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**Article**

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## Why do companies go private in Emerging Markets? Evidence from Poland\*

Krzysztof Jackowicz, Oskar Kowalewski\*\*

*In recent years the number of going private transactions has considerably increased in emerging markets. The purpose of this study is to define the financial characteristics of companies that have gone private using a dataset comprising Polish companies. By applying a probit model we were able to distinguish the difference between firms that went private and those that did not. We found that the probability of going private grew with an increase in the concentration of foreign ownership, a rise in the relative level of free cash flows, a decrease in the level of long term debt, and a decrease in the liquidity of share trading. The results obtained are important both for investors wishing to identify entities marked by a high likelihood of going private as well as for governmental authorities evaluating the methods and rationality of privatization among mature state-owned enterprises.*

*In den letzten Jahren hat sich die Zahl der privaten Transaktionen in wachsenden Märkten enorm vervielfacht. Der Zweck dieser Studie ist es, die finanziellen Charakteristika von Firmen, die privatisiert worden sind, zu definieren anhand eines Datensatzes von polnischen Unternehmen. Wir fanden heraus, dass die Wahrscheinlichkeit einer Privatisierung höher ist im Zusammenhang mit ausländischen Inhabern, einer relativen Erhöhung des Kapitalflusses, einer Erhöhung der langfristigen Schulden und einer Verringerung der Liquidität von Aktien. Die Ergebnisse sind wichtig für Investoren und auch für Behörden zur Evaluierung von Methoden und der Rationalität der Privatisierung unter fortgeschrittenen staatlichen Unternehmen.*

*Key words: Going Private, free cash flow, information asymmetry, ownership structure, emerging markets*

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## 1. Introduction

The Warsaw Stock Exchange (WSE) in Poland was recreated in 1991 after more than fifty years of inactivity due to the Second World War and the introduction of a centrally planned economy thereafter (Czerniawski 1992). Seven years after its reactivation, the first going private transaction took place. Following this transaction, dozens of going private transactions have been made to date. Thus, the logical question arises as to why this phenomenon, normally considered typical of developed markets, would occur in such a young market. The answer to this question is further exacerbated by the fact that, due to the specificity of the post-communist economy, the usefulness of theories published in the literature explaining the reasons for going private are quite clearly limited. Taking into the account the very different nature in market characteristics and institutional backgrounds among developed and emerging countries, we seek to examine this issue.

The paper is divided into six sections. Section II providing a brief description of going private transactions in Poland. In Section III, hypotheses are derived based on previous empirical research that explain the motives for and the characteristics of Polish going private companies. The data and methodology used are specified in Section IV. By looking at the financial profile of going private companies Section V provides empirical results and verifies the compliance with forecasts of the hypotheses. Finally, Section VI gives a brief summary of the findings.

Empirical research conducted uses data on transactions of going private available through the end of 2004. Thus, it broadens the analytical scope of previous empirical research (results) published in Polish, as they were based on data collected over a shorter period of time (Jackowicz/Kowalewski 2004).

This paper enriches the findings of previous research in three ways. First, it adjusts explanations for going private transactions presented in earlier literature for developing markets to those conditions found in a post-communist economy. Second, it tests the formulated hypotheses using a data set that has not yet been analyzed. Third, it provides a unique illustration of the significance of foreign ownership in going private transactions and, in some cases, the choices made by governmental authorities concerning the privatization method of state enterprises.

## 2. Going Private Transactions in Poland

From the beginning of 1998 till the end of 2004, 33 companies had gone private. Thirty-one did so as a result of so-called regular delisting and two did so as a result of cold delisting related to their transformation into limited liability companies. The number of going private transactions related to the total number of listed companies on the WSE in specific years is illustrated in Table 1.

Wedel S.A. was the first economic entity that went private in Poland in 1998. However, one had to wait until 2002 for an increase in the number of going private transactions and for an impact on the total number of companies listed on the WSE. Apart from factors having a microeconomic nature that we attempt to identify in a section devoted to the presentation of our research results, two factors, a slowdown in the rate of economic growth and a general decrease in the level of share prices, may have been conducive to stimulating going private transactions in Poland in the period 2001-2002.

*Table 1. Number of going private transactions related to the number of listed companies on the WSE*

Year	Number of Going Private companies	Going Private / Number of companies listed at the beginning of period
1998	1	0.70%
1999	2	1.01%
2000	3	1.36%
2001	2	0.89%
2002	11	4.78%
2003	8	3.70%
2004	6	3.94%
<b>Total (or average)</b>	<b>33</b>	<b>2.34%</b>

When characterizing the going private transactions made in Poland, we focus on: (1) characteristics of going private companies, (2) types of initiating entities, (3) assessment of the achievement of objectives, and (4) motives presented officially.

Companies that went private in Poland were, in the majority of cases, mature business entities. When the stock market was recreated, they had operated for forty years, on average. The majority of them (27 of 33) consisted of state-owned enterprises before entering the stock market. Most of these companies came from the manufacturing sector (mainly food, drink, tobacco and machinery). Table 2 gives an overview about the structure of companies that went private using the European classification of activities (NACE).

Entities initiating the processes in question may be divided according to the country of origin and the type of relationship between them and the going private companies. Slightly more than 75 % of going private transactions were made by foreign investors (see Table 3). It was assumed in Table 3 that the country where the registered office of the parent company is located indicates the geographic origin of the investor. In practice, a representative of the parent company initiated the transaction in a majority of cases. Hydrobudowa is a good

example. This company went private at the request of NCC Polska sp. z o. o., a Polish subsidiary – of the Swedish company NCC AB.

*Table 2. Structure of going private companies in Poland according to NACE code*

<b>NACE</b>	<b>Industry</b>	<b>Number</b>
10 - 14	Mining	1
15 - 37	Manufacturing	23
45	Construction	3
50 - 52	Wholesale and retail commerce	2
60 - 64	Financial intermediation	1
70 - 74	Real estate services	3

*Table 3. Initiators of the going private transactions in Poland according to country of origin*

<b>Country of origin of initiators:</b>	<b>Number of companies</b>
Austria	2
Denmark	2
France	4
Spain	1
The Netherlands	1
Germany	6
Poland	8
Sweden	3
The United States	5
The United Kingdom	2
<b>Total</b>	<b>34*</b>

In one case a going private transaction was initiated by two investors (Austrian and German).

Whenever going private transactions are initiated by those shareholders, who own more than 20% of equity and longer than a year, we have an *insider buy-out*. In other cases, one may speak of an *outsider buy-out*. In Poland, 70% of the going private transactions were initiated by long-term strategic shareholders in the past, as illustrated in Table 4. It should also be noted that on only two occasions investors were not the active entities. This was the case of the going private transaction of Zasada SA, initiated by its founder, and also Wafapomp SA, initiated by the employee company POWEN SA. However, not a single transaction has been initiated by a financial investor in Poland so far.

*Table 4. Initiators of going private transactions divided according to type of relationship with the company*

<b>Initiators:</b>	<b>Number of going private companies</b>	<b>Share in the total number of going private transactions</b>
<b>Insider:</b>	<b>23</b>	<b>69.70%</b>
including:		
Founders	1	3.03%
Strategic investors	21	63.64%
Employees	1	3.03%
<b>Outsiders</b>	<b>10</b>	<b>30.30%</b>
including:		
Investors	10	30.30%
<b>Total</b>	<b>33</b>	<b>100%</b>

The main criterion for evaluating the efficiency of going private transactions is the time necessary to complete the operation. Analysis of the Polish transactions shows that the period from the announcement of the intention of going private to the moment the General Shareholders' Meeting (GM) adopts the relevant resolution, is approximately 2.18 months. From the moment the GM adopts a resolution until the moment listings cease, 4.97 months elapsed on average. Therefore, going private transactions required slightly more than 7 months in Poland. As a point of comparison, Zillmer (2002) found that, in going private transactions in Germany from the moment a resolution of the GM is passed until listings cease, it took 12.5 months on average in the years 1996–2001. The relatively short time needed for a going private transaction is an indication of the effectiveness of the Polish Securities and Exchange Commission (SEC) and also a lack of serious objections from minority shareholders until now.

In Poland, securities regulation and the Company Code is mainly based on German law. Thus, a public company may be delisted either voluntarily by a declaration to the SEC or by a cold delisting. As cold delisting we understand the transformation of a public company in a limited liability company, a merger or acquisition of a listed company with a non-listed company or through the sales of its assets to a non-listed company. In either case, a resolution of the GM with a 75 per cent majority vote is needed.

A going private transaction, on the other hand, is achieved by the full elimination of minority shareholders. However, even as Polish regulations are granting the majority shareholders the right to privatize a public company, nonetheless the exclusion of remaining minority shareholders is not allowed. In this case, mandatory bid rules are applied, where the initiator has the obligation to make the offer to buy back shares from minority shareholders. The share price in the mandatory tender cannot be lower than the average share prices based on the last six months. In most cases, the price in the bid offer is even higher, as

bidders are interested in buying out the minority shareholders. The existence of mandatory bid rules may explain why companies are often delisted in Poland and other Central European countries (Berglöf/Pajuste 2004). According to the existing regulations, owners passing a certain threshold must offer to buy the remaining shares from minority shareholders. In Poland the thresholds are 33% and 66%. It means that once the threshold is passed, such as the 33% plus one share, the bidder has an obligation to make a mandatory bid before reaching the next threshold. Yet, when the second threshold is passed, the bidder then has an obligation to buy the entire company. In addition a mandatory tender has to be made when a shareholder buys within a period of sixty days either more than 10% of equity or 5% when he owns already more than 33% of the voting rights. As a consequence, ownership is becoming increasingly concentrated in Poland, which expedites the going private process or even forces it involuntarily, when the second threshold is passed.

*Table 5. Official motives offered about decisions for going private transactions in Poland*

<b>Motives:</b>	<b>Percentage of cases when motive was listed as the first one</b>	<b>Percentage of cases when motive was listed as the second one</b>
Illiquidity of companies' shares	39%	24%
Consolidation of activities with another entity or inclusion in holding structures	24%	18%
High cost of maintaining listings	18%	15%
Restriction of access to information about business activities of the company	12%	9%
No need for additional financing through the stock market	3%	27%
Other motives or motives that were not identified	4%	7%

Initiators of the transaction are obligated to announce the motivation for the decision to take the company private. As a rule, several reasons are mentioned. Table 5 shows how often the most popular justifications for going private transactions were given and were presented either in the resolutions of the GM, forwarded to SEC, or made public as press announcements. In the light of the data the transformation of public companies into private companies should primarily be attributed to both the illiquidity of a company's shares and the desire to reorganize business activities. It is interesting that the unattractiveness of the stock market as a source of funding is rarely mentioned as the first motive, but often as the second one. It may be that the lack of enthusiasm for the equity market is related to its short period of operation. Putting this as the foremost of motives would call into question the rationality of listing the company several years earlier. In general, official motives should be treated with

considerable caution. In several cases, the conduct of owners after going private showed that they had goals other than those that had been previously announced.

### **3. Review of the Literature**

Possible explanations of motives for going private transactions offered in previous literature can, in our view, be divided into three groups. In the first, we include those theories that highlight the motives for activities undertaken by shareholders of going private companies, i.e. hypotheses related to agency problems associated with the occurrence of free cash flows and wealth redistribution from different groups of stakeholders to shareholders. The second group consists of theories that mainly focus on managerial incentives. In this group, theories of information asymmetry and market inefficiency are highlighted, as are managerial motives to control and diversify the resources under their control. The third and last group of factors distinguished in the literature gives paramount importance to issues from the general sphere of rational management, such as cost reduction and a decrease in tax burdens.

#### **Agency costs-related hypotheses**

The explanation of going private transactions, included in the first group in the form of the hypothesis of agency problem costs of free cash flows, is decidedly the most popular in the literature. It was first developed by Jensen (1989), who claimed that the publicly held corporation as an organizational form of business activity has outlived its usefulness in many sectors. This theory has been followed up in the literature, including Lehn et al. (1989), Rao et al. (1995), Weir et al. (2002), and Andres et al. (2004). According to this hypothesis, in the case of mature industries that develop slowly, there are few available investment projects with positive NPV that give the company an abundant free cash flow. Therefore, the discrepancy between the interests of managers and shareholders becomes particularly acute. Shareholders prefer the disbursement of this free cash flow, while managers may tend to reinvest it to increase the scale of business activities and to improve their position on the labour market, even at the risk of decreasing shareholders' wealth (Denis 1992). Going private transactions may mitigate the agency problem described above through an increase of managers' ownership in a firm and the increased financial leverage that is associated with LBOs in particular. An accumulation of debts puts pressure on managers to act and reduces the cash flow available for spending at their discretion (Jensen 1986). Thus, management incentives grow because of an increased monitoring by stakeholders and active investors of the company as well as the looming threat of job loss in the event of poor performance (Gilson 1989).

The mitigation of agency cost of free cash flows is one of the most often cited sources for shareholders' gains associated with going private transactions. Going



private reduces the possibility for managers to waste the free cash flows instead of distributing them to shareholders (Jensen 1986). This hypothesis assumes that entities active in going private transactions act in accordance with general business ethics. The starting point of the hypothesis of redistribution of wealth from various groups of stakeholders towards shareholders (Ippolito et al. 1992; Andres et al. 2004) is different, however, the previously mentioned transfer is made possible by a breach of implicit contracts ratified with stakeholders during the course of a going private transaction. In the literature, special attention is devoted to the transfer of wealth arising from the early termination of pension programs with a defined benefit and the appropriation by shareholders of excess assets (Ippolito et al. 1992). The empirically strong positive correlation between the likelihood of terminating a pension program with defined benefits and the act of going private was not always interpreted with the same censoriousness. To illustrate, Chaplinsky et al. (1998) perceive that gaining access to excess assets of pension plans, when accompanied by an increase in the share in employee ownership, such as financial assistance in the purchase of shares, is acceptable. Such an action helps decrease the scale of financial leverage and improves the ability of a company to service debt in the future.

### **Information asymmetry hypothesis**

A conviction about the undervaluation of shares may constitute an incentive for managers to undergo a going private transaction. Potential reasons for the undervaluation of shares are twofold: the asymmetry of information and the inefficiency of the market. The most important area where the asymmetry of information materializes is the difference in both entities' and external observers' correctness of evaluating the value of assets, when they have access to inside information in a company. Inefficiency of the market in the area of valuation of a company most often results from the small scale of the so-called free float (Maupin 1987; Lehn et al. 1989; Rao et al. 1995; Jansen et al. 2003; Andres et al. 2004).

Another explanation of the reasons for going private focussing mainly on factors shaping the conduct of managers is the diversification – control hypothesis. (Elitzur et al. 1998). It assumes that managers who wish to maintain control over a company attempt to increase their share in the ownership structure. However, as a result of such conduct, there is a strong concentration of financial investment portfolios in the hands of managing personnel, and thus they are subject to serious exposure to non-systematic risk. Going private transactions create opportunities for the transformation of a company's capital structure, so that the managers may maintain or increase their shareholding by utilizing financial leverage. At the same time, they may decrease the amount invested in the company. As a result, the degree of diversification of managers' financial investment portfolios improves.

### **Transaction cost hypothesis**

Advocates of the motive for a decrease in costs stress that going private allows for a reduction both in costs directly related to public listings and requirement to disclose information or losses of business opportunities and information asymmetry in situations when the main competitors operate as non-public companies (Maupin 1987; Jansen et al. 2003; Andres et al. 2004). The decrease in tax burdens, on the other hand, is associated with going private transactions mainly because of a growing significance of liabilities in the capital structure of a firm during its course (Lehn et al. 1989; Andres et al. 2004).

The majority of empirical studies testing the above hypotheses use data from the US stock markets. However, the results obtained are not unequivocal. As an example, in the case of the hypothesis of agency problems of free cash flows arguments in support of its validity are provided by Lehn et al. (1989), Denis (1992), Opler et al. (1993) and Rao et al. (1995). On the other hand, there is no such support in the research of Servaes (1994) and Kieschnik (1998). At the same time, work by Halpern et al. (1999) underlines the need to exercise caution when interpreting the results of earlier investigations because of the heterogenic nature of going private transactions in the US. However, a lack of consensus in conclusions resulting from their analysis of the US experience does not constitute the main obstacle for utilizing this part of the literature in designing our study. The principal difficulty is connected with the incompatibility of the structure of the US economy and the characteristics of companies operating within the Polish reality in the last decade. From this perspective, research based on data from the developed countries of Western Europe are of greater, although still limited, use. Andres et al. (2004) observed that for EU member states and Norway, companies that went private in the period 1996–2002 had relatively undervalued shares. Observed abnormal returns were higher when there was a greater reduction in market monitoring resulting from share dispersion. Jansen et al. (2003) confirmed agency problems connected with free cash flows for the German capital market in the period 1997-2001. They also noticed that in the estimated models, there was a strong positive relationship between concentration of ownership and the likelihood of going private. In the British capital market (Weir et al. 2002) going private companies differed from control samples of non-going private companies in the area of corporate governance in terms of the details of solutions as well as in future development prospects.

### **What motivates going private transactions in Poland?**

As for the Polish capital market, we do not have any notice of previous research results regarding going private transactions. The phenomenon of the initial public offering of shares has recently been subjected to econometric analysis (Dudko-Kopczewska 2004). Because of the lack of previous research on the motivation for going private conducted in conditions comparable with the Polish

ones from 1998-2004, we are guided by theoretical reasoning in choosing the hypotheses to be tested. Our starting point will be defining the level of compatibility of the assumptions made in each hypothesis, prepared for developed financial markets, with the specificity of the functioning of the Polish economy and the capital market.

At the heart of the hypothesis of agency problem of free cash flows are implicit assumptions that shareholding in public companies is generally dispersed and the role of foreign investors in comparison with home country investors is slight. These assumptions are fulfilled in the US, but do not correspond to economic realities in other countries. In Australia, for example, foreign investors control approximately 32% of shares of listed companies on the Australian Stock Exchange (Poa et al. 2001). In Germany, we encounter a highly concentrated ownership structure (Jansen et al. 2003). Clearly, these assumptions cannot be regarded as valid in the Polish environment. Due to a high level of ownership concentration and the considerable significance of foreign investors, the likelihood of the free rider phenomenon occurring in the area of monitoring companies decreases as does the inefficiency of internal control mechanisms for the utilization of free cash flows. As a result, finding statistically significant higher levels of free cash flows, smaller developmental perspectives and a smaller degree of financial leverage utilization in going private companies may mean, depending on the stage of development of the company, a lack of attractiveness of the stock market as a source of funding, rather than signal the occurrence of specific agency problems. However, it seems to us that it is not possible to totally exclude the hypothesis of agency problems of free cash flows from our field of interest for two reasons. First, 30% of the going private transactions in Poland were conducted by groups of investors who were shareholders for less than a year. Second, overwhelmingly, entities entering the stock exchange as part of the privatization process were mature (Kowalewski 2006).

The hypothesis of the transfer of wealth from employees or creditors as the explanation for the initiation of going private transactions in Polish conditions is seriously limited by two factors. First, in the period analyzed, employee pension programs were poorly developed. Second, banks still remain the largest capital provider for companies. In 2003, receivables from the non-financial sector constituted 27% of the GDP, whereas the value of bonds issued by companies equalled only 0.65% of the GDP (Jackowicz 2004). The likelihood of a permanently profitable breach of implicit contracts concluded with creditors is inversely related to the level of their concentration.

We identified 33 cases of going private transactions in Poland from 1998 till the end of 2004. Only one involved an employees' buyout and there were no cases of the process being initiated by managers. This allows us to assume that, in the Polish environment, the significance of the hypotheses explaining going private

transactions from the angle of factors primarily determining the conduct of managers is more modest than in developed capital markets if we take into account the role of foreign investors. The conclusion applies primarily to the diversification – control hypothesis which requires considerable capital involvement from managers, and to a lesser extent, to the hypothesis of the asymmetry of information and the inefficiency of the capital market. Asymmetry of information may emerge not only in the relationships of managers and dispersed external investors, but also in relationships between the dominant shareholder and other investors. In the latter case, the problem of company undervaluation by the stock market may be felt acutely due to its shallow nature.

Gains from going private could result from savings in direct costs, which are unique to a public company as opposed to a private company. Such costs include, but are not limited to, actual listing fees, analyst conferences, and the cost of annual general meetings. In addition to these direct costs there are also indirect costs of a public listing, such as costs resulting from the requirement to disclose information, which might lead to competitive disadvantages and the increase in regulatory constraints, which, in turn, leads to reduced flexibility. In Poland, it seems justified to extend the gains from going private to cover potential savings and benefits achieved thanks to the integration of going private companies with their foreign owners. The desire to minimize tax burdens does not constitute, in our view, a rightful and intrinsic justification for the decision to go private. This view is supported by Opler et al. (1993) and Jansen et al. (2003). The positive statistically significant correlation of the level of tax burdens and the likelihood of conducting the transaction in question would be a side-effect of companies having a considerable supplementary loan capacity resulting from not utilizing the opportunity to contract debts and generate high and stable cash flows, or may result from using debt to reduce agency problems. It should be noted that, at the time covered by our analysis, the interest rates remained high in Poland and started to decline significantly only recently.

The following chapter is concerned with empirical testing of the three main hypotheses explaining going private transactions: agency problems of free cash flows, the asymmetry of information, and the inefficiency of the stock market. However, in our opinion, the main reason of delisting, which is not popular in mature markets, is the intention of integrating public companies with the foreign owner and as a consequence the reduction in listing costs. The stock market capitalization of the going private companies was in between 2 and 270 million euros at the end of the year before delisting. As the initiators often already had the majority in the going private companies, the costs of buying out the remaining shares were relatively low. We estimated that the buyout costs for the initiators were between 0.04 and 80 million euros. Thus, the relative small costs of delisting and the opportunity to merge the existing operations is in our opinion the most important motive for going private transactions in Poland. As

the foreign investors are the main imitators, the going private transaction may be seen as an investment in order to expand their business in an emerging market and to gain first-rate growth prospects

Owing to the weakening of the operation of the first two hypotheses, we expect to obtain confirmation for the superiority of the third, the foreign integration and growth explanation.

#### **4. Methodology**

In order to analyze the determinants and motives for the likelihood of going private in Poland, we used a probit model (Verbeek 2000) comparable with the one employed in the study of Rao et al. (1995). Literature on the subject shows that other econometric tools are also used for this purpose: linear probability models (Poa et al. 2001); discriminant analysis (Maupin 1987) and logit models (Lehn et al. 1989; C. Weir et al., 2002).

The set of independent variables used in this study was selected so as to create an opportunity to test the three hypotheses stated in the previous section describing the reasons for going private. In order to verify the hypothesis concerning agency problems of free cash flows, we introduced proxies describing: the level of free cash flows (FCFA), financial leverage (LTDA) and the dynamics of sales revenues (RSD). We approximated free cash flows, which according to Jensen (1986), constitute an excess of cash flows over those required to finance projects with a positive NPV, using the sum of the cash flows from operating and financial activities. The occurrence of agency problems, as well as a lack of the need for funding via the stock market, lead us to expect a positive parameter for the FCFA variable and negative parameters for the LTDA and RSD variables.

We tested the asymmetry of information and the inefficiency of the capital market by adding the next three proxies to the model describing: differences in the market and book value of equity (MVBV), the level of abnormal market returns from shares of the companies covered by the study (YIELD) and the number of days without shares trading (V0). Since the hypothesis analyzed predicts that companies undervalued by the stock market go private, we should obtain negative estimates of the parameters for the MVBV and YIELD variables and a positive estimate for the V0 variable

To test the hypothesis of integration and the decrease in costs, we employed two proxies used separately in the estimated models. A dummy variable denoting whether the given entity belonged to a foreign entity prior to going private (FOREIGN). The second variable is a product of the FOREIGN variable and an indicator of ownership concentration in the hands of the largest shareholder. We named it FORCON. A positive sign of the variables for both proxies would confirm the hypothesis.

Additionally, in all estimated models, we used a proxy for profitability which will be operationalized as a return on assets (ROA). We assume that the lower the effectiveness of operation, the greater the need to introduce organizational changes, including those made in conjunction with going private transactions.

*Table 6. Explanatory variables, their operational definitions and predicted signs*

<b>Variable</b>	<b>Operational Definitions</b>	<b>Predicted Sign</b>
<b>FCFA</b>	Sum of cash flows from operating and financial activities divided by total assets	+
<b>LTDA</b>	Value of long-term debt divided by total assets	-
<b>RSD</b>	Geometric average of annual growth rate of sale revenues	-
<b>MVBV</b>	Market value of the company to book value.	-
<b>YIELD</b>	Average return from shares of a given entity after deducting the return offered by the market index WIG.	-
<b>V0</b>	Number of days without trading in shares of a given company during the year.	+
<b>FOREIGN</b>	Dummy variable = 1 if entities controlled by foreign investors and 0 – in other cases.	+
<b>FORCON</b>	Product of the FOREIGN variable and the indicator of concentration of ownership in the hands of the largest shareholder.	+
<b>ROA</b>	Net income divided by total assets.	-

All the proxy variables, with the exception of the binary variable, were computed as a mean over a period of the three years immediately preceding the dates when the firms went private. Table 6 provides information about the variables, their operational definitions, and the predicted signs.

The estimation of the probit model is based on a set of information concerning the going private companies and entities grouped in the control samples.

### **Data and sample selection**

No systematic documentation is available in Poland concerning going private transactions, delisting, or merging of companies on the WSE. Therefore, in order to identify companies that should be covered by this study, we used annual reports of the SEC and statistical yearbooks of the WSE. Based on these documents, we identified 33 cases of going private companies from the moment when the stock exchange was created in 1991 till the end of 2004. In accordance

with the approach adopted in the literature, we excluded an insurance institution. The elimination of another company was necessary because of the lack of data necessary for calculating the proxies. Thus, the final number in the original sample of 33 companies was reduced to 31, constituting the final sample of this study.

The issue of choosing the proper method for the selection of public companies in the control groups is not resolved in the relevant literature. Some studies use an industry adjusted sample as a control group (Maupin 1987; Lehn et al. 1989; Poa et al. 2001; Weir et al. 2002), whereas other studies use the method of random sampling (Rao et al. 1995; Halpern et al. 1999; Jansen et al. 2003). One can also find studies where the entire population of listed companies is used as a control group (Opler et al. 1993). We, however, take into account the diversity of solutions in the existing literature, on the one hand, and the fact that it would require a great effort to amass financial data given Polish conditions.

We decided to form three control groups of sample companies. First, an industry adjusted matched sample of 31 firms that did not attempt to go private during that period is used in the estimation of the model. This industry adjustment enables to draw a comparison between firms in similar industries. In addition, industry matching allows us to control for the fact that going private activities may be industry-specific. Second, a random sample of 31 non-going private companies was chosen from the WSE report. Finally, a sample group was constructed as a result of a merger of the two previous groups of listed companies. The first two samples consist of 31 companies each and the third, as it is the sum of the first two samples, of 62 companies. This makes it possible for us to evaluate the extent to which the results depend on the manner of constructing the control group.

The number of entities in a group, on the basis of which the models were estimated, is not large. In the previous literature, the number of cases of going private transactions ranges from 54, in the study by Maupin (1987), to 263 in the study of Lehn and Poulsen (1989).

The estimation of the model required compiling a large set of data on 93 business entities. We acquired it primarily from the database *IMS Emerging Markets* and *Notoria* services. Unavailable data concerning earlier accounting periods were taken from the annual statements of companies listed on the stock exchange. We created the missing information about listings of company shares based on the official bulletin of the WSE „*Cedula*”. The necessary macroeconomic data came from statistical yearbooks published by the Central Statistical Office.

## 5. Empirical results

Table 7 below presents the research results into the statistical significance of mean differences for independent variables selected in section 4 for the group of going private companies and three control groups.

Table 7. *T - Statistic for differences in mean of independent variables<sup>#</sup>*

Variable:	Going private companies and the combined controlled groups	Going privates companies and a control group selected randomly	Going privates companies and a control group selected according to sectors
FCFA	1.1549	2.0467**	0.2220
LTDA	-1.1954	-0.6145	-1.3412
RSD	0.7051	1.1038	-0.0485
MVBV	1.0109	1.0356	0.9752
YIELD	-0.1516	0.4119	-0.7149
V0	3.2507***	4.4569***	3.3082***
FOREIGN	4.8716***	3.5479***	2.7235***
FORCON	6.5574***	6.3099***	5.1610***
ROA	-1.3549	-0.2873	-2.7421***

<sup>#</sup> The table presents results of t-statistic for continuous variables, for binary variables – the z statistic from the binomial test is listed instead of a t - statistic;

\*\*\*, \*\*, \* indicate statistical significance at the 1%, 5% and 10% levels, respectively.

In all cases where the rejection of the null hypothesis based on the equality of means is possible, the test statistics have the expected signs. Indeed, companies that left the WSE are characterized by a statistically significant greater number of days without trading in shares in the three years immediately preceding this event, a higher concentration of the shareholding structure, and the fact that they are more likely to become foreign property. Additionally, they have a lower return on assets in comparison to entities from the industry adjusted sample control group and a relatively higher level of free cash flows when compared to the randomly selected sample control group. The results obtained speak, in a preliminary manner, in favour of the explanations of the going private phenomenon as being related to the integration of activities with the foreign owner and the lack of liquidity in shares trading.

The causes of going private transactions in Poland are reflected by the results of the estimation of probit models presented in Table 8. Apart from the values of parameter and the t-statistic estimates, the table contains elements of diagnostics of the models obtained, including information on the precision of the classifications of companies within the sample used.



The six estimated specifications of the probit model for the phenomenon of going private transactions are characterized by good econometric properties. The sets of explanatory variables used in all cases significantly affect the likelihood of going private. The null hypothesis in the appropriate test may always be rejected at the significance level of 1%. In specifications 1, 2 and 5, apart from the constant term, there are four individual statistically significant independent variables in each case and in the remaining specifications – three variables per case. McFadden's  $R^2$  ratios range from 30.40% for the fifth specification to 56.37% for the fourth specification. In the case of models with a binary dependent variable, these are satisfactory values. They demonstrate that the estimated models are considerably better than the model containing only a constant as an explanatory variable. Additionally, it is worth noting that reaching convergence in the process of estimating model parameters required five (specification 1) to seven iterations (specification 5).

Of the three constructed models using the combined control groups, the random group, and the industry adjusted group, the third one is weakest in goodness of fit. It has relatively small values of McFadden's  $R^2$  ratio and relatively high values of the Akaike information criterion. It also offers a poorer precision of classification of companies making up the samples. Specifications 5 and 6 identify correctly 74.19% and 77.42% of cases of going private companies and 83.87% and 80.65% of cases of maintaining shares in trading on the stock exchange until the end of the time subject to the analysis respectively. The estimated models for combined control groups correctly classify 83.87% and 87.10% of all companies included in the sample. Specifications 3 and 4 provide incorrect values in only 14.52% and 11.29% of cases.

In general, models that used the FORCON variable, which takes into account the degree of ownership concentration in the hands of the largest shareholder as opposed to the variable identifying the entities controlled by foreign investors, seem to be most beneficial. Additionally, the analysis of the values of McFadden's  $R^2$  ratios, the Akaike information criterion, and the percentages of correct classifications of entities from the sample lead to this conclusion.

The following three conclusions of a general nature may be formulated when interpreting the results obtained economically. First, in a situation of individual statistical significance of explanatory variables, parameters estimated for them always have the expected signs. For non-significant variables, the signs of the parameters do not comply with the expected signs for all specifications for variables describing the relation between the market and book valuation of equity (MVBV) as well as an above market rate of return from shares (YIELD).

Table 8. Results of estimation and diagnostics of a probit model for going private companies in Poland – combined control groups (1,2); random control group (3,4); adjusted control group (5,6)

Number of the specification of the model:	1	2	3	4	5	6
<b>Constant</b>	-1.5451 (-4.41) <sup>***</sup>	-1.7066 (-4.49) <sup>***</sup>	-1.6003 (-3.37) <sup>***</sup>	-1.9472 (-3.41) <sup>***</sup>	-0.8808 (-2.10) <sup>**</sup>	-1.0732 (-2.46) <sup>**</sup>
<b>FCFA</b>	4.6933 (2.06) <sup>**</sup>	4.2981 (1.79) <sup>*</sup>	6.2403 (2.07) <sup>**</sup>	6.5295 (2.01) <sup>**</sup>	3.2887 (1.26)	2.9077 (1.07)
<b>LTDA</b>	-5.4556 (-2.29) <sup>**</sup>	-5.3369 (-2.09) <sup>**</sup>	-3.3750 (-1.35)	-3.6948 (-1.23)	-6.1010 (-2.31) <sup>**</sup>	-6.0635 (-2.16) <sup>**</sup>
<b>RSD</b>	-0.1120 (-0.118)	-0.5415 (-0.514)	-0.9128 (-0.757)	-2.3586 (-1.43)	-0.1580 (-0.145)	-0.4981 (-0.419)
<b>MVBV</b>	0.0396 (0.635)	0.0436 (0.415)	0.0520 (0.440)	0.0947 (0.677)	0.0467 (0.398)	0.0606 (0.442)
<b>YIELD</b>	0.1384 (0.219)	0.4173 (0.593)	0.4083 (0.521)	1.0552 (1.19)	0.0414 (0.0572)	0.3023 (0.388)
<b>V0</b>	0.0142 (3.16) <sup>***</sup>	0.0142 (2.97) <sup>***</sup>	0.0194 (2.94) <sup>***</sup>	0.0205 (2.92) <sup>***</sup>	0.0122 (2.29) <sup>**</sup>	0.01263 (2.22) <sup>**</sup>
<b>FOREIGN</b>	1.1677 (3.44) <sup>***</sup>		1.5359 (3.41) <sup>***</sup>		0.9449 (2.40) <sup>**</sup>	
<b>FORCON</b>		2.6199 (4.47) <sup>***</sup>		3.8301 (3.65) <sup>***</sup>		2.1814 (3.40) <sup>***</sup>
<b>ROA</b>	-3.6509 (-1.63)	-3.1376 (-1.28)	-2.2747 (-0.773)	-1.0956 (-0.349)	-5.5510 (-1.78) <sup>*</sup>	-5.1279 (-1.53)
<b>Elements of diagnostics</b>						
Number of observations	93	93	62	62	62	62
Test of joint statistical significance of explanatory variables ( $\chi^2$ )	51.839 <sup>***</sup>	64.242 <sup>***</sup>	38.618 <sup>***</sup>	48.447 <sup>***</sup>	26.129 <sup>***</sup>	33.934 <sup>***</sup>
McFadden's R <sup>2</sup>	34.89%	45.36%	44.93%	56.37%	30.40%	39.48%
Akaike information criterion	1.0224	0.8891	1.0537	0.8952	1.2552	1.1293

<i>Correctness of classification within the sample using the model</i>						
Percentage of correctly identified non going private companies (specificity)	90.32%	90.32%	80.65%	90.32%	74.19%	77.42%
Percentage of correctly identified going private companies (sensitivity)	70.97%	80.65%	90.32%	87.10%	83.87%	80.65%
Total percentage of correct classifications	83.87%	87.10%	85.48%	88.71%	79.03%	79.03%

t - statistic values are in parentheses; \*\*\*, \*\*, \* indicate statistical significance at the 1%, 5% and 10% level levels, respectively.

*Appendix A . Composition of the Going Private companies dataset*

<b>Going Private Company</b>	<b>Year of Delisting</b>	<b>NACE</b>	<b>Initiator of Going Private Transactions</b>	<b>Country</b>
Dom - Plast S.A.	1999	25	Rubbermaid Inc.	USA
Zakłady Cementowo - Wapiennicze Gorządze S.A.	1999	26	HeidlebergCement	Germany
Koszalińskie Zakłady Piwowarskie Brok S.A.	2000	15	Holsten-Brauerei AG	Germany
Polifarb Dębica S.A.	2000	24	Alcro Beckers AB	Holland
Zasada S.A.	2000	34	Sobiesław Zasada Family	Poland
Nomi S.A. (PLI SA)	2001	52	Kingfisher Plc	Great Britain
Bakoma S.A.	2001	15	Copagnie Gerweise Danone	France
3M Viscoplast S.A.	2001	24	3M Inc	USA
Animex S.A.	2002	51	Smithfieldfoods, Inc	USA
Delia S.A.	2002	18	Mostostal Export S.A.	Poland
Wrocławskie Kopalnie Surowców Mineralnych S.A.	2002	14	Anglo American plc	Great Britain
Izolacja Zdunska Wola S.A. (Icopal)	2002	26	CAIK Holding A/S.	Denmark
Exbud S.A.	2002	45	Skanska Europe AB	Sweden
Polar Wrocław S.A.	2002	29	Whirpool Global Parnership	USA
Zakłady Mięsne Morliny S.A.	2002	15	Campofrio Alimentacion S.A.	Spain
Famot Pleszew S.A.	2002	29	Gildemeister AG	Germany
Stomil Bełchatów S.A.	2002	25	Semperit AG Holding	Austria
Gdańskie Przedsiębiorstwo Robót Drogowych S.A.	2003	45	Skanska Europe AB	Sweden
Agros Holding S.A.	2003	74	Pernod Ricard S.A.	France
Zakład Elektrod Węglowych S.A.	2003	32	SGL Carbon AG	Germany
Tele-Fonika Kable (Bydgoska Fabryka Kabli) S.A.	2003	31	TELE - FONIKA KFK S.A.	Poland
DROSED Siedleckie Zakłady Drobiarskie S.A.	2003	15	LDC S.A.	France
Katowickie Zakłady Wyróbów Metalowych S.A.	2003	29	WSP Ogniocron S.A.	Poland
Art Marketing Sydnicate S.A.	2003	74	Agora S.A.	Poland

Zakłady Przemysłu Bawełnianego Bielbaw S.A.	2003	17	Wistil S.A.	Poland
Hydrobudowa Gdańsk S.A.	2004	45	NCC AB	Sweden
Carlsberg Okocim	2004	15	Carlsberg Breweries A/S	Denmark
Huta Oława S.A.	2004	24	BORYSZEW S.A.	Poland
MITEX SA	2004	74	Eiffage Construction SA	France
WAFAPOMP SA	2004	29	POWEN S.A.	Poland
Kujawska Fabryka Manometrów KFM SA	2004	33	WIKA Systems GmbH	Germany

*Composition of the listed companies datasets selected by NACE Code and randomly*

	<b>Companies by NACE Code</b>	<b>NACE</b>		<b>Random Companies</b>	<b>NACE</b>
1	Dębica S.A.	25		Rafako S.A.	28
2	Irena S.A.	26		Novita S.A.	17
3	Brok Strzelec S.A.	15		Prochem S.A.	74
4	Polifarb CW S.A.	24		Remak	28
5	AS Motors (7 bull) S.A.	34		Stomil Olsztyn S.A.	25
6	Alma Market (Krakchem) S.A.	52		Vistula S.A.	18
7	Kruszewice S.A.	15		Relpol S.A.	33
8	Polfa Kutno S.A.	24		Mieszko S.A.	15
9	Sokołów S.A.	51		Pepees S.A.	15
10	Wólczanka S.A.	18		PPWK S.A.	22
11	KGHM S.A.	14		Lubawa S.A.	17
12	Krosno S.A.	26		Ropczyce S.A.	26
13	Budimex S.A.	45		Ampli S.A.	51
14	Amica S.A.	29		Mostostal Warszawa	45
15	Ekodrob S.A.	15		Paged S.A	51
16	ZREW S.A.	29		Hutmen S.A.	27
17	Stomil Sanok S.A.	25		Atlantis S.A.	45
18	Bauma S.A.	45		Mennica Państwowa S.A.	36
19	Indykpol S.A.	74		Cersanit	26
20	Apator S.A.	32		Howell S.A.	51
21	Kable (NKT Cables) S.A.	31		Prokom Software S.A.	72
22	Pozmeat S.A.	15		Kopex S.A.	45
23	WAFAPOMP S.A.	29		Milmet S.A.	28
24	Poligrafia S.A.	74		TP S.A.	64
25	Wistil S.A.	17		ZEG S.A.	33
26	Hydrobudowa Śląsk S.A.	45		Wawel S.A.	15
27	Browar Żywiec S.A.	15		Agora	22
28	Jelfa SA	24		PROSPER SA	51
29	Polnord SA	74		TIM SA	51
30	HYDROTOR SA	29		Pollena-Ewa SA	24
31	Relpol S.A.	33		PEPEES SA	15

Second, the results obtained to a large extent confirm the hypothesis of integration and decrease of costs, in addition to, although to a lesser degree, the hypothesis of agency problems and the unattractiveness of the stock market as a source of funding. The most unequivocal is the result of the test of the hypothesis of asymmetry of information and the inefficiency of the capital market. Third, the manner in which the control groups were created has a negligible impact on the general interpretation of the results obtained.

The proxies testing the significance of the motive of integration with the foreign owner and the decrease of costs are statistically significant in all specifications and, in line with our expectations, increase the likelihood of going private. In five out of six specifications, the null hypothesis for the lack of influence of these variables on the likelihood of going private may be rejected at the significance level of 1% and, in one case, at the significance level of 5%. The conclusion concerning the determinants of going private companies emerging is, thus, similar to the one obtained by Jansen et al (2003) for the German capital market. These authors noticed that the likelihood of conducting the described process depended, to a large extent, on the degree of ownership concentration.

In the versions of the models estimated using the combined control groups and the control group selected randomly, the likelihood of going private increased in a statistically significant manner with the increase of the relative level of free cash flows (FCFA). In specifications 1, 2, 5 and 6, on the other hand, the likelihood of the event in question decreased in a statistically significant manner with an increase in the level of financial leverage (LTDA). Both of the relationships identified may be seen as a confirmation of the occurrence of agency problems related to free cash flows in entities deciding to leave the stock market. As we have strongly argued in section 3, in the case of Polish conditions, this may also be regarded as a signal that the company does not feel, due to its stage of development, the need to acquire further capital in the stock market. The third proxy testing the hypothesis of agency problems, RDS, is never statistically significant, although it has the expected sign of the estimated parameter in all specifications. One of the reasons for the non-significance of the RDS variable may be, as suggested by Lehn et al. (1989), the fact that the average dynamics of sales revenues does not reflect the developmental prospects of the company well if its managers follow a growth strategy through aggressive acquisitions.

Of the proxies testing the hypothesis of asymmetry of information and inefficiency of the capital market, only the average number of days without trading influences the likelihood of going private in a statistically significant manner and in the foreseen direction in all specifications. Proxies describing the potential market undervaluation of companies from the sample MVBV and YIELD are statistically insignificant. At the same time, these variables have the positive signs of estimated parameters which are contrary to expectations. The

same anomaly was observed in the German capital market (Jansen et al. 2003). In research using data from the US and British capital markets, there was a negative influence of the increase of the market valuation of equity in relation to the book value on the likelihood of going private (Ippolito et al. 1992; Weir et al. 2002). In summary, although we provided evidence that going private companies were characterized by a lower liquidity in trading in their shares, we cannot establish the simultaneous occurrence of undervaluation caused by the asymmetry of information in Polish circumstances.

Moreover, the likelihood of going private decreases in specification 5 with an increase of the effectiveness of operation measured by the ratio return on assets (ROA). We observe a similar dependence almost reaching the level of statistical significance for specification 1.

Compared with our prior results of research into the motives of going private we noted two differences (Jackowicz et al. 2004). The results described above indicate the relatively higher significance of illiquidity in shares trading and the less important role of the return on assets on the decision to go private.

## 6. Conclusions

The phenomenon of going private is associated mainly with developed financial markets. Empirical research conducted up to now into the reasons for its occurrence is based, in the majority of cases, on data from the US capital market and the capital markets of Western European countries. This paper supplements findings described in the literature from a young Polish capital market created in 1991. The theoretical and empirical analyses carried out lead to two basic conclusions. First, standard explanations for the phenomenon of going private companies in previous literature requires reformulation and reinterpretation in consideration of developing markets. Second, decisions to leave the stock market in the period 1999 - 2004 in Poland were made mainly because of the desire to explore activities with the foreign owner, the non-attractiveness of the stock market as a source of funding, and the illiquidity of shares trading. Results obtained in the study are significant for investors wishing to identify entities with a high likelihood of going private, and for government authorities in terms of evaluating the rationality of some of the privatization paths of mature state-owned enterprises in Poland in the 1990s.

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