	Poland	Manufacturer of bathroom furnishings	OPOCZNO	Y	Poland	Tile manufacturer
2006-10-05	Shot Acquisitions Sp. z o.o.	N	Poland	Private equity	POLMOSLBN	Y	Poland	Alcoholic beverages manufacturer
2006-10-16	Carey Agri International - Poland Sp. z o.o.	N	Poland	Alcoholic beverages manufacturer	POLMOSBIA	Y	Poland	Alcoholic beverages manufacturer
2006-10-27	Bauer Media Invest GmbH	N	Germany	Media holding company	RMFFM	Y	Poland	Radio broadcast
2006-11-23	Banco Comercial Portugues S.A.	N	Portugal	Commercial Bank	Millennium	Y	Poland	Commercial bank
2006-11-24	NFI Midas S.A.	Y	Poland	National Investment Fund	SUWARY	Y	Poland	Plastic packaging and reflective triangles for automotive industry manufacturing

2006-12-11	Shot Acquisitions sp. z o.o. oraz Jablonna SA	N	Poland	Private equity	POLMOSLBN	Y	Poland	Alcoholic beverages manufacturer
2006-12-21	Ansell Healthcare Europe N.V.	N	Belgium	Ansell Healthcare is a global leader in the design, development, manufacture and marketing of barrier protective products	UNIMIL	Y	Poland	Manufactures rubber products including condoms
2007-01-17	Carey Agri International - Poland Sp. z o.o.	N	Poland	Alcoholic beverages manufacturer	POLMOSBIA	Y	Poland	Alcoholic beverages manufacturing and distribution
2007-01-23	Michał Solowow	N	Poland	Private Investor	SYNTHOS	Y	Poland	Synthetic rubbers, styrene plastics, vinyl and copolymer dispersions
2007-01-30	Koelner S.A.	Y	Poland	Poland based manufacturer and distributor of fastening systems for construction industry	SRUBEX	Y	Poland	Poland based manufacturer of fasteners
2007-01-31	Nutrilux s.a.r.l.	N	Luxembourg	Luxembourg based special purpose vehicle created to acquire Provimi Holding BV and controlled by Permira IV Fund	PROVIMROL	Y	Poland	Imports, exports and manufactures oil/fats, seeds, sugar, meat and poultry
2007-02-01	Zakłady " Lentex" SA	Y	Poland	Vinyl floor coverings manufacturing	NOVITA	Y	Poland	Textile floor coverings manufacturer
2007-02-02	Lucjan Piłśniak	N	Poland	Private Investor	BEEFSAN	Y	Poland	Meat and meat products manufacturing
2007-02-22	Roman Krzysztof Karkosik	N	Poland	Private Investor	KREZUS	Y	Poland	National Investment Fund
2007-02-23	Pamapol S.A.	Y	Poland	Pre cooked meals company	WILBO	Y	Poland	Seafood production
2007-03-27	Michał M. Lisiecki	N	Poland	Private Investor	POINTGROUP	Y	Poland	Media holding company

2007-04-17	ComArch S.A.	Y	Poland	IT service provider	INTERIA.PL	Y	Poland	Internet portal
2007-04-26	Avallon MBO SA, Kuźnia Polska Sp. z o.o	N	Poland	Building and construction company	ZETKAMA	Y	Poland	Manufactures industrial valves, fittings and castings
2007-05-07	Polimex Mostostal S.A.	Y	Poland	Building and construction company	ENERGOPN	Y	Poland	Construction firm
2007-05-10	Bauer Media Invest GmbH	N	Germany	Media holding company	INTERIA.PL	Y	Poland	Internet portal
2007-05-18	Nutrilux s.a.r.l.	N	Luxembourg	Luxembourg based special purpose vehicle created to acquire Provimi Holding BV and controlled by Permira IV Fund	PROVIMROL	Y	Poland	Imports, exports and manufactures oil/fats, seeds, sugar, meat and poultry
2007-07-04	Atlantia S.A.	N	Italy	Transport and communications infrastructure company	STALEXP	Y	Poland	Steel trading
2007-08-30	Leszek Jędrzejewski, Krzysztof Jędrzejewski, Anna Jędrzejewska	N	Poland	Private Investor	KOPEX	Y	Poland	Trading company
2007-10-01	BBI Capital NFI S.A.	Y	Poland	National Investment Fund	ZEG	Y	Poland	Mechanical services, monitoring and industrial TV systems, Work time registration system etc
2007-10-04	MIH Poland Holdings BV	N	Netherlands	Internet, and television services, including cable and digital satellite pay TV	GADUGADU	Y	Poland	Internet communicator

2007-10-09	BVF Czech a.s.	N	Czech Republic	Disinfectants, cleaning products and products for wood treatment, materials for surface treatment of metals and accumulator masses manufacturer	PERMEDIA	Y	Poland	Chemical industry - manufacturer of inorganic pigments as well as compounds of cadmium, nickel and cobalt
2007-10-16	SIA Alta Capital Partners	N	Lithuania	Private Equity byout company	MIESZKO	Y	Poland	Confectionery manufacturer
2007-10-24	Koelner S.A.	Y	Poland	Handtools and power-driven handtools manufacturing	SRUBEX	Y	Poland	Screws producer
2007-10-30	Buskot Trading Limited	N	Cyprus	Medical Aesthetic products	13FORTUNA	Y	Poland	National Investment Fund
2007-11-30	Keystar Holdings Limited	N	Cyprus	Holding Company	05VICT	Y	Poland	National Investment Fund
2007-11-30	PAI Media S.A.	N	Poland	Media holding company	ELEKTRIM	Y	Poland	Five main divisions: power equipment, electrical machinery and apparatus, telecommunications, the cable industry, and lighting technology
2007-12-03	Bauer Media Invest GmbH	N	Germany	Media holding company	INTERIA.PL	Y	Poland	Internet portal
2007-12-14	Dalkia Polska S.A.	N	Poland	Dalkia is the inventor and leading European provider of energy services	PRATERM	Y	Poland	Thermal energy generator
2007-12-24	Desislava Investments S.a.r.l.	N	Luxembourg	Private equity	ORZBIALY	Y	Poland	Bateries (accumulators) recycling company

Source: Warsaw Stock Exchange Annual Bulletins, 2005, 2006, 2007, 2008

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