OWNERSHIP COMPETITION IN THE EUROPEAN TRANSITION ARENA: TOWARDS A VIABLE RESTRUCTURING?

Julien Le Maux

Université Paris 1 Sorbonne

Diana Pop*

Université d'Orléans

Abstract

One of the main goals of the European authorities is to promote common patterns of corporate restructuring by protecting the interests of holders of the securities of public companies from member States. Within the context of European integration, the new ascending countries have adapted corporate governance principles, including takeover regulation, in order to address both the question of economic growth and that of agency conflicts arisen in fully- or partially-privatized companies. Using data on Croatian and Romanian listed firms over the 2000-2003 period, we show that the ownership concentration has an asymmetrical effect on economic performance, which is conditioned by the initial structural conditions prevailing in those countries. Particularly, the Croatian companies' resources seem better managed if there are many large shareholders comparable in size, while Romanian companies perform better if the holdings of the largest shareholder are important relative to those of remaining shareholders. However, the relation between corporate governance variables and firm performance depends on a firm's characteristics, as well as on the macroeconomic environment.

JEL classification: G18; G32; G34
Keywords: Ownership structure; Corporate performance; Emerging markets; Croatia; Romania; Transition

1. Introduction

The structural reforms and institutional changes performed in the former socialist countries in the last two decades removed the M&A frontier dividing Continental Europe. Over several years, the transition process was definitively marked by privatization, which meant to transfer the State's assets into private property. The initial conditions, as well as the sequencing of privatization, have influenced the pace of capital transfer. It is now broadly documented that acquisitions could be accommodated more easily in the countries which were the reformers of early privatization (Hungary, Poland and Czech Republic). The entry strategies adopted by foreign investors varied from joint ventures to acquisitions of controlling stake, sometimes even 100% of the capital of companies, based on the business climate in Eastern Europe economies and the propensity of authorities to open capital to investors. Controlling the capital of companies was a necessary condition (albeit not a sufficient one) to impose the rate of restructuring and achieve the development of those countries.

After 15 years of transition a broad consensus has emerged around the positive effect of privatization on the companies restructuring. The aggregate results of many studies investigating the antinomy between State and private ownership in Central and Eastern Europe emphasize the superior abilities of private investors in improving the companies' performance[1] (Konings, 1997; Smith et al., 1997; Frydman et al., 1999; Claessens and Djankov, 2002). However, the economic implications of the capital transfer into private hands were generalized based on an asymmetric analysis favoring the transition leaders *(i.e.* the Czech Republic).

---

[1] For a comprehensive survey on the restructuring topics in all the transition economies, see Djankov and Murrell (2002).

This study aims to contribute to the debate on the achievement of restructuring objectives in the CEE countries by enlarging the scope of analysis on the recent data of Croatian and Romanian listed companies. In this respect, we focus on the expertise mix of different blockholders sharing the control of public companies along three dimensions: the ownership concentration, the distribution of voting power among large shareholders, and the identity of owners. The objective of our approach is to assess whether the private owners were able to commit to a viable restructuring[2] by assuring a prevailing growth in the European transition arena. Following the argument of disciplinary role assumed by dominant shareholders, we are interested in finding out whether the internal governance is effective as would be revealed by the persistence of positive effects identified by previous studies on the transition economies.

The remainder of the paper is organized as follows. Section 2 presents the configuration of internal governance mechanism, by investigating the main post-privatization regulations affecting the concentration and interactions among shareholders. In Section 3 we justify the extension of the previous research on the role of ownership structure. Section 4 describes the sample selection procedure, as well as the restructuring, corporate governance and other control variables. Section 5 studies the effects of ownership concentration and the distribution of voting power among large shareholders on the economic performance of public companies. Section 6 summarizes our findings and concludes.

2. Corporate Governance: Stylized Facts From the New Ascending Countries

Of the two countries, Croatia made reforms regarding the ownership of small firms before the critical regime's change. According to EBRD Transition Indicators this country has been

---

[2] According to Pohl et al (1999) the enterprise restructuring is viable only if it is continuous, *i.e.* if the profitability can be preserved in a dynamic environment.

counted at the beginning of 2000 among the advanced reformers, with an average transition indicator comparable with that of the new EU countries. Romania, assigned with a Performance Indicator of 2.8, was classified as an intermediate reformer. Nevertheless the two countries were assigned with comparable Governance and Restructuring and Securities Markets & Nonbank Financial Institutions indicators. After four years of further reforms the progress is not so obvious. The governance and the quality of financial institutions have been improved from 2.3 to 3– for Croatia, while these quality indicators remained unchanged for the Romanian economy.[3] According to institutional development criterion, Tihanyi and Roath (2002) place the two countries in the same group, considering that despite the modest achievements in the field of companies restructuring, these economies still have viable chances to accede to regional integration.

Although the governments proposed different privatization schemes, refined analysis of the development of the financial market (Berglof and Pajuste 2003) proved that the early laggards have recovered the initial discrepancy. The ownership has become concentrated either following the privatization transactions or the subsequent purchasing from the capital market. The typical case of the Romanian experience, as presented in Telegdy et al. (2002) and Brown et al. (2004), provides additional support for this assertion. In the current context, the monitoring performed by active large shareholders is considered the only viable option available in the young markets (Berglof and Pajuste, 2003). The other alternatives, like disciplinary market for corporate control, proxy fights, shareholders litigation, have limited impact as long as much progress has to be done for promoting an enforceable legal system.[4]

The exposure of public companies to market judgment and the new wave of harmonizing the national regulation on acquisitions according to the European standards offer new

---

[3] Nevertheless, according to other indicators, Romania has marked important evolution.
[4] Analyzing competition policies in the European transition economies, Vagliasindi (2001) shows that, in 1999, Romania had one of the most effective overall implementation of competition policy. Nevertheless, among the 'institutional', 'advocacy' and 'enforcement' dimensions, the enforcement category of this indicator is much higher in Croatia than in Romania.

directions for analyzing the control system designed by privatization. The European authorities proposed to member and ascending states to adopt takeover regulation in a way that "*prevent patterns of corporate restructuring from being distorted by arbitrary differences in governance and management cultures*" (see Directive 2004/25/EC, article 3).

The need for a Corporate Governance Code and straightforward rules regarding the transfer of property among private investors has become stringent since there is an enhanced demand of shareholders for transparency and efficient monitoring of listed companies. The corporate governance objectives have also been defined as a function of the peculiarity of control structures driven by acquisition decisions. Consequently, the form and scope of regulations have emerged as a natural answer of authorities to investors' concerns regarding the property rights of minority shareholders as well as the fair competition for control. Under the pressure of consolidation of control, every country imposed the Mandatory Bid Rule, wherever some capital thresholds are exceeded. From this point of view there are remarkable differences among the takeover regulations of the two countries.

The Croatian Corporate Takeover Procedures Act from 2002 establishes the minimum threshold for making a public offer at 25% of the total number of votes in joint-stock companies. If further acquisitions of shares of the same issuer assure to an investor more than 75% of shares carrying voting rights, he has to publish a new takeover bid.

In Romania the regulation has been changed several times since the promulgation of the first takeover procedure in 1996. For several years there were only two mandatory bid thresholds: 33% and 50%. The market law and the takeover regulation from 2002 stipulate two further obligations for the investors whose shareholdings exceed 75% and 90% of the voting rights of a public company. In the last case the major shareholder has to buy out all the

remaining shares and transform the company into a privately-held company.[5] Detailed information about the public offers' characteristics are presented in Pop (2004).

The acquirers' obligations were set so that lest the private interests should bind the State's ones. Requiring an equal treatment for all the shareholders of a company means eliminating any control premium. Such a rule could impair the State's objectives, like selecting strategic investors or negotiating favorable sale prices in function of the liability retained with the privatization authority. Consequently, the acquisition of a majority position within the privatization process exempts the investor from the obligation to make a public offer for the remaining shares. The Croatian Privatization Fund is also exempted from the obligation to publish a takeover bid if the issuer is notified about the intention of the state authorities to sell the surplus of shares exceeding 25% within the period such an obligation is created.[6]

Since the governance principles were designed as a response to the evolving agency problems, we naturally address the question of whether the internal mechanism of corporate governance, i.e. the ownership structure, has had any effect on the company performance.

3. Related Literature: Performance and Ownership Concentration

In order to justify our empirical approach we refer to two strands of literature. First, our interest in further research on restructuring is based on the conclusions of the literature on privatization. Comprehensive analyses on the command of private owners distinguish a positive relation between the post-privatization performance on one hand and the owner type (Claessens et al.,1997; Konings, 1997; Smith et al., 1997; Weiss and Nikitin, 1998; Claessens

---

[5] In 2004 the market authority revised once again the market law by closely referring to the European Directive. Relative to previous texts, there is no mention about the threshold of 75% and the obligation to unquote a public company is raised to 95%. Besides, the acquirer is forbidden to make another takeover bid in the next twelve months counted from the closing date of the previous public offer. Without providing clear directions concerning different classes of shares, the new legislation requires that the mandatory bid to be addressed separately to each class of shares.
[6] See the article 7 of the Croatian Takeover law.

and Djankov 1999b; Frydman et al.,1999; Earle and Telgedy, 2002; Walsh et Whelan 2001; Cull et al., 2002; Grosfeld and Tressel, 2002), or ownership concentration (Claessens, 1997; Claessens and Djankov, 1999a, b; Earle et al., 2003), on the other hand. Such an influence is expected especially in the countries suffering from the poor legal environment (La Porta et al., 1998), where the concentrated ownership is considered a disciplinary device for managers' behavior.

However the main hypotheses regarding the role of ownership are based on the studies investigating the effect of blockholder regimes on the valuation of companies in developed countries. We consider that this distinction is very important since the complexity of shareholding arrangements leads to an opposite conclusion on the performance-ownership concentration relationship. Particularly, the results reported in the studies investigating this topic in western European economies reveal that the value increases if control, irrespective of its nature (management control, or large shareholders' control), is contestable. Lehmann and Weigand (2000); Volpin (2002); Boubaker (2003); Cronqvist and Nillson (2003); Maury and Pajuste (2005) find that the concentration of capital, as well as the majority holdings of large shareholders, adversely influences the market value of companies. This negative relation is explained by the decreased risk run by large shareholders, notably due to financial engineering like pyramids, crossholdings, controlling coalitions, and dual-class shares.

This brief survey on the role of ownership structure shows that on the new capital markets, any result is possible. First, since the privatization programs of these countries are not yet achieved and the restructuring is still representing a challenge, a positive relation between performance and private ownership is expected. Second, the emergence of agency problems within public companies would justify the value discount due to the expropriation of minority shareholders. Finally, the reduced transaction costs allow the investors to choose the degree of concentration maximizing the firm value. According to Demsetz (1983) and

Demsetz and Villalonga (2001), if the market forces influence both the performance and the ownership structure, there is no reason to find a deterministic relation between the two measures. Under these circumstances, only a new empirical investigation could clarify how the recent changes have influenced the restructuring pattern in European emerging countries.

4. Empirical Strategy

4.1 Sample Selection

To study the efficiency of internal governance mechanism, we investigate the relationship between company performance and various measures of ownership. The final sample was constructed using a three-step selection procedure. First, from the overall companies listed in 2003 on the Bucharest, Varazdin, and Zagreb Stock Exchanges (hereafter BSE, VSE, and ZSE respectively) we exclude those operating in financial and regulated utilities sectors. Second, we selected only the industrial companies that have ownership information over the period 2000 to 2003. The Romanian ownership data were provided by BSE registry while the Croatian ones are available on the official site of the National Security Commission (hereafter Crosec). Then, for those companies we computed the return on assets and other control variables by comparing several data sources: Amadeus, Ministry of Finance Romania, Crosec, BSE, VSE, ZSE. From 168 companies, 71% are headquartered in Croatia and the rest in Romania. Consequently, our final (balanced) sample includes 672 company-year observations (484 observations for Croatia and 188 observations for Romania) diversified across 14 industries established in function of NACE primary codes.

4.2 Restructuring Variables

In order to appraise the restructuring achievements, the previous studies on transition economies employed different performance measures. A first class of explained variables is based on the information concerning the company activity. The operational performance, like the main objective of a sound management, is a function of productivity determinants: value added on employee or capital, the output, etc. (Smith et al., 1997; Weiss and Nikitin, 1998; Estrin et al., 2001; Grosfeld and Tressel, 2002; Brown et al., 2004).

Another type of approach is to consider that restructuring is synonymous with employment cuts, as long as one criticism addressed to former centralized economies regarded the staff oversize. Nevertheless, Walsh and Whelan, (2001), Claessens and Djankov, (2002) argue that restructuring supposes expanding activities and consequently a higher number of employees.

Finally, Hanousek and al. (2004) use accounting information (profit, sales, operational cash flow) while Earle et al. (2003) consider financial ratios (return on assets, financial return, etc) as proxies for company performance.

In this study we measure the performance by the return on assets (ROA), which is the ratio between the gross profit before extraordinary items and the value of total assets at the end of financial year. Descriptive statistics of the sample corporations are provided in Table 1.

4.3 Corporate Governance Variables

The corporate governance variables include ownership concentration and ownership interaction measures, dummies for each type of owner as well as combinations of these variables.

9

The post-privatization ownership structure is expressed by the Ownership Concentration Index (CONC) and Herfindahl Index (HIX) that are constructed in function of the shareholdings exceeding 5% of capital. Choosing this threshold is justified by the disclosure requirements imposed on listed companies. In Romania, between 2000 and 2003 every investor holding at least 5% of capital was qualified as "significant shareholder" and had to publicly reveal his identity. The Croatian companies must report the ten most important shareholders, irrespective of the size of their holdings. For regularity reasons we impose the limit (5% of capital) on Croatian companies too. In each case we consider, on one hand all the significant shareholdings (CONC; HIX), on the other hand only the ownership shares held by the three largest shareholders (CONC3; HIX3).

Table 1: Descriptive Statistics

	Croatia				Romania			
	2000	2001	2002	2003	2000	2001	2002	2003
ROA	−1.70	−1.55	−1.24	−0.84	10.09	6.16	5.87	2.83
	(−0.44)	(0.04)	(−0.01)	(0.12)	(8.26)	(5.86)	(3.43)	(3.51)
CONC	64.25	65.46	66.71	69.01	73.61	74.55	76.25	77.77
	(70.78)	(73.93)	(75.69)	(77.15)	(73.05)	(74.94)	(76.81)	(81.28)
HIX	2,544	2,817	2,929	3,197	3,427	3,605	3,960	4,359
	(2,188)	(2,462)	(2,552)	(2,758)	(2,913)	(3,155)	(3,515)	(4,016)
CONTEST	1,460	1,769	1,920	2,168	2,323	2,431	2,849	3,248
	(837)	(945)	(930)	(1,013)	(1,734)	(2,097)	(2,192)	(2,668)
OWN1	40.88	43.27	44.20	46.33	52.17	53.61	57.30	61.24
	(39.41)	(42.31)	(42.36)	(47.70)	(51.65)	(53.02)	(55.97)	(60.67)
SIZE	52,591	51,844	62,342	76,320	30,730	33,027	35,865	45,430
	(23,786)	(21,893)	(26,387)	(33,114)	(13,521)	(16,476)	(18,135)	(26,479)
FATA	0.69	0.69	0.69	0.66	0.51	0.55	0.54	0.56
	(0.72)	(0.71)	(0.73)	(0.70)	(0.52)	(0.53)	(0.51)	(0.58)
LEV	0.40	0.41	0.41	0.43	0.41	0.40	0.43	0.40
	(0.39)	(0.40)	(0.39)	(0.41)	(0.47)	(0.37)	(0.38)	(0.32)
ΔSALES	0.04	0.06	0.25	0.31	0.12	0.16	0.15	0.34
	(0.00)	(0.06)	(0.21)	(0.23)	(0.04)	(0.10)	(0.12)	(0.18)
STAF	687	708	709	695	1,682	1,624	1,510	1,388
	(390)	(396)	(406)	(366)	(1,186)	(1,113)	(986)	(811)

The descriptive statistics reported in this table comprise the mean value and the median value (in parenthesis) of reported variables, at the end of the year: ROA, the ratio between gross profit before extraordinary items and total assets; CONC, the sum of significant shareholders' stakes; HIX, the sum of squares of the significant shareholders' stakes; CTST, the sum of squares of the differences between each two successive stakes of significant shareholders; SIZE, the value of total assets in thousand USD; LEV, the ratio between the debt value and total assets; ΔSALES, the percentage change in sales in the current year relative to the previous one; FATA is the ratio between the fixed assets and total assets; STAF, the number of employees. The Croatian sample consists of 121 industrial firms listed on VSE and ZSE at JDD tier. The Romanian sample consists of 47 industrial firms listed on BSE at first and second tiers.

In order to measure the severity of agency problems between the major and minority shareholders we use a variation of the Herfindahl Index, as in Maury and Pajuste (2005). This one is measured as the sum of differences between each two successive stakes, either for all large shareholders (maximum ten shareholders) or for the first three stakes (CTST; CTST3).

We have also considered dummy variables and piecewise-linear terms according to legal thresholds required by national takeover regulation as follows: for the Romanian sample we divided the ownership of the largest shareholder into three classes (0-33%, 33-50%, and 50%-100%). As far as regards the Croatian sample, we performed the analysis on four different groups (0%-25%, 25%-50%, 50%-75% and 75%-100%) computed also in function of the holdings of the largest shareholder. For the piecewise regression we followed the specification proposed by Himmelberg et al. (1999).

The idiosyncrasy of corporate governance is emphasized by analyzing six groups of investors: the State Ownership Fund, industrial companies, financial institutions, investment trusts, individual shareholders, and employees.[7] Lehmann and Weigand (2000) consider that the type of control (internal *vs*. external control) depends on the identity of shareholders. The large external shareholders (diversified industrial companies, investments funds) are interested in hiring professional managers while families exercise the control directly.

The privatization strategy has varied among countries not only in connection with the methods of capital transfer (direct sales, voucher privatization) but also in connection with the structure of portfolio to be sold in a specific period of time. The forerunners placed the emphasis on early big-ticket transactions while the others preferred to postpone the sale of "crown jewels". Generally the State's ownership is associated with inefficiencies that motivate *ipso facto* the whole privatization process. Nevertheless, the effect on performance is a function of the goals of State' authorities: on one hand a negative influence is expected if

---

[7] When the small shareholders emerged within the privatization are classified into a homogenous class, we recalculate the shareholder structure only in function of the other groups. In reality, small dispersed shareholders could not play a pivotal role.

the State continues to provide social protection, reacquires shares in industrial companies or cancels previous transactions; on the other hand a positive effect can be inferred when actions to restructure the bad performers are taken before the sale of the State block.

The control stake of an industrial company can also have a two-sided effect. If the institutional and legal framework limits the profit or assets transfers within the group, one expects to find a positive relation between the industrial property and performance. The main channels favoring the improvement of profitability consist of exploiting operational or financial synergies. In the opposite case, the tunneling effects encouraged by group structures could drive a decrease of company performance.

The role played by financial institutions is not axiomatic. The atypical relations developed between banks and companies in the ex-communist countries find their origins at the beginning of transition, when the limited monitoring exercised by banks encouraged corruption (Hanousek et al., 2004). Grosfeld and Tressel (2002) consider that the decision to convert the outstanding debts into shares could influence only the shareholders structure of weak companies. Claessens et al. (1997) present arguments in line with the monitoring hypothesis of Jensen and Meckling (1976) when the banks both indirectly control and finance the company.[8]

The 'investment trust' category comprises the investment funds emerging within privatization as well as other foreign entities that are active acquirers specialized in investments in emerging markets (e.g. Broadhurst Investment Limited). The role played by those investment funds is hardly to establish. In particular, the mass privatization scheme of the Romanian Government offers an interesting agency setting. By political decision, five domestic private funds were established as privatization vehicles. In the early stage of transition, their role was to dissociate the absolute State property. A part of their holdings

---

[8] Analyzing the peculiarity of Czech privatization, Claessens et al. (1997) show that the shareholdings of investment funds backed by banks, exceeding 10% have a positive influence on the company performance if that bank was in the same time the company' s fund provider.

made the object of free shares distribution to citizens within the mass privatization program. At the same time, they collected the privatization vouchers by counter-offering their own shares. For a long period these funds were rather pseudo-private investors: on one hand, they represented State's instruments within the public companies; on the other hand, the diversification achieved after the accomplishment of mass privatization makes them decide to change their status into investment trusts having their own investment objectives. Nowadays in either country the funds which emerged within privatization are listed on the stock exchange.[9]

The empirical investigations on the family shareholdings show that the individual shareholders generally have an owner-manager quality (Faccio and Lang, 2002; Cronqvist and Nilsson, 2003; Maury and Pajuste, 2005). Boubaker (2003) finds a positive relation between this ownership category and firm performance and suggests that the expropriation of minority shareholders in that case is lower. On the contrary, Cronqvist and Nilsson (2003) present two channels for transmission of a negative influence: (1) sub-optimal investments; and (2) expropriation of the other classes of owners through management decisions.

Finally, the employees' shareholdings are generally associated with insider ownership. However, the role of employees in company restructuring is controversial. The main reason for proposing them to share equity is to give more insights into their company and so more incentives to commit to restructuring objectives. In reality their expertise to monitor the management is limited. In many cases, the employees' representative colludes with managers. Other times, there is a coordination problem inside the association if the voting scheme establishes that every member has one voting right.[10]

---

[9] Earle and Telegdy (2002) provide evidence about the positive effect of these entities on the productivity during 5 years after the Romanian mass privatization.

[10] For Romania, Earle and Telegdy (2002) report a positive effect of inside shareholdings that is significant at conventional levels.

4.4 Other Control Variables

To explain the company performance we control for several other factors: firm size, financial leverage, sales growth, fixed assets ratio dummies, number of employees, investor's origin dummy, and industry and year dummies.

The firm size (SIZE) is measured by the logarithm of total assets expressed in thousand US dollars at the end of financial year. The financial leverage (LEV) is the ratio between the debt value and total assets. The sale growth (ΔSALES) is the percentage change in sales year-on-year. Fixed assets ratio is obtained by dividing the value of fixed assets by total assets. As the fixed assets ratio is correlated with the leverage, we split the first variable in three groups in function of the 60% and 80% thresholds: $FATA_{low}$, $FATA_{med}$ and $FATA_{high}$. We have also accounted for the number of employees at the end of the financial year (STAF) and the largest shareholder's origin (ORIGIN). The investor's origin dummy takes the value of 1 if the largest shareholder is a domestic investor and 0 otherwise. The industry dummies were established in function of the NACE primary codes.

5. Empirical Results

The general form of the panel regression is:

$$ROA_{it} = \beta_1 OWNERSHIP_t + \beta_2 SIZE_t + \beta_3 FATAmean_t + \beta_4 FATAhigh_t + \beta_5 LEV_t + \beta_6 LEV_t^2 \\ + \beta_7 \Delta SALES_{t/t-1} + \beta_8 STAF_t + \beta_9 YEAR_t + \beta_{10} Industry_i + u_{it}$$

where the subscript i=1,...,168 identifies individual firms and t=2000,...,2003 represents the years.

Various specifications of this empirical model were estimated by the OLS method with or without the inclusion of fixed effects.[11] In order to identify the heterogeneity of agency settings we perform the estimations on three different samples: (1) The sample "Global" including all the observations; (2) the sample "Croatia" comprising the Croatian companies only; (3) the sample "Romania" including the Romanian companies only. When possible, we also control for the non-linear effect by considering the squared value of the governance measures.

The descriptive statistics presented in Table 1 provide evidence on the different patterns of ownership concentration followed by Croatian and Romanian firms. Even if the main large shareholders jointly control more than 50% of the equity and the rhythm of concentration is comparable between the two samples, a striking difference exists in the case of the power of major shareholder. On average, in Croatian companies the largest shareholders did not have the majority during the 2000-2003 period, while in Romanian listed companies the major shareholder had exerted *de jure* control from the beginning of the analyzed period. Besides, the number of significant shareholders is higher in Croatian companies than in Romanian ones. In the latter case, the ownership has rarely been divided among more than three large shareholders. The further capital concentration makes the average number of significant shareholders decrease from 2.9 at the end of 2000 to 2.4 at the end of 2003.

Generally, we observe that even if concentrated according to the overall index, the control of Croatian companies is shared by many large shareholders while in the Romanian context major blockholders have been preferred to more dispersed shareholdings.

The results of the OLS pooled regressions when governance indicators are constructed according to holdings of all large shareholders are presented in Table 2. Intercept terms, year dummies, industries dummies are included in all of the specifications but they are not

---

[11] The Haussman test rejected the null hypothesis for the Global and Croatian samples, while for the Romanian one it proves that the observed variables are correlated with firm effects. Anyway, the fixed effects specification is reported for the last sample too, knowing that the coefficients estimated in that case are not biased.

reported for space reasons. The coefficients of the 'CONC', 'HIX' and 'CONTEST' variables are not significant for the global sample but they become negative and strongly significant for the two sub-samples. Nevertheless, by taking into account the non-linearities, we find a negative and significant effect of capital concentration for overall sample, too.

Table 2: Panel Regressions on the Relation between ROA and Ownership Concentration

	Global Pooled				Croatia Pooled				Romania Pooled			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
CONC	–0.498	1.586			–0.546	–0.800			–7.889	433.147		
	(0.105)	(0.030)			(0.046)	(0.196)			(0.023)	(0.003)		
CONC^2		–0.177				0.022				–51.972		
		(0.010)				(0.702)				(0.003)		
HIX			0.277				–0.600				–2.711	
			(0.202)				(0.006)				(0.022)	
CTST				0.196				–0.417				–1.231
				(0.342)				(0.054)				(0.037)
SIZE	0.140	0.202	0.144	0.145	2.125	2.126	2.115	2.133	1.768	2.357	1.131	0.965
	(0.726)	(0.615)	(0.719)	(0.715)	(0.000)	(0.000)	(0.000)	(0.000)	(0.060)	(0.013)	(0.167)	(0.246)
FATA$_{med}$	–4.322	–4.457	–4.448	–4.413	–2.355	–2.328	–2.228	–2.358	–6.760	–7.065	–6.622	–6.724
	(0.000)	(0.000)	(0.000)	(0.000)	(0.004)	(0.005)	(0.007)	(0.004)	(0.000)	(0.000)	(0.000)	(0.000)
FATA$_{high}$	–4.690	–5.071	–5.554	–5.457	–2.814	–2.766	–2.627	–2.911	–20.163	–21.655	–20.995	–20.913
	(0.000)	(0.000)	(0.000)	(0.000)	(0.014)	(0.015)	(0.018)	(0.008)	(0.000)	(0.000)	(0.000)	(0.000)
LEV	1.036	0.964	0.397	0.467	3.433	3.465	2.960	2.596	–31.000	–34.921	–27.651	–27.298
	(0.837)	(0.848)	(0.938)	(0.927)	(0.463)	(0.460)	(0.531)	(0.584)	(0.004)	(0.001)	(0.014)	(0.016)
LEV^2	–23.532	–23.593	–23.323	–23.325	–20.522	–20.523	–19.919	–19.828	–4.539	–1.979	–6.525	–6.703
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.689)	(0.847)	(0.587)	(0.584)
ΔSALES	2.774	2.692	2.619	2.632	0.951	0.962	1.021	1.004	4.402	4.875	4.456	4.521
	(0.226)	(0.239)	(0.251)	(0.249)	(0.745)	(0.743)	(0.731)	(0.734)	(0.027)	(0.018)	(0.026)	(0.024)
STAF	0.001	0.001	0.001	0.001	–0.001	–0.001	–0.001	–0.001	0.000	0.000	0.000	0.000
	(0.009)	(0.016)	(0.010)	(0.009)	(0.108)	(0.110)	(0.096)	(0.085)	(0.742)	(0.849)	(0.507)	(0.469)
Adj. R^2	0.340	0.344	0.338	0.337	0.303	0.302	0.305	0.302	0.561	0.585	0.560	0.557

The pooled specifications reported in this table all model the economic performance ROA, as a linear function of the indicated variables. The independent variables are: CONC, the logarithm of the sum of significant shareholders' stakes; HIX, the logarithm of the sum of squares of the significant shareholders' stakes, CTST, the logarithm of the sum of squares of the differences between each two successive stakes of significant shareholders; SIZE, the logarithm of total assets; LEV, the ratio between the debt value and total assets; SALES, the percentage change in sales year-on-year; FATA$_{med}$ dummy, equals 1 if the fixed assets ratio is comprised between 0.6 and 0.8; FATA$_{high}$ dummy, equals 1 if the fixed assets ratio is comprised between 0.8 and 1.0; STAF, the number of employees. Intercept terms, year dummies and industry dummies are included in all regressions, but not reported. Probability values resulting from White Heteroskedasticity-Consistent Standard Errors & Covariance correction are reported in the parenthesis.

When each domestic group is considered alone we find that the higher the capital concentration, the less efficient are the controlled companies. As revealed by the lower absolute value of the HIX coefficient with respect to the CONC one, the negative effect on Croatian companies' performance is more important if the weight of first shareholder's holdings in the total capital is high. Moreover, the contestability index shows that the higher

the discrepancy between successive voting powers, the larger the scope for diverting resources and consequently the lower the performance. These last findings are in line with those of Maury and Pajuste (2005).

Similar results are reported for Romanian companies. In that case the negative effect of capital concentration is even stronger than that estimated for the Croatian sample. On average, the performance of companies is poorer at high level of capital concentration. Nevertheless, the performance deterioration seems more likely in the companies having many large shareholders: the HIX coefficient in that case is −2.71 compared with that of −7.88 obtained when equal weights are given to all shareholders. But if the second shareholder has comparable power, the performance is expected to improve (the CTST coefficient is negative and significant at conventional levels).

To better weight this kind of influence we replicate the estimations by computing the governance indicators based on the holdings of the three largest shareholders only (non-reported results). The significant results we obtained in that case provide additional support to our previous explanations. By comparing the absolute negative and significant value of CONC3 to that including all shareholdings above five percent we notice that this one is more important in Croatian sample while it becomes weaker for the Romanian companies.

When we consider the same model for all firms we find that the presence of a major shareholder makes the performance decrease, irrespective of the influence of additional significant shareholders. The OWN1 coefficient shows that companies where the holdings of largest shareholder increase, have significantly lower returns. According to the governance theory, it is more likely to have resources diverted when the major shareholder has discretion on the company's decisions. However in the pooled regression we do not detect a significant effect for the global sample (see Table 3).

Table 3: Panel Regression on the Relation between ROA and Ownership of Largest Shareholder

	Global Pooled			Croatia Pooled			Romania Pooled			Global Firm Effects			Croatia Firm Effects			Romania Firm Effects		
	(5)	(6)	(7)	(5)	(6)	(7)	(5)	(6)	(7)	(5)	(6)	(7)	(5)	(6)	(7)	(5)	(6)	(7)
OWN1	0.489	0.755	1.686	−1.071	−0.895	0.994	−3.113	−1.707	3.131	0.844	0.655	−3.675	0.617	0.612	−2.191	2.936	3.075	2.549
	(0.236)	(0.107)	(0.473)	(0.011)	(0.015)	(0.566)	(0.066)	(0.387)	(0.883)	(0.173)	(0.318)	(0.045)	(0.361)	(0.417)	(0.305)	(0.053)	(0.072)	(0.864)
$OWN1^2$			−0.148			−0.307			−0.641			0.701			0.472			0.072
			(0.694)			(0.301)			(0.822)			(0.055)			(0.279)			(0.973)
IND		0.723	0.750		2.544	2.620		−5.691	−5.634		0.698	0.666		1.033	1.025		−6.486	−6.501
		(0.428)	(0.409)		(0.005)	(0.003)		(0.021)	(0.023)		(0.517)	(0.536)		(0.278)	(0.282)		(0.179)	(0.191)
FIN		0.185	0.184		2.009	2.030		−3.340	−3.290		−0.081	0.022		0.135	0.190		−2.172	−2.162
		(0.871)	(0.873)		(0.066)	(0.062)		(0.332)	(0.343)		(0.957)	(0.989)		(0.926)	(0.896)		(0.597)	(0.594)
TRUST		1.328	1.314		−1.481	−1.519		−1.117	−1.068		−0.351	−0.159		1.171	1.274		−3.268	−3.265
		(0.284)	(0.291)		(0.087)	(0.082)		(0.720)	(0.735)		(0.785)	(0.903)		(0.321)	(0.284)		(0.523)	(0.524)
FAM		2.985	3.018		5.115	5.187		−0.016	0.097		−0.727	−1.042		1.066	0.755		−11.226	−11.208
		(0.045)	(0.044)		(0.000)	(0.000)		(0.998)	(0.987)		(0.622)	(0.478)		(0.446)	(0.591)		(0.021)	(0.021)
ESOP		3.318	3.303		1.363	1.294		−2.389	−2.421		0.254	0.649		−0.915	−0.418		−2.526	−2.507
		(0.017)	(0.018)		(0.356)	(0.393)		(0.399)	(0.390)		(0.850)	(0.631)		(0.437)	(0.706)		(0.405)	(0.409)
SIZE	0.148	0.409	0.402	2.120	2.207	2.216	1.087	1.517	1.516	0.420	0.437	0.427	6.721	6.694	6.756	−1.185	−1.869	−1.866
	(0.709)	(0.316)	(0.322)	(0.000)	(0.000)	(0.000)	(0.183)	(0.099)	(0.100)	(0.789)	(0.780)	(0.785)	(0.004)	(0.003)	(0.003)	(0.555)	(0.353)	(0.356)
$FATA_{med}$	−4.428	−4.106	−4.124	−2.285	−2.068	−2.131	−6.789	−6.772	−6.767	−2.735	−2.756	−2.689	1.922	2.037	2.023	−4.742	−4.151	−4.149
	(0.000)	(0.000)	(0.000)	(0.005)	(0.016)	(0.014)	(0.000)	(0.000)	(0.000)	(0.010)	(0.012)	(0.014)	(0.203)	(0.192)	(0.197)	(0.001)	(0.003)	(0.003)
$FATA_{high}$	−5.522	−5.246	−5.269	−2.707	−2.273	−2.315	−21.000	−17.650	−17.534	−4.576	−4.636	−4.608	0.690	0.627	0.575	−14.141	−13.499	−13.498
	(0.000)	(0.000)	(0.000)	(0.014)	(0.033)	(0.030)	(0.000)	(0.000)	(0.000)	(0.156)	(0.152)	(0.153)	(0.846)	(0.861)	(0.873)	(0.004)	(0.005)	(0.005)
LEV	0.468	−0.714	−0.768	2.670	0.205	−0.049	−28.085	−24.479	−24.653	16.945	16.636	16.794	2.462	2.764	2.974	8.262	8.788	8.790
	(0.927)	(0.890)	(0.882)	(0.573)	(0.966)	(0.992)	(0.013)	(0.040)	(0.040)	(0.039)	(0.042)	(0.040)	(0.831)	(0.808)	(0.794)	(0.437)	(0.427)	(0.429)
LEV^2	−23.351	−21.897	−21.850	−19.773	−16.951	−16.706	−6.131	−8.737	−8.645	−31.546	−31.381	−31.446	−19.549	−19.986	−20.138	−28.261	−28.739	−28.736
	(0.000)	(0.000)	(0.000)	(0.000)	(0.002)	(0.003)	(0.616)	(0.488)	(0.494)	(0.000)	(0.000)	(0.000)	(0.116)	(0.107)	(0.106)	(0.001)	(0.002)	(0.002)
ΔSALES	2.623	2.680	2.668	1.021	0.837	0.809	4.461	4.968	4.987	1.680	1.673	1.696	0.874	0.946	0.977	4.124	4.080	4.078
	(0.250)	(0.242)	(0.245)	(0.730)	(0.777)	(0.784)	(0.026)	(0.011)	(0.012)	(0.225)	(0.218)	(0.214)	(0.620)	(0.581)	(0.572)	(0.001)	(0.002)	(0.002)
STAF	0.001	0.001	0.001	−0.001	−0.001	−0.001	0.001	0.001	0.001	0.003	0.003	0.003	−0.001	−0.001	−0.001	0.001	0.001	0.001
	(0.010)	(0.010)	(0.010)	(0.093)	(0.293)	(0.274)	(0.509)	(0.731)	(0.736)	(0.004)	(0.004)	(0.003)	(0.312)	(0.325)	(0.330)	(0.627)	(0.810)	(0.809)
Adj. R^2	0.338	0.342	0.341	0.305	0.336	0.336	0.555	0.570	0.567	0.632	0.629	0.629	0.553	0.548	0.548	0.693	0.693	0.690

The specifications reported in this table all model the economic performance ROA, as a linear function of the indicated variables. The independent variables are: OWN1, the logarithm of the stake held by the largest shareholder; IND dummy, equals 1 if the largest shareholder is an industrial company; FIN dummy, equals 1 if the largest shareholder is a financial institution; TRUST dummy, equals 1 if the largest shareholder is an investment trust; FAM dummy, equals 1 if the largest shareholder is an individual; ESOP dummy, equals 1 if the largest shareholder is the employees' association; SIZE, the logarithm of total assets; LEV, the ratio between the debt value and total assets; ΔSALES, the percentage change in sales year-on-year; $FATA_{med}$ dummy, equals 1 if the fixed assets ratio is comprised between 0.6 and 0.8; $FATA_{high}$ dummy, equals 1 if the fixed assets ratio is comprised between 0.8 and 1.0; STAF, the number of employees. Intercept terms, year dummies and industry dummies are included in all regressions, but not reported. Fixed effects are included where indicated, but not reported. Probability values resulting from White Heteroskedasticity-Consistent Standard Errors & Covariance correction are reported in the parenthesis.

Lehmann and Weigand (2000) argue that the location of control rights could matter for the development potential of companies. For this reason we additionally control for the identity of the largest shareholder. In a first specification we consider dummy variables for each of the six classes, and then we investigate this issue by interacting the ownership variable with identity indicators.

In Croatia, companies controlled by other industrial companies, financial institutions or individuals perform better, on average, that those belonging to the State portfolio. On the contrary, the presence of diffused investment trusts has a negative impact on the firm value. The last result makes us think that funds invest in listed firms for diversification reasons and they are less likely to commit to restructuring objectives.

For the Romanian case we find a surprising result: the industrial companies ownership is associated with lower performance relative to that of companies still controlled by State. This result is significant at 5% level.

The second approach aims at investigating the effect of ownership changes for each type of blockholder. The second column of the Table 4 shows that, in Croatian firms, the magnitude of the negative effect depends on the identity of the largest shareholder. These findings reinforce the results presented above, when we use dummy variables as proxies for owner type. Except for the family property, all the other reported coefficients are significant at high confidence levels. On the contrary, no concluding result has been obtained for the Romanian panel.

To study the impact of takeover regulation on the restructuring pattern we conduct a similar analysis in function of the legal thresholds established by the Mandatory Bid Rule, as shown in Table 5. On average, the Croatian firms whose equity is largely dispersed among small shareholders perform better than companies where the largest shareholder exerts the absolute control of assets.

Table 4: Panel Regression on the Relation between ROA and the Ownership of the Largest Shareholder by Identity

	Global Pooled	Croatia Pooled	Romania Pooled	Global Firm Effects	Croatia Firm Effects	Romania Firm Effects
	(8)	(8)	(8)	(8)	(8)	(8)
SOF_{own1}	0.127	−1.723	−1.380	0.551	0.623	3.304
	(0.799)	(0.000)	(0.492)	(0.394)	(0.379)	(0.074)
IND_{own1}	0.149	−0.835	−2.240	0.869	0.929	2.221
	(0.751)	(0.036)	(0.228)	(0.147)	(0.154)	(0.122)
FIN_{own1}	0.081	−0.965	−1.909	0.531	0.667	2.865
	(0.881)	(0.039)	(0.393)	(0.477)	(0.430)	(0.109)
$TRUST_{own1}$	0.314	−2.127	−0.902	0.436	0.855	3.065
	(0.562)	(0.000)	(0.670)	(0.486)	(0.215)	(0.204)
FAM_{own1}	0.721	0.070	−1.262	0.595	0.984	0.607
	(0.307)	(0.889)	(0.659)	(0.410)	(0.215)	(0.770)
$ESOP_{own1}$	0.972	−1.233	−1.791	0.815	0.315	2.852
	(0.055)	(0.014)	(0.377)	(0.224)	(0.568)	(0.113)
ORIGIN	−2.187	2.473	2.623	5.886	3.122	2.985
	(0.024)	(0.061)	(0.198)	(0.003)	(0.086)	(0.507)
SIZE	0.321	2.480	1.703	0.071	6.272	−1.906
	(0.436)	(0.000)	(0.092)	(0.963)	(0.008)	(0.344)
$FATA_{med}$	−4.343	−1.886	−6.841	−2.413	2.038	−3.889
	(0.000)	(0.021)	(0.000)	(0.022)	(0.190)	(0.007)
$FATA_{high}$	−5.252	−1.904	−19.117	−4.487	0.545	−13.308
	(0.000)	(0.089)	(0.000)	(0.158)	(0.877)	(0.006)
LEV	−0.154	−1.044	−25.243	15.510	1.901	9.216
	(0.976)	(0.824)	(0.035)	(0.058)	(0.865)	(0.409)
LEV^2	−22.393	−15.389	−8.264	−30.284	−19.008	−28.994
	(0.000)	(0.004)	(0.515)	(0.000)	(0.121)	(0.001)
ΔSALES	2.574	0.887	5.044	1.729	0.990	3.994
	(0.272)	(0.755)	(0.009)	(0.184)	(0.557)	(0.002)
STAF	0.001	−0.001	0.000	0.003	−0.001	0.001
	(0.012)	(0.092)	(0.775)	(0.003)	(0.379)	(0.746)
Adj. R^2	0.345	0.345	0.568	0.634	0.549	0.691

The specifications reported in this table all model the economic performance ROA, as a linear function of the indicated variables. The independent variables are: SOF_{own1}, the logarithm of the stake held by State Ownership Fund, as the largest shareholder of company; IND_{own1} the logarithm of the stake held by industrial companies, as the largest shareholder of company; FIN_{own1} the logarithm of the stake held by financial companies, as the largest shareholder of company; $TRUST_{own}$ the logarithm of the stake held by investment trusts, as the largest shareholder of company; FAM_{own1} the logarithm of the stake held by individuals, as the largest shareholder of company; $ESOP_{own1}$ the logarithm of the stake held by employees and insiders, as the largest shareholder of company; SIZE, the logarithm of total assets; LEV, the ratio between the debt value and total assets; ΔSALES, the percentage change in sales year-on-year; $FATA_{med}$ dummy, equals 1 if the fixed assets ratio is comprised between 0.6 and 0.8; $FATA_{high}$ dummy, equals 1 if the fixed assets ratio is comprised between 0.8 and 1.0; STAF, the number of employees. Intercept terms, year dummies and industry dummies are included in all regressions, but not reported. Fixed effects are included where indicated, but not reported. Probability values resulting from White Heteroskedasticity-Consistent Standard Errors & Covariance correction are reported in the parenthesis.

Besides, the further concentration of capital in the first category (0-25%) has an adverse impact on performance while the probability of a squeeze-out offer increases in more sound companies.

When we control for firm heterogeneity, the only previous result that remains robust is that concerning the non-linear effect of ownership concentration on the performance of Romanian

Table 5: Panel Regression on the Relation between ROA and Ownership of Largest Shareholder, by the Mandatory Bid Thresholds

	Croatia Pooled		Romania Pooled		Croatia Firm Effects		Romania Firm Effects	
	(9)	(10)	(9)	(10)	(9)	(10)	(9)	(10)
HR_{25}	−0.406				−0.289			
	(0.642)				(0.775)			
HR_{50}	−1.594				1.090			
	(0.220)				(0.506)			
HR_{75}	−1.638				2.319			
	(0.026)				(0.159)			
RO_{33}			−2.730				1.173	
			(0.223)				(0.644)	
RO_{50}			−2.626				2.533	
			(0.225)				(0.212)	
HR_{0_pw}		−0.117				−0.043		
		(0.032)				(0.429)		
HR_{25_pw}		−0.016				0.092		
		(0.444)				(0.056)		
HR_{50_pw}		−0.034				−0.072		
		(0.271)				(0.117)		
HR_{75_pw}		0.284				0.362		
		(0.051)				(0.120)		
RO_{0_pw}				−0.319				0.382
				(0.099)				(0.007)
RO_{33_pw}				0.042				−0.047
				(0.406)				(0.447)
RO_{50_pw}				−0.107				0.078
				(0.149)				(0.322)
SIZE	2.083	1.998	1.087	1.190	6.627	6.584	−1.030	−1.197
	(0.000)	(0.000)	(0.188)	(0.159)	(0.003)	(0.003)	(0.606)	(0.547)
$FATA_{med}$	−2.465	−2.429	−7.103	−6.736	1.884	1.810	−4.774	−4.694
	(0.003)	(0.003)	(0.000)	(0.000)	(0.222)	(0.229)	(0.001)	(0.001)
$FATA_{high}$	−2.961	−2.596	−20.355	−21.542	0.683	0.361	−14.237	−14.115
	(0.007)	(0.018)	(0.000)	(0.000)	(0.847)	(0.919)	(0.004)	(0.003)
LEV	2.716	3.965	−28.780	−27.446	2.483	−0.426	8.252	7.874
	(0.585)	(0.414)	(0.013)	(0.018)	(0.830)	(0.971)	(0.440)	(0.458)
LEV^2	−19.954	−21.106	−5.640	−6.784	−20.028	−17.103	−28.278	−28.031
	(0.001)	(0.000)	(0.653)	(0.586)	(0.111)	(0.182)	(0.001)	(0.001)
ΔSALES	0.977	1.053	4.360	4.453	0.881	0.851	4.127	4.235
	(0.738)	(0.720)	(0.027)	(0.032)	(0.614)	(0.633)	(0.002)	(0.001)
STAF	−0.001	−0.001	0.000	0.000	−0.001	−0.001	0.001	0.001
	(0.097)	(0.122)	(0.591)	(0.715)	(0.385)	(0.346)	(0.618)	(0.663)
Adj. R^2	0.300	0.308	0.549	0.555	0.555	0.557	0.689	0.690

The specifications reported in this table all model the economic performance ROA, as a linear function of the indicated variables. The independent variables are: HR_{25} dummy, equals 1 if the stake of largest shareholder is comprised between 25% and 50%; HR_{50} dummy, equals 1 if the stake of largest shareholder is comprised between 50% and 75%; HR_{75} dummy, equals 1 if the stake of largest shareholder is comprised between 75% and 100%; RO_{33} dummy, equals 1 if the stake of largest shareholder is comprised between 33% and 50%; RO_{50} dummy, equals 1 if the stake of largest shareholder is comprised between 50% and 100%; HR_{0_pw}, HR_{25_pw}, HR_{50_pw}, HR_{75_pw}, RO_{0_pw}, RO_{33_pw}, RO_{50_pw}, piece-wise terms established in function of the national mandatory bid thresholds; SIZE, the logarithm of total assets; LEV, the ratio between the debt value and total assets; ΔSALES, the percentage change in sales year-on-year;, $FATA_{med}$ dummy, equals 1 if the fixed assets ratio is comprised between 0.6 and 0.8; $FATA_{high}$ dummy, equals 1 if the fixed assets ratio is comprised between 0.8 and 1.0; STAF, the number of employees. Intercept terms, year dummies and industry dummies are included in all regressions, but not reported. Fixed effects are included where indicated, but not reported. Probability values resulting from White Heteroskedasticity-Consistent Standard Errors & Covariance correction are reported in the parenthesis.

companies. In contrast, by including the fixed effects, some estimated coefficients change their sign, as is the case of the HIX, CONTEST and OWN1 variables reported for explaining the performance of Romanian companies. Taken together the results reported in Table 6 confirm one of the intuitions stated before: in Romania, the additional blockholdings make the performance of companies decrease. Besides, the companies still controlled by the State perform better than their competitors (3.30; p=0.07). Himmelberg at al. (1999) explain the sign and significance changes between pooled and fixed effects estimations by giving some insights on the complexity of contractual environment. Failing to take into account the influence of characteristics specific to firms on the ownership concentration decisions could bias the final conclusions.

Table 6: Panel Regressions on the Relation between ROA and Ownership Concentration

	Global Firm Effects				Croatia Firm Effects				Romania Firm Effects			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
CONC	−0.197	−0.088			−0.118	−0.184			6.956	341.434		
	(0.413)	(0.887)			(0.616)	(0.740)			(0.135)	(0.091)		
$CONC^2$		−0.008				0.005				−39.347		
		(0.869)				(0.919)				(0.098)		
HIX			0.319				0.178				2.062	
			(0.249)				(0.537)				(0.066)	
CTST				0.381				0.333				0.973
				(0.178)				(0.302)				(0.075)
SIZE	0.428	0.423	0.444	0.435	6.644	6.647	6.730	6.743	−1.369	−1.957	−1.245	−1.050
	(0.784)	(0.786)	(0.778)	(0.781)	(0.003)	(0.003)	(0.004)	(0.003)	(0.497)	(0.365)	(0.535)	(0.600)
$FATA_{med}$	−2.822	−2.820	−2.759	−2.717	1.847	1.846	1.908	1.956	−4.839	−4.861	−4.750	−4.802
	(0.008)	(0.008)	(0.010)	(0.011)	(0.221)	(0.222)	(0.207)	(0.198)	(0.000)	(0.000)	(0.001)	(0.000)
$FATA_{high}$	−4.460	−4.455	−4.574	−4.541	0.756	0.754	0.706	0.729	−14.444	−14.534	−14.185	−14.194
	(0.174)	(0.175)	(0.157)	(0.159)	(0.834)	(0.835)	(0.843)	(0.837)	(0.002)	(0.004)	(0.003)	(0.003)
LEV	16.930	16.948	16.870	17.054	2.490	2.471	2.354	2.694	8.588	5.882	8.277	8.212
	(0.039)	(0.039)	(0.040)	(0.038)	(0.830)	(0.831)	(0.839)	(0.816)	(0.419)	(0.585)	(0.436)	(0.440)
LEV^2	−31.675	−31.689	−31.501	−31.628	−19.546	−19.529	−19.464	−19.757	−28.509	−27.106	−28.232	−28.222
	(0.000)	(0.000)	(0.000)	(0.000)	(0.115)	(0.115)	(0.117)	(0.113)	(0.001)	(0.002)	(0.001)	(0.001)
ΔSALES	1.735	1.732	1.686	1.675	0.881	0.882	0.880	0.870	4.242	4.496	4.138	4.126
	(0.213)	(0.215)	(0.224)	(0.226)	(0.617)	(0.618)	(0.618)	(0.621)	(0.001)	(0.001)	(0.001)	(0.001)
STAF	0.003	0.003	0.003	0.003	−0.001	−0.001	−0.001	−0.001	0.001	0.001	0.001	0.001
	(0.003)	(0.003)	(0.004)	(0.004)	(0.336)	(0.339)	(0.321)	(0.314)	(0.624)	(0.550)	(0.623)	(0.604)
Adj. R^2	0.632	0.631	0.631	0.632	0.553	0.552	0.553	0.554	0.691	0.693	0.692	0.692

The fixed effects specifications reported in this table all model the economic performance ROA, as a linear function of the indicated variables. The independent variables are: CONC, the logarithm of the sum of significant shareholders' stakes; HIX, the logarithm of the sum of squares of the significant shareholders' stakes, CTST, the logarithm of the sum of squares of the differences between each two successive stakes of significant shareholders; SIZE, the logarithm of total assets; LEV, the ratio between the debt value and total assets; ΔSALES, the percentage change in sales year-on-year; $FATA_{med}$ dummy, equals 1 if the fixed assets ratio is comprised between 0.6 and 0.8; $FATA_{high}$ dummy, equals 1 if the fixed assets ratio is comprised between 0.8 and 1.0; STAF, the number of employees. Intercept terms, year dummies and industry dummies are included in all regressions, but not reported. Fixed effects are included where indicated, but not reported. Probability values resulting from White Heteroskedasticity-Consistent Standard Errors & Covariance correction are reported in the parenthesis.

The coefficient of largest shareholder stake for the Global sample becomes significant and suggests that acquiring additional shares has a negative impact on performance that is much stronger for low shareholdings relative to large blocks (the extreme point is even lower than 5%). The influence may be due to Croatian companies' peculiarities as long as when taking into account the unobserved firms' characteristics in specification (11) we estimate a positive and significant sign for Romanian piecewise-linear term RO_0_pw. Building a toehold in Romanian companies is associated with better returns on assets. This effect seems plausible, since the investors that are not able to avoid the market by purchasing the control directly from the State are more likely to be actively involved in companies restructuring.

The governance issues in the post privatization period could have an endogenous nature since the new shareholder could look at the previous performance and choose the companies to invest in. One of the fierce criticisms addressed to transition economies is that companies were rarely competitive and the stand-alone value was sometimes negative. Bearing in mind this drawback, we wonder whether the relationship between the level of performance and that of ownership could cause us hastily to conclude on the indifference of shareholders regarding performance. In reality, it is plausible to consider that in the post-privatization period the new shareholders had first to recover the previous losses and afterwards to commit to a sharp revival of economic activity. In order to eliminate the bias stemming from correlation between ownership composition and initial performance we follow the approach of Weiss and Nikitin (1998) by estimating the relationship between changes in performance and the level of ownership at the beginning of the analyzed period. Besides, we analyze how the changes in performance are affected by changes in ownership (see also Earle et al., 2003). For this purpose we calculated the changes in performance as a difference between ROA at the end of the current year relative to the ratio computed at the end of previous year.

When the variation in performance is regressed on lagged variables (not reported results) the explanatory power of the model decreases and the majority of coefficient estimates are non significant. Notwithstanding, for Romania we find a negative sensitivity of performance variability (−1.94; p = 0.04) to ownership concentration, proxied by the Herfindahl Index.

The final approach that we adopt regresses changes in performance on changes in ownership composition (see Table 7&8).

Table 7: Panel Regression on the Relation between Changes in ROA and Changes in Ownership Concentration

	Global Pooled				Croatia Pooled				Romania Pooled			
	(11)	(12)	(13)	(14)	(11)	(12)	(13)	(14)	(11)	(12)	(13)	(14)
ΔCONC	−0.002*				−0.002*				0.075			
	(0.705)				(0.812)				(0.382)			
ΔHIX		−0.002*				−0.002*				0.001		
		(0.000)				(0.004)				(0.007)		
ΔCTST			0.000				0.000				0.001	
			(0.375)				(0.492)				(0.064)	
ΔOWN1				0.014				−0.011				0.093
				(0.505)				(0.647)				(0.094)
ΔSIZE	−0.443	−0.450	−0.446	−0.443	6.061	6.050	6.033	6.046	−3.893	−3.536	−3.983	−3.838
	(0.761)	(0.758)	(0.758)	(0.760)	(0.016)	(0.017)	(0.017)	(0.017)	(0.053)	(0.079)	(0.030)	(0.050)
ΔLEV	−15.582	−15.501	−15.575	−15.535	−17.957	−17.867	−18.025	−18.028	−17.320	−17.502	−18.044	−17.641
	(0.003)	(0.003)	(0.003)	(0.003)	(0.010)	(0.011)	(0.010)	(0.010)	(0.034)	(0.032)	(0.024)	(0.029)
ΔSALES	3.327	3.435	3.337	3.323	2.326	2.448	2.325	2.328	6.356	6.274	6.559	6.353
	(0.111)	(0.108)	(0.108)	(0.110)	(0.356)	(0.346)	(0.356)	(0.356)	(0.029)	(0.030)	(0.014)	(0.025)
ΔSTAF	−0.018	−0.018	−0.019	−0.016	−0.025	−0.025	−0.024	−0.026	−4.457	−3.726	−4.603	−4.387
	(0.202)	(0.202)	(0.192)	(0.250)	(0.078)	(0.078)	(0.091)	(0.065)	(0.178)	(0.263)	(0.154)	(0.182)
R^2	0.085	0.087	0.085	0.085	0.084	0.086	0.084	0.084	0.207	0.210	0.222	0.214

The pooled specifications reported in this table all model the change in economic performance ΔROA, as a linear function of the indicated variables. The independent variables are: ΔCONC, the change in the sum of significant shareholders' stakes in the current year relative to the previous one; ΔHIX, the change in the sum of squares of the significant shareholders' stakes in the current year relative to the previous one; ΔCTST, the change in the sum of squares of the differences between each two successive stakes of significant shareholders in the current year relative to the previous one; ΔOWN1, the change in the level of ownership of the largest shareholder in the current year relative to the previous one; ΔSIZE, the change in the value of total assets in the current year relative to the previous one; ΔLEV, the change in the leverage in the current year relative to the previous one; ΔSALES, the percentage change in sales year-on-year; ΔSTAF, the change of the number of employees in the current year relative to the previous one. Intercept terms, year dummies and industry dummies are included in all regressions, but not reported. Probability values resulting from White Heteroskedasticity-Consistent Standard Errors & Covariance correction are reported in the parenthesis.
* x10^{-3}

If the ownership structure does not change a lot, the estimated coefficients of governance variables are biased toward zero. As the main objective of privatization was to transfer the capital from the State to private investors we expect to see changes in the distribution of voting power among shareholders rather than in the overall capital concentration.

Table 8: Panel Regression on the Relation between Changes in ROA and Changes in Ownership Concentration

	Global Firm Effects				Croatia Firm Effects				Romania Firm Effects			
	(11)	(12)	(13)	(14)	(11)	(12)	(13)	(14)	(11)	(12)	(13)	(14)
ΔCONC	-0.004^*				-0.004^*				0.072			
	(0.805)				(0.787)				(0.439)			
ΔHIX		-0.002^*				-0.002^*				0.001		
		(0.000)				(0.000)				(0.003)		
ΔCTST			0.000				0.000				0.001	
			(0.535)				(0.203)				(0.095)	
ΔOWN1				0.014				-0.021				0.091
				(0.566)				(0.422)				(0.175)
ΔSIZE	-0.173	-0.200	-0.164	-0.153	7.246	7.173	7.187	7.210	-3.971	-3.827	-4.062	-3.899
	(0.912)	(0.899)	(0.917)	(0.922)	(0.022)	(0.023)	(0.025)	(0.023)	(0.057)	(0.063)	(0.038)	(0.057)
ΔLEV	-14.354	-14.372	-14.354	-14.292	-15.101	-15.181	-15.284	-15.333	-16.262	-16.687	-17.079	-16.587
	(0.002)	(0.002)	(0.002)	(0.003)	(0.049)	(0.048)	(0.047)	(0.046)	(0.009)	(0.007)	(0.005)	(0.007)
ΔSALES	3.599	3.703	3.612	3.602	2.630	2.753	2.623	2.628	5.840	5.538	6.123	5.867
	(0.029)	(0.028)	(0.028)	(0.029)	(0.167)	(0.160)	(0.169)	(0.169)	(0.049)	(0.060)	(0.022)	(0.040)
ΔSTAF	-0.006	-0.007	-0.007	-0.005	-0.016	-0.017	-0.014	-0.018	-4.018	-3.980	-4.530	-4.106
	(0.916)	(0.903)	(0.902)	(0.935)	(0.782)	(0.773)	(0.816)	(0.757)	(0.225)	(0.225)	(0.178)	(0.225)
R^2	0.170	0.172	0.170	0.170	0.154	0.157	0.156	0.155	0.262	0.267	0.274	0.267

The fixed effects specifications reported in this table all model the change in economic performance ΔROA, as a linear function of the indicated variables. The independent variables are: ΔCONC, the change in the sum of significant shareholders' stakes in the current year relative to the previous one; ΔHIX, the change in the sum of squares of the significant shareholders' stakes in the current year relative to the previous one; ΔCTST, the change in the sum of squares of the differences between each two successive stakes of significant shareholders in the current year relative to the previous one; ΔOWN1, the change in the level of ownership of the largest shareholder in the current year relative to the previous one; ΔSIZE, the change in the value of total assets in the current year relative to the previous one; ΔLEV, the change in the leverage in the current year relative to the previous one; ΔSALES, the percentage change in sales year-on-year; ΔSTAF, the change of the number of employees in the current year relative to the previous one. Intercept terms, year dummies and industry dummies are included in all regressions, but not reported. Probability values resulting from White Heteroskedasticity-Consistent Standard Errors & Covariance correction are reported in the parenthesis.
* x10^{-3}

The ΔHIX coefficients are negative and statistically significant for the Global and Croatian samples in either specification. The idea is that the larger the additional capital concentration (especially in the hands of large shareholders), the less probable becomes the threat of market for corporate control and consequently the larger the scope for minority shareholders expropriation all the more control is already gained.

For Romania, the empirical results strengthen the idea that the model has to be structured in order to control for the endogeneity bias. As in the case of fixed effects estimations, we find that increasing the weight of largest shareholder, as well as the scope of its influence creates more economic value thanks to better performance.

Our approach gives an important insight on some observable firms' characteristics that could also drive asymmetrically the economic results in the two analyzed countries. In all the reported specifications, firm size has a positive and highly significant effect on the

performance of Croatian companies. This kind of influence is expected if large firms could benefit from economies of scale or could have access to financing sources thanks to a better and longer connection with the funds providers. In a challenging environment, the creditors should play an active monitoring role that would be translated in a positive relationship between leverage and assets performance. In the vast majority of cases, the non-linear effect identified for this variable shows that, beyond a certain limit, the bankruptcy threat outweighs the beneficial effect of debt as an effective monitoring device. Filatotchev and Mickiewicz (2001) explain that, in the case of emerging economies, the negative impact of leverage on the firm value could be due to the possible collusion between the dominant shareholder and the providers of debt.

In Romania, the companies having a lot of fixed assets are the worst performers, *ceteris paribus*. If the assets can no longer be used to secure borrowings, their stand-alone value becomes irrelevant. A lot of fixed assets reveal potential agency costs related to over-investment. In addition, the need for restructuring is higher in the over-capitalized companies that could add additional pressure on the current performance.

The SALE variable, as a proxy for firm growth, exhibits a positive and significant sign in all reported variations of the general model. Our findings are in line with the investment literature stating that, under common circumstances, it is more likely to see performance improvements for companies having more investments opportunities.

Concerning the macroeconomic environment, we found that the deterioration of overall conditions after 2000 adversely affected all the industrial companies. The non-reported year dummies keep their negative and significant sign in various specifications.

Summarizing our findings, the performance as objective of restructuring activity depends not only on the composition of ownership and the industrial features of companies but also on the business environment designed by the national privatization objectives.

6. Concluding Remarks

In this study we try to reveal the patterns of agency relationships within Croatian and Romanian public companies by revisiting the capital concentration topic several years after large-scale privatization. For this purpose, we analyze the economic performance in function of various corporate governance indicators over the 2000–2003 period.

The differences identified by country suggest that some recent constraints imposed to limit the discretion of large shareholders and thus to protect the small investors have been established in line with the objectives of domestic privatization programs. The strategy of Croatian authorities was to split the ownership among many large shareholders while the Romanian government looks to distribute large blocks to strategic investors. In order to preserve these objectives the takeover regulation has been adapted accordingly. In Croatia, acquiring the control is more expensive, since the first threshold is set at 25% of capital (compared with 33% in Romania) and the transparency rules make the market identify sometimes even the small shareholders (under 5%). The results we obtained for the Croatian sample show that the scope of agency conflicts increases if more power is given to one shareholder and the company resources are better managed if additional large shareholders comparable in size can monitor the largest shareholder.

On the contrary, the Romanian companies seem to perform better if the holdings of the largest shareholder are important relative to those of remaining shareholders. Sometimes, the actions of a single dominant shareholder could be already bound by the privatization contract terms, and consequently the other large investors' monitoring is less effective. Surprisingly, when we control for the owners identity, we obtain no relevant result defending the enhanced management capacity of private ownership. Previous analyses comprising almost all the privatized Romanian companies (Earle et al., 2002, 2004) report results that are in contrast to

ours. Nevertheless, if increasing the ownership concentration is expected mainly in the case of private shareholders, the results obtained by regressing changes in performance on changes in ownership variables give support to such an intuition. However, the return on assets, as a proxy for restructuring, depends on the unobserved firm heterogeneity and time specific effects.

Integration into the European structures means doubtlessly common standards, but also competitiveness. Considering only the common features of industrial firms (e.g. concentrated ownership) when valuing the practice of corporate governance in new ascending countries, as well as ignoring macroeconomic conditions, offers only a partial picture of the problems confronting those economies. Our results provide additional support to the idea that there is no smooth path to growth goals: the transfer of ownership is not a panacea for restructuring and it cannot fully substitute for a sound legal environment.

References

Berglöf, E., Pajuste, A., 2003. Emerging owners, eclipsing markets: Corporate governance in transition. In: Cornelius, P.K., Kogut, B. (Eds.), Corporate Governance and Capital Flows in a Global Economy, Oxford University Press, pp. 267-304.

Boubaker, S., 2003. Ownership-control discrepancy and firm value: evidence from France. Institut de Recherche en Gestion and Ecole Supérieure des Affaires, Paris XII University working paper.

Brown, D.J., Earle, J.S., Telegdy A., 2004. Does privatization raise productivity? Evidence from comprehensive panel data on manufacturing firms in Hungary, Romania, Russia and Ukraine. Upjohn Institute staff working paper no. 04-107.

Claessens, S., 1997. Corporate governance and equity prices: Evidence from the Czech and Slovak Republics. Journal of Finance 52, 1641-1658.

Claessens, S., Djankov, S., Pohl, G., 1997. Ownership and corporate governance: Evidence from the Czech Republic. World Bank policy research working paper no. 1737.

Claessens, S., Djankov, S., 1999a. Ownership concentration and corporate performance in the Czech Republic. Journal of Comparative Economics 27, 498-513.

Claessens, S., Djankov, S., 1999b. Enterprise performance and management turnover in the Czech Republic. European Economic Review 43, 1115-1124.

Claessens, S., Djankov, S., 2002. Privatization benefits in Eastern Europe. Journal of Public Economics 83, 307-324.

Cronqvist, H., Nilsson, M., 2003. Agency costs of controlling minority shareholders. Journal of Financial and Quantitative Analysis 38, 695-719.

Cull, R., Matesova, J., Shirley, M., 2002. Ownership Structure and the Temptation to Loot: Evidence from Privatized Firms in the Czech Republic. Journal of Comparative Economics 30, 1-24.

Demsetz, H., Villalonga, B., 2001. Ownership structure and corporate performance. Journal of Corporate Finance 7, 209-233.

Djankov, S., Murrell, P., 2002. Enterprise restructuring in transition: A quantitative survey. Journal of Economic Literature 40, 739-792.

Earle, J.S., Telegdy, A., 2002. Privatization methods and productivity effects in Romanian industrial enterprises. Journal of Comparative Economics 30, 657-682.

Earle, J.S., Kucsera, C., Telegdy, A., 2003. Ownership concentration and corporate performance on the Budapest Stock Exchange: Do too many cooks spoil the goulash?, Corporate Governance 12, 1-11.

Estrin, S., Konings, J., Zolkiewski, Z., Angelucci, M., 2001. The effect of ownership and competitive pressure on firm performance in transitions economies: Micro evidence from Bulgaria, Romania and Poland. CEPR discussion paper no. 2985.

Faccio, M., Lang, L., 2002. The ultimate ownership of Western European corporations. Journal of Financial Economics 65, 365-395.

Filatotchev, I., Mickiewicz, T., 2001. Ownership concentration, 'private benefits of control' and debt financing. Centre for the Study of Economic & Social Change in Europe working paper no. 4.

Fryedman, R., Gray, C., Hessel, M., Rapaczynski, A., 1999. When does privatization work? The impact of private ownership on corporate performance in the transition economies. Quarterly Journal of Economics 114, 1153-1191.

Grosfeld, I., Tressell, T., 2002. Competition and ownership structure: Substitutes or complements? Evidence from the Warsaw Stock Exchange. Economics of Transition 10, 525-551.

Hanousek, J., Kocenda, E., Svejnar, J., 2004. Ownership, control and corporate performance after large scale privatization. William Davidson Institute working paper no. 652.

Himmelberg, P., Hubbard, G.C.R., Palia, D., 1999. Understanding the determinants of managerial ownership and the link between ownership and performance. Journal of Financial Economics 53, 353-384.

Jensen, M.C., Meckling, W.H., 1976. Theory of the firm: Managerial behavior, agency costs and ownership structure, Journal of Financial Economics 3, 305-360.

Konings, J., 1997. Competition and firm performance in transition economies: Evidence from firm-level surveys in Slovenia, Hungary, and Romania. CEPR discussion paper no. 1770.

La Porta R., Lopez-de Silanes, F., Shleifer, A., Vishny, R., 1998. Law and Finance. Journal of Political Economy 106, 1113-1155.

Lehmann, E., Weigand, J., 2000. Does the governed corporation perform better? Governance structures and corporate performance in Germany. European Financial Review 4, 157-195.

Lins, K.V., 2003. Equity ownership and firm value in emerging markets. Journal of Financial and Quantitative Analysis 38, 159-184.

Maury, B.C., Pajuste, A., 2005. Multiple large shareholders and firm value. Journal of Banking and Finance, forthcoming.

Pohl, G., Anderson, R.E., Claessens, S., Djankov, S., 1997. Privatization and restructuring in Central and Eastern Europe: Evidence and policy options. World Bank Technical Paper no. 368.

Pop, D., 2004. Is the Romanian market for corporate control atypical? Empirical evidence on takeover bids: 1998-2002. Laboratoire d'Economie d'Orléans working paper no. 2004-24.

Smith, S., Cin, B.C., Vodopivec, M., 1997. Privatization incidence, ownership forms and firm performance: Evidence from Slovenia. Journal of Comparative Economics 25, 158-179.

Telegdy, A., Earle, J.S., Kaznovsky V., Kucsera, C., 2002. Corporate control: A study of firms on the Bucharest Stock Exchange. Eastern European Economics 40, 6-27.

Tihanyi, L., Roath, A.S., 2002. Technology transfer and institutional development in Central and Eastern Europe. Journal of World Business 37, 188-198.

Vagliasindi M. 2001. Competition across transition economies: An enterprise-level analysis of the main policy and structural determinants. EBRD working paper no.68.

Volpin, P.F., 2002. Governance with poor investor protection: Evidence from top executive turnover in Italy. Journal of Financial Economics 64, 91-90.

Walsh, P.P., Whelan, C., 2001. Firm performance and political economy of corporate governance: Survey evidence from Bulgaria, Hungary, Slovakia and Slovenia. Economic Systems 25, 85-112.

Weiss, A., Nikitin, G., 1998. Performance of Czech companies by ownership structure. Davidson Institute working paper no. 186.