This is a so-called personal version (author's manuscript as accepted for publishing after the review process but prior to final layout and copyediting) of the article.

Maury, Benjamin and Liljeblom Eva. 2009, Oligarchs, political regime changes, and firm valuation, Economics of Transition, Vol 17 (3), pp. 411-438

Researchers are kindly asked to use the official publication in references

Oligarchs, political regime changes, and firm valuation

Benjamin Maury

Department of Finance and Statistics,
Swedish School of Economics
and Business Administration,
P.O. BOX 479, 00101 Helsinki,
FINLAND.
Phone: (358)-9-431 33 422
benjamin.maury@hanken.fi

Eva Liljeblom[1]

Department of Finance and Statistics,
Swedish School of Economics
and Business Administration,
P.O. BOX 479, 00101 Helsinki,
FINLAND.
Phone: (358)-9-431 33 291
e-mail: eva.liljeblom@hanken.fi

[1] Benjamin Maury (corresponding author). We are especially grateful to Sergei Guriev (the Editor) and two anonymous referees for detailed and insightful comments. Comments by participants at the 7th International Workshop on Corporate Governance and Investments in Jönköping, the Russia in Flux seminar in Turku, the Workshop on the Politics of Corporate Governance in Copenhagen, the Joint Finance Research seminar in Helsinki, the 19th Australasian Finance & Banking Conference 2006 in Sydney, and the European Financial Management annual meeting 2007 in Vienna, the research seminar at the Norwegian School of Management in 2007 are gratefully acknowledged. Financial support from the Finnish Academy of Sciences (the Russia in flux program) and Stiftelsen för främjandet av värdepappersmarknaden i Finland (Maury) is gratefully acknowledged.

ABSTRACT

This paper examines the impact of a regime shift on the valuation of politically powerful oligarch firms. Focusing on the Yeltsin-Putin regime shift in Russia, we find that the valuations of outside shareholders claims are significantly higher under the Putin regime than under the Yeltsin regime after controlling for industry and time effects. The findings suggest that the increasing cost of extracting private benefits outweigh the reduction in the value of political connections following the political regime change. The results are also consistent with changes in the risk of state expropriation. Our results show that effects driven by the political regime change complement the traditional view stating that increased ownership concentration improved the performance of Russian oligarch firms.

JEL: G3, G32, P26
Key words: oligarchs; regime shift; subversion of institutions; political connections; ownership structure; valuation.

1. INTRODUCTION

Russian firms have experienced significant changes in their corporate governance structures since the collapse of the Soviet Union in 1991. The voucher privatization program enabled shareholdings by outsiders, managers as well as employees (e.g., Boycko et al., 1995). The privatization process, including the subsequent loans-for-shares auctions, gave rise to the so-called oligarchs with an influence over the Russian economy (Guriev and Rachinsky, 2005; Shleifer and Treisman, 2005). While it appears theoretically rather clear that private ownership concentration is needed to achieve efficient restructuring in former state-controlled firms (e.g., Shleifer and Vishny, 1997), authors disagree on the costs and benefits of the oligarchs in the Russian economy. Those emphasizing the positive role of oligarchs in Russia's economic recovery include Boone and Rodionov (2002), Aslund (2004), Guriev and Rachinsky (2005), and Shleifer and Treisman (2005), whereas those who view oligarchs as having weakened Russia's economy include Stiglitz (2002), and Goldman (2004). We try to reconcile these opposing views by positing that to understand the role of oligarchs one has to recognize their incentives and their relation to political institutions.

Theory points out that there are two key governance mechanisms that affect firm value. First, a higher ownership stake by the entrepreneur reduces the interest to expropriate minority shareholders (Jensen and Meckling, 1976). Second, increases in investor protection make expropriation of minority shareholders costlier (La Porta et al., 2000, 2002). In the 1990s, the oligarchs obtained significant private benefits from subverting economic and political institutions to their own benefit (Hellman, 1998; Glaeser et al., 2003). The oligarchs also lobbied against legal reform because such reforms would have reduced the value of their private benefits of control (Sonin, 2003). We conjecture that the regime shift from Yeltsin to Putin helped separate big business from the Kremlin, and

therefore the regime shift increased the cost of extracting private benefits and consequently increased the market values of oligarch-controlled firms.

Using a sample of 121 Russian listed firms for the period 1998 to 2003, we find that the valuation of oligarch-controlled firms is significantly higher during the Putin I regime than during the Yeltsin II regime. The changes in the valuation of oligarch-controlled firms are robust to several controls including industry and year effects, as well as firm characteristics.

Our results point to the importance a political regime change can have on the valuation of firms with politically powerful owners. While we find results in line with the argument that increasing ownership concentration and rising natural resource prices created significant incentives for the oligarchs to maximize market capitalization, we also find evidence that ownership concentration and industry effects explain only part of the valuation changes in oligarch firms. Our results suggest that president Putin's rise to power made it more difficult to subvert institutions to their own benefit. Thus, the valuation patterns we obtain for oligarch-controlled firms are consistent with the idea that the increased cost of stealing outweighs the loss in the value of political connections. Our results are also consistent with temporarily lower risk of expropriation by the state (political risk) at the beginning of Putin's first term as president as he promised to respect the oligarchs' rights to their acquired property as long as they stayed out of politics.

Our results fit rather well with some recent findings in other empirical studies. Guriev and Rachinsky (2005) find that Russian oligarch-controlled firms had significantly higher productivity growth in year 2002, but not during earlier years. Focusing on the 1990s, Filatotchev et al. (2001) find that ownership concentration is negatively related to firm performance. This result suggest that the entrenchment effect with controlling ownership overshadowed the incentive effects when institutions where especially poor in Russia. Desai et al. (2007) show that the Russian firms in the extractive industries (oil and minerals) that were targeted by increased tax enforcement in the beginning of President Putin's first term experienced increases in stock values. This result suggests that increased law enforcement dampened minority shareholder expropriation. These studies as well as our findings expand our understanding of how institutions affect the cost of diverting profits, and therefore the transfer of value from controlling shareholders to minority shareholders.

The paper proceeds as follows. Section 2 briefly reviews the literature on oligarchs, offers theoretical predictions. Section 3 presents the sample and descriptive statistics on corporate governance characteristics. Section 4 presents the main regression results. Section 5 offers robustness tests. Section 6 discusses explanations for the obtained results, and provides some additional tests. Section 7 draws together the conclusions.

2. POLITICAL REGIME CHANGE AND THE VALUATION OF OLIGARCH FIRMS

Before presenting the empirical results, we briefly discuss how a political regime shift may influence the valuation of politically powerful oligarch firms. The focus lies on the cost of extracting private benefits and the role of political risks.

2.1. Theoretical framework

2.1.1. Characteristics of oligarch-controlled firms

According to Boone and Rodionov (2002) and Hoffman (2003), the Russian oligarchs initially diluted the holdings by the government and outside shareholders, but once they were firmly in control of a firm, they started to maximize market capitalization out of sheer self-interest. The increasing prices of oil, gas, and metal provided strong incentives for the oligarchs. Guriev and Rachinsky (2005) suggest that oligarchs may be more efficient than other domestic owners because of lower separation between ownership and control, better access to capital, improved control of hold up problems and better protection against expropriation by the state. Empirically, Guriev and Rachinsky (2005) find higher productivity growth in oligarch-controlled firms than in other domestically controlled firms for the year 2002. Although the view of Boone and Rodionov (2002) is consistent with the behavior of oligarchs, we posit that our focus on oligarchs' political power adds to this "conventional wisdom" in an important way.

2.1.2. Possible effects of a political regime shift on valuations

A larger fraction of cash-flow rights by the entrepreneur and better minority shareholder protection should improve the valuation of minority shareholders' ownership rights (La Porta et al., 2002). A regime change could affect the valuation of firms controlled by politically powerful oligarchs in at least three important ways. First, the shift could affect the cost of expropriating minority shareholders. Second, the values of the oligarchs' political connections are likely to be altered by the new regime. Third, the new political regime is likely to have implications for the security of the oligarchs' property rights.

Several authors discuss how the oligarchs used their power to expropriate minority shareholders especially in the 1990s in Russia[2]. Glaeser et al. (2003) maintain that the oligarchs used their power to dilute minority shareholders' interest with legal impunity in order to consolidate their control over firms. Glaeser and Shleifer (2003) define illegal and legal subversion. Legal subversion includes obtaining favorable legislation, lobbying

[2] The Yukos case serves as an example of methods of expropriation. Yukos was established in 1993 by the integration of various state-owned companies (Aron, 2003). Khodorkovsky's Menatep acquired a stake in Yukos through a loans-for-shares auction in 1995, and obtained majority ownership when the state defaulted on the loan. The minority expropriation methods associated with Yukos include the use of transfer pricing to the benefit of Yukos' controlling shareholders, share issues in 1998 to dilute minority shareholders, asset transfers (asset stripping), underpriced share buyback offers, and the use of a compliant judge to enforce the proposals by the majority owners despite the lack of the required (75 percent) amount of votes.

for appointments of friendly law enforcers, hiring top lawyers, or using delaying tactics in the case of suits, whereas illegal subversion techniques include intimidating and bribing judges, regulators, and juries. Hellman (1998) and Sonin (2003) argue that the oligarchs used their political power to stop legal reform in the 1990s because they benefited from the existing poor institutions.

The Yeltsin-Putin regime change appears to have affected the oligarchs. Glaeser et al. (2003) argue that Putin's rise to power meant a reduction in the political influence of the oligarchs[3]. They also maintain that Putin pushed for legal reform and a strengthening the power of the police[4]. Desai et al. (2007) model a positive relation between tax law enforcement and shareholder value. Using a sample of Russian firms, they find that oligarch firms targeted by tax investigations experienced increases in stock prices consistent with the view that improved law enforcement increased the cost of stealing and consequently increased stock prices[5]. Thus, the literature suggests that the regime shift increased the cost of expropriating minority shareholders.

A regime shift may also affect the value of oligarchs' political connections. Faccio (2006) argues that political connections may be valuable to firms since the connected firms may receive benefits such as preferential treatment from the government, obtain tax cuts, face relaxed regulatory oversight, whereas rivals may face stiffer oversight. For a large sample of Russian firms, Slinko et al. (2004) find that politically powerful firms exhibit higher growth in profitability, sales, and employment than firms without such connections.[6] Using international data, Faccio (2006) finds increases in stock prices when a businessperson enters politics, whereas no effect is found when politicians enter corporate boards. Glaeser et al. (2003) argues that the political influence of many oligarchs was significantly limited with Putin's presidency. As Shleifer and Vishny (1994) note, the valuation consequences will depend on whether the marginal benefits of such connections outweigh the costs. Hence, if the reduction in the value of political connections is dominated by the increased cost of stealing, the valuation of oligarch firms should improve following the Yeltsin-Putin regime shift.

The level of political risk may also have implications for the valuation of oligarch-controlled firms. The privatization in Russia was controversial and there was a significant risk of reversing the results of the privatization. Freeland (2005) characterize that the close relation between some oligarchs and the political establishment as being like "Siamese twins". Oligarchs also financed Yeltsin in 1996 (e.g., Guriev and Rachinsky, 2005). The close connection between oligarchs and Kremlin was likely to protect the oligarchs from expropriation by the state. Braguinsky and Myerson (2007) argue that

3 It has been claimed that Putin offered to respect the property rights of the oligarchs as long as they stayed out of politics and paid taxes (Thompson, 2004). This defined the relationship between the President and the oligarchs during Putin's first term (2000–2004) (Guriev and Rachinsky, 2005).

4 It should be noted, though, that Putin did not put insider trading laws in place.

5 Moreover, Shleifer and Treisman (2005) note that the high performance of oligarch-run oil firms compared with other oil firms such as state-controlled ones was attributable not only to higher oil prices but also to better management.

6 For Ukraine, Gorodnichenko and Grygorenko (2008) find that oligarch-controlled firms tend to have higher productivity growth than those not controlled by oligarchs.

asset owners protected themselves against expropriation by the state by building up assets abroad. They argue that the capital flight must have produced an initial decline in the economy. Putin's assurance in year 2000 that he will not question the results of the privatization may have had a positive effect on the valuations of oligarch firms. Goriaev and Sonin (2005) show the reverse effect of the interaction between political risk and stock prices. The imprisonment of Yukos executives negatively affected Yukos's share price and hade adverse effects on the market.

2.1.3. Summary of research focus

Our main research question is how a political regime change affects the valuation of firms controlled by politically powerful owners. We focus on two questions which highlight alternative views about how minority shareholders can be affected by the regime change. First, did the regime shift from Yeltsin to Putin increase the cost of stealing in oligarch firms? This could have been the case if the effect of a higher cost of stealing dominated the potentially lowered value of political connections followed by the new administration. Second, did the initial assurance of the Putin regime that the rights of the oligarchs' acquired property will not be questioned decrease the political risk concerning the oligarchs' ownership?

3. DATA

3.1. Sample

We focus on the time period following the financial crisis that affected Russia in 1998. As a starting point, we select all firms in the UBS Brunswick Russian Equity guides (UBS guides) for the six-year period of 1998 to 2003 (Brunswick UBS, 1999-2005). The UBS guides primarily include Russian firms traded on Russian exchanges but also a few Russian firms traded only in the U.S. All our accounting-based data come from the UBS guides. Table 1 describes the construction of the sample.

Table 1. *Construction of the sample*

Panel A: Construction of the basic sample with ownership data	
505	Firm years covered by the Brunswick UBS Guides (UBS guides) 1998–2003
−67	Ownership information incomplete to calculate ownership by largest individual shareholder in UBS guides or Skrin.ru
438	Basic sample with ownership data for descriptive analysis (Table 4)
Panel B: Construction of sample for empirical analysis	
438	Basic sample
−23	Accounting data missing to calculate control variables
−31	Stock price data not available
384	Sample for empirical analysis with ownership and valuation data covering 121 different firms over the period 1998–2003

Information on ownership structures come from two sources: UBS guides and Skrin.ru. From the UBS guide 1999/2000 we collect ownership information reflecting the situation at year-end 1998. As the USB guides lack data on ownership for year-end 1999 and 2000, we gather ownership data for these years from Skrin.ru. Ownership data for year-end 2001, 2002, and 2003 come from UBS guides labeled 2002/03, 2003/04, and 2004/05, respectively.

Data on market valuations come from three sources: UBS guides, Thomson One Banker, and RTS.ru. Valuation data that measure the impact of corporate governance characteristics in 1998 are those market capitalizations (based on mid prices as on August 1, 1999) that are published in the "capital structure" section in the UBS guide 1999/2000. To get valuation measures for years 1999 and 2000, we use year-end valuation data from Thomson One Banker for these years. If data are missing in Thomson One Banker, we collect information on prices and number of shares from RTS.ru.[7] Valuation data measuring corporate governance characteristics for years 2001, 2002, and 2003 come from UBS guides that report market capitalizations on July 26 2002, August 1 2003, and August 2004, respectively. Finally, our sample containing ownership data consists of 438 firm-year observations (Basic sample). As a result of the sample and variable selection, we end up with 121 firms and 384 firm-years for the sample that facilitates empirical analysis (sample used in the regressions).

3.2. Variable descriptions

The constructions of the variables are shown in Table 2. We measure firm valuation with the Tobin's q-ratio, defined as market value of equity (ordinary share price times the number of outstanding shares) plus total assets minus book value of equity all divided by the book value of total assets. To reduce the impact of extreme values, we winsorize the valuation ratio at the 1st and 99th percentiles, by setting influential values equal to the 1st and 99th percentile values, respectively.[8] We also report results using industry-adjusted valuations. We calculate industry Tobin's q-ratios using industry-group averages each year.[9] The industry adjusted Tobin's q is the actual Tobin's q minus the industry-adjusted Tobin's q each year.[10] In Section 5, we discuss results using the firm value/sales ratio and market-to-book value of equity as the valuation measure.

We trace the ultimate controlling shareholder in a firm using a significant voting stake of 20 %. Such a voting stake is usually enough for exercising effective control of a firm (La Porta et al., 1999).[11] If there are several owners with the same immediate ownership

---

7 If there is no trading on last day of the year, we use price data from the last trade available for the each firm.

8 We obtain similar results when we winsorize valuations at the 5th and 95th percentiles, take the logarithm of the valuation ratio and use raw valuations.

9 The detailed industry groups used to calculate industry Tobin's q-ratios are the 17 groups in the Russian Equity Guides published by UBS Brunswick.

10 We winsorize neither the actual Tobin's q nor the industry-average Tobin's q in this specification.

11 Perotti and Gelfer (2001) also use a 20% voting stake as a definition of control in Russian firms. However, Guriev and Rachinsky (2005) require a controlling shareholder to hold 25% of decision rights in their study using Russian data.

stake, we consider the owner with more voting rights (including through the indirect holdings) as the controlling shareholder. We group the controlling shareholders into four types: state, oligarch, other private, and foreign. If the firm does not have a controlling shareholder, we call it "widely held".

Table 2. *Definition of variables*

	Variable	Description
1	Tobin's q	((Ordinary share price times number of outstanding shares) + (Total assets − book value of shareholders equity))/Total assets. *Source:* Brunswick UBS Russian Equity Guides, 1999/00, 2002/03, 2003/04, 2004/05, and Thomson One Banker Financials or RTS.ru (year-end 1999 and 2000).
2	Industry-adjusted Tobin's q	Tobin's q minus the industry average Tobin's q for each year. Detailed industry classification comes from Brunswick UBS Equity Guides (17 industries). *Sources:* see above.
3	Oligarch	Equals one if a firm in a particular year is controlled by an oligarch or an holding company controlled by an oligarch with at least 20 percent of the votes and zero otherwise. *Source:* Guriev and Rachinsky (2005), Barnes (2003), *Financial Times* (1996), Brunswick UBS Russian Equity Guides, and Skrin.ru (years 1999 and 2000).
4	State ownership	Equals one if the state is the controlling shareholder with at least 20 percent of the votes and zero otherwise.
5	Foreign ownership	Equals 1 if a foreign shareholder controls the firm with at least 20 percent of the votes and zero otherwise.
6	Widely held	Equals one if the firm does not have a controlling shareholder with at least 20 percent of the votes and zero otherwise. *Source:* Brunswick UBS Russian Equity Guides and Skrin.ru (years 1999 and 2000).
7	Cross-listing	Equals one if the firm has cross-listed its shares that year and zero otherwise. *Source:* Bank of New York, Deutsche Bank, Brunswick UBS.
8	Ownership	Cash-flow rights held by the ultimate controlling shareholder with at least 20 percent of the votes. *Source*: Direct ownership data from Brunswick UBS Russian Equity Guides and Skrin.ru (years 1999 and 2000), ultimate ownership data calculated using method in La Porta *et al.* (1999).
9	Loans-for-shares	Equals 1 if the firm was privatized through the loans-for-shares auctions, and zero otherwise. *Source:* Brunswick UBS Russian Equity Guide (2004/5, p. 8).
10	Log(sales)	The logarithm of sales. *Source:* Brunswick UBS Russian Equity Guides.

	Variable	Description
11	Leverage	Total debt/total assets. *Source:* Brunswick UBS Russian Equity Guides.
12	Industry dummies	Broad industry groups are Auto, Consumer, Metals, Telecom, Power, Oil & Gas, and other. *Source:* Brunswick UBS Russian Equity Guides.

Notes: Description of the main variables used in the analyses.

We say that a firm in our sample is state-controlled if the control rights held by the federal government and regional governments together constitute the controlling group. The state ownership can be in the form of direct ownership, indirect ownership through traded state-controlled firms, or unlisted state-controlled firms. The information on state holding companies comes primarily from lists published in UBS guides.

If the firm's controlling shareholder is not the state, we check if the private controlling owner is either directly an oligarch or a holding company controlled by an oligarch or oligarchs, and if so, we classify the firm as oligarch-controlled that year. The information on private oligarchs comes primarily from Guriev and Rachinsky (2005), Fianncial Times (1996) and the oligarch list in Barnes (2003). The oligarch ranking in Guriev and Rachinsky (2005), as they note, is generally consistent with many other rankings for Yeltsin's second period and Putin's first term.[12] We assume that the ultimate owners behind the oligarch holding companies have been the same during the study period.

If the firm's controlling shareholder is neither an oligarch nor the state, we use Internet sources to check the country of incorporation of the owner. Foreign owners are typically foreign multinationals. We do not trace the ultimate owner of the foreign owner but keep it as a separate owner type because foreign owners may perform their own governance role. If the firm has a controlling shareholder that is not a foreign owner, the state or an oligarch, we classify it as controlled by an "other private" owner. These other private shareholders can be persons, unlisted firms, or widely held corporations. If the firm does not have any controlling shareholder with at least 20 % of votes, we classify it as "widely held".

Having traced the identity of the ultimate owner, we measure the fraction of cash-flow rights it is entitled to. Voting rights can exceed cash-flow rights primarily due to the use of pyramiding or due to differences in voting rights attached to different share classes. The variable for cash-flow ownership may overstate the amount of incentives because in some cases we have not been able to identify the ultimate owner. However, the owners behind unlisted firms are typically individuals with a controlling stake rather than

[12] To be included in their list of the 22 largest Russian oligarchs, it is required that total annual sales revenues controlled by a particular group of shareholders are above $700 million or the total employment controlled by the group is above 20,000 people.

dispersed owners (La Porta et al., 1999), and therefore the cash-flow incentives by the ultimate owner should be significant.[13]

We separate the Yeltsin era from the Putin era by analyzing the effects of the corporate governance variables during these two separate regimes. Yeltsin was in power in the Kremlin during the years 1991-1999. On New Year's Eve 1999, President Boris Yeltsin announced his resignation. By separating the periods under President Yeltsin and Putin, we are able to explore, in particular, whether the valuation of oligarch-controlled firms has changed during these two power regimes. According to the Economist (2004) "much of what Mr Putin did in his first term was aimed at dismantling Mr Yeltsin's legacy". Vladimir Putin took office after the election of March 2000. During Putin's power in the Kremlin, the new Law on Joint-Stock companies also came into effect in year 2002. In April 2002, the Federal Securities Commission (FSC) prepared a corporate governance code.[14]

To measure the effect of cross-listings as a governance mechanism on the valuation of the firm, we construct a dummy variable equal to one if the firm has cross-listed its shares in another country.[15] We include all types of cross-listings in this variable such as Reg S, 144a, OTC, and Exchange listings. The Rule 144a private placements programs do not require the firm to follow US Generally Accepted Accounting Principles (US GAAP) and US Securities and the Exchange Commission (SEC) rules, whereas the Level 1 ADRs trade as OTC issues with limited liquidity and require only limited SEC disclosure and no US GAAP compliance (Doidge et al., 2004). In contrast, the Level 2 and 3 American Deposit Receipt (ADR) listings require SEC disclosure and require the firm to follow the exchange's own listing rules. The cross-listings are either ADRs or depository receipts issued in Europe. Nevertheless, since the depository receipts generally require improved disclosure quality from the firms and in some instances give minority shareholders some improved rights (depending on the level of the cross-listing), we expect a positive relation between cross-listings and firm valuations.

We control for firm-specific and industry characteristics using several variables. Sales growth is used to measure growth opportunities. The variable is measured as the growth in revenues from the previous year. Leverage is defined as total debt / total assets.[16] Firm size is measured as the logarithm of sales. We also control for industry effects by

---

13 When using emerging markets data, accuracy may be a problem. Thus we also estimate models using errors-in-variables models to control for potential measurement errors in the ownership variable and find that the models tolerate a 10% error. Thus, the ownership variable appears to be rather robust with respect to measurement errors.

14 It should be noted that all the corporate governance improvements were voluntary.

15 Coffee (1999) and Stulz (1999) were among the first to suggest that foreign listings may function as a corporate governance mechanism, preventing managers from taking excessive private benefits. Through a foreign listing, the firm may become subject to more stringent regulatory rules, the investors may acquire the ability to exercise more effective legal actions such as class actions, and the exchange itself may commit the firm to more extensive and transparent reporting (Coffee, 1999). Besides Doidge et al. (2004), also e.g. Reese and Weisbach (2002) and Mitton (2002) provide evidence supporting the hypothesis of such bonding / legal bonding through ADRs.

16 We obtained similar results when we defined leverage as long-term debt / total assets.

including dummy variables for industries and for year-specific effects by including year dummies, where appropriate.[17]

3.3. Descriptive statistics

Table 3 shows that the fraction of oligarch-run firms equals 22,7 % (87 of 384). The valuations were lower in oligarch firms than in non-oligarch firms during the Yeltsin period, whereas this difference is reversed during the Putin period. For the full sample, we find that oligarch-controlled firms are significantly larger, have higher growth levels and leverage, as well as more concentrated ownership by the controlling shareholder. The frequency of cross-listings is about the same in oligarch and non-oligarch-controlled firms.

Table 4 presents descriptive statistics on controlling owners and cross-listings for the sample firms over the period 1998-2003. Panel A shows that the most common type of controlling owner is still the state which is in control, on average, in more than half of the sample firms. The fraction of listed companies controlled by oligarchs has increased from 8 % in 1999 to 34% in 2003. By comparison, Guriev and Rachinsky (2005) show that oligarchs in 2003 controlled about 40% of sales in their large sample study, also covering unlisted firms. In the year 1998, the fraction of oligarch-controlled firms was 13 %. Thus, the fraction of oligarch-controlled firms has increased after the financial crisis in which a few of the oligarchs that dominated Yeltsin's Russia took a hit (Guriev and Rachinsky, 2005). Oligarchs appear to have taken over assets from the state in subsequent privatization deals and from other private owners as well.

Panel B of Table 4 displays that the recorded ownership rights held by the controlling shareholder have increased over the sample period, namely from 38 % to 54 %. Panel B also shows that ownership concentration is higher in oligarch-controlled firms as compared to firms with other types of controlling shareholders. Furthermore, panel C of Table 4 shows that many firms introduced cross-listings of their shares in year 1999: the fraction of firms with cross-listings was 25 % in 1998 and 41% in 1999.

17 As an alternative to the industry and year dummies, we use yearly industry-adjusted Tobin's q-ratios.

***Table 3**: Summary statistics.*
This table presents means, standard deviations, and tests of differences in means between oligarch-controlled and nonoligarch-controlled listed firms during President Yeltsin's second term and President Putin's first term. The sample consists of 384 firm-year observations form 121 Russian listed firms during 1998-2003. The variables are Tobin's q, ordinary share price times number of shares plus book value of debt all divided by total assets; Sales growth, the percentage change in sales year-on-year; Sales, the sales in million USD; Leverage, Long-term debt divided by total assets; Ownership, the fraction of cash-flow rights held by the firm's controlling shareholder; and Cross-listing, equals 1 if the firm has cross-listed its shares abroad, and 0 otherwise.
, **, * denote significance at the 10, 5, and 1 percent levels, respectively.*

	[a]				[b]				[c]				Diff. in means			
	Full sample				Yeltsin II				Putin I							
	(1)		(2)		(3)		(4)		(5)		(6)		(3)–(4)		(5)–(6)	
	Olig.		Nonolig		Olig.		Nonolig.		Olig.		Nonolig.					
Variable	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Diff.	*t*-stat	Diff.	*t*-stat
Tobin's *q*	1.20	0.66	0.93	0.57	0.75	0.30	0.89	0.52	1.30	0.68	0.95	0.60	−0.13	−1.00	0.35	4.01***
Industry-adjusted Tobin's *q*	0.12	0.56	−0.03	0.43	−0.05	0.24	0.01	0.38	0.15	0.61	−0.06	0.45	−0.06	−0.65	0.21	3.06***
Sales growth	0.23	0.46	0.03	0.37	−0.03	0.69	−0.33	0.26	0.29	0.37	0.23	0.24	0.30	3.25***	0.06	1.61
Sales (million USD)	6.95	1.30	5.91	1.30	7.17	0.96	5.67	1.38	6.91	1.37	6.05	1.24	1.49	4.18***	0.86	4.82***
Leverage	0.47	0.20	0.41	0.20	0.50	0.19	0.46	0.19	0.46	0.20	0.38	0.19	0.04	0.79	0.08	2.95***
Ownership	62.03	21.65	36.87	18.77	53.74	19.10	31.26	16.02	63.90	21.88	40.02	19.50	22.48	5.10***	23.88	8.51***
Cross-listing	0.45	0.50	0.43	0.50	0.38	0.50	0.33	0.47	0.46	0.50	0.48	0.50	0.05	0.38	−0.02	−0.27
Firm years	87		297		16		107		71		190					

	Yeltsin II		Putin I			
	1998	1999	2000	2001	2002	2003
Panel A: Fraction of firms by controlling owner type						
Oligarch	0.13	0.08	0.11	0.24	0.30	0.34
Other private	0.23	0.13	0.13	0.11	0.06	0.16
State	0.48	0.63	0.63	0.56	0.58	0.46
Foreign	0.08	0.03	0.03	0.07	0.05	0.03
Widely held	0.08	0.13	0.10	0.01	0.02	0.00
Panel B: Ownership concentration by type						
Ownership concentration	37.93	38.58	39.81	46.95	48.84	53.76
Own. conc. in oligarch firms	49.70	62.64	60.03	64.3	62.96	64.8
Own. conc. in nonoligarch firms	35.97	36.18	36.98	40.14	42.06	48.00
Panel C: Cross-listing by owner type						
Cross-listing	0.25	0.41	0.43	0.50	0.50	0.36
Cross-listing in oligarch firms	0.27	0.60	0.57	0.47	0.45	0.43
Cross-listing in nonoligarch firms	0.25	0.39	0.41	0.51	0.52	0.32

Table 4. *Descriptive statistics on ownership structures and cross-listing*
This table displays the fraction of firms controlled by various owner types, the ownership rights by the controlling shareholder, and the fraction of firms with cross-listings for various fiscal years. The basic sample consists of 427 firm-year observations for Russian listed firms during 1998-2003. The variables are Oligarch, equals 1 if a firm in a particular year is controlled by an oligarch or an holding company controlled by an oligarch with at least 20 % of the votes, and 0 otherwise; Other private, equals 1 if a firm in a particular year is controlled by a private shareholder with at least 20 % of the votes who is not an oligarch, and 1 otherwise; State, equals one if the state is the controlling shareholder with at least 20% of the votes and zero otherwise; Foreign, equals 1 if a foreign shareholder controls the firms with at least 20 % of the votes, and 0 otherwise; Widely held, equals 1 if the firm do not have a controlling shareholder with at least 20 % of the votes, and 0 otherwise; Ownership, the fraction of cash-flow rights held by the firm's controlling shareholder; and Cross-listing, equals 1 if the firm has cross-listed its shares abroad, and 0 otherwise.

4. REGRESSION RESULTS

4.1. Model

Our main interest is in the relation between the oligarch controlling shareholder, political regimes and firm valuation. The main model is an ordinary least squares (OLS) regression specification. Because of the relatively small sample size, we report bootstrap standard errors.[18] The standard errors also control for within cluster (firm) correlation and heteroscedasticity. This specification relaxes the independence assumption required by the OLS estimator to being just independence between clusters (firms). The main model takes the following form:

18 We use 1000 bootstrap samples in the calculations. We generally obtain similar results when we calculate standard errors based on asymptotic properties.

Firm valuation =

(1)

where Firm valuation = Tobin's *q* (or industry-adjusted Tobin's *q*); oligarch firm = binary variable that equals one if the firm is controlled by an oligarch; Putin regime = binary variable that equals one for the years with Putin as President; Oligarch Putin regime = interaction of the oligarch firm dummy and the Putin regime; Control variables = State dummy, Foreign dummy, Widely held dummy, Ownership (the ownership rights held by the controlling shareholder), Cross-listing (binary variable that equals one when the firm has cross-listed its shares abroad), annual sales growth, log(sales), and total debt by total assets; and Industry dummies = 1 for the industry class in our sample (where applicable).

4.2. Regression results

In this section, we present the main regression results. The main question we ask is how the valuation of oligarch-controlled firms is affected by the political regime. First, we present the results of the relative valuation of oligarch-controlled firms during the Yeltsin regime. Second, we estimate the same regression models during the Putin administration. Thirdly, we run regressions for all years on a pooled sample substituting the year dummies with the Putin (vs Yeltsin) period dummy. Finally, we report regressions using yearly industry-adjusted valuations.[19]

19 We also explored to what extent the results are driven by the rise in the valuations of firms in oil and related industries that are oligarch-controlled. Desai et al. (2007) find that the decline in voting premia – and presumably minority shareholder expropriation – following the tax enforcement actions in year 2001 was concentrated in the oil and gas industry. We therefore re-estimated our findings on a sub-sample that excludes the oil and gas industries. We found that the results for the valuation of oligarch firms obtained in Table 5 were similar when firms operating in the oil and gas industries were excluded. These results (not reported in the paper) suggest that factors other than the tax enforcement actions related to the regime change affected the valuations of oligarch-controlled firms.

Table 5. *Regressions of valuation on oligarch ownership under different political regimes*

	Yeltsin II Panel A		Putin I Panel B		Full sample Panel C		Full sample Panel D	
	Tobin's q		Tobin's q		Tobin's q		Industry-adjusted Tobin's q	
	OLS		OLS		OLS		OLS	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Constant	0.303	0.180	0.476	0.614	0.449	0.479	−0.117	−0.231
	(0.288)	(0.289)	(0.432)	(0.470)	(0.304)	(0.317)	(0.189)	(0.191)
Oligarch controlling shareholder	−0.274	−0.161	0.303	0.229	−0.180	−0.200	−0.115	−0.008
	(0.161)*	(0.155)	(0.132)**	(0.170)	(0.129)	(0.158)	(0.130)	(0.138)
Oligarch × Putin I					0.463	0.462	0.279	0.267
					(0.149)***	(0.149)***	(0.147)*	(0.151)*
Putin I					−0.060	−0.013	−0.091	−0.068
					(0.100)	(0.097)	(0.093)	(0.088)
State controlling shareholder		0.056		−0.192		−0.137		0.082
		(0.162)		(0.200)		(0.150)		(0.098)
Foreign controlling shareholder		0.609		0.482		0.512		0.484
		(0.261)**		(0.308)		(0.260)**		(0.269)*
Widely held firms	−0.067	0.093	0.425	0.466	0.139	0.221	−0.087	0.009
	(0.216)	(0.234)	(0.269)	(0.319)	(0.156)	(0.190)	(0.108)	(0.153)
Ownership	0.004	0.004	0.005	0.004	0.006	0.006	0.000	0.000
	(0.005)	(0.005)	(0.003)	(0.003)	(0.003)**	(0.003)**	(0.003)	(0.003)
Cross-listing	0.149	0.188	−0.020	−0.010	0.010	0.027	0.019	0.020
	(0.073)*	(0.068)**	(0.094)	(0.085)	(0.075)	(0.068)	(0.058)	(0.050)
Leverage	0.479	0.623	0.957	0.994	0.799	0.846	0.596	0.618
	(0.261)*	(0.238)***	(0.278)***	(0.277)***	(0.218)***	(0.206)***	(0.185)***	(0.177)***

	Yeltsin II Panel A		Putin I Panel B		Full sample Panel C		Full sample Panel D	
	Tobin's q		Tobin's q		Tobin's q		Industry-adjusted Tobin's q	
	OLS		OLS		OLS		OLS	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Growth	0.237	0.198	0.295	0.226	0.258	0.217	0.127	0.095
	(0.128)*	(0.113)*	(0.189)	(0.176)	(0.130)**	(0.119)*	(0.113)	(0.101)
Log(sales)	0.020	0.001	−0.049	−0.050	−0.026	−0.030	−0.021	−0.021
	(0.058)	(0.060)	(0.047)	(0.047)	(0.037)	(0.036)	(0.028)	(0.030)
Observations	123	123	261	261	384	384	384	384
R^2	0.50	0.57	0.47	0.49	0.40	0.43	0.10	0.14

The table presents coefficient estimates and standard errors (in parenthesis) from regressions of firm valuation on corporate governance variables for a sample of 121 listed Russian firms for the period 1998-2003. Panel A covers the last two years of President Yeltsin's second term 1998-1999, whereas Panel B covers President Putin's first term period for years 2000-2003, and Panel C covers the whole period. The dependent variable in Panles A to C is Tobin's defined as the ((ordinary shares price times number of outstanding shares) + book value of debt) / Totals assets) winsorized at the 1st and 99th percentiles. Panel D report regressions using yearly industry-adjusted Tobin's q ratios defined as Tobin's q minus each year's industry average Tobin's q. The independent variables are: Oligarch, equals 1 if a firm in a particular year is controlled by an oligarch or an holding company controlled by an oligarch with at least 20 % of the votes, and 0 otherwise; Oligarch ownership stake, the ultimate cash flow rights held by the oligarch controlling shareholder; nonoligarch ownership stake, the ultimate cash flow rights held by a nonoligarch controlling shareholder; State, equals one if the state is the controlling shareholder with at least 20% of the votes and zero otherwise; Foreign, equals 1 if a foreign shareholder controls the firms with at least 20 % of the votes, and 0 otherwise; Putin, equals 1 for firm-years covering the Putin era, and 0 otherwise; Oligarch X Putin, an interaction variable between the Oligarch dummy and the Putin regime dummy; Widely held, equals 1 if the firm do not have a controlling shareholder with at least 20 % of the votes, and 0 otherwise; Oligarch X Putin, an interaction variable between the Oligarch dummy and the Putin regime dummy; Cross-listing, equals 1 if the firm has cross-listed its shares abroad, and 0 otherwise; Ownership, the fraction of cash-flow rights held by the firm's controlling shareholder; Leverage, long-term debt divided by total assets; Sales growth, the percentage change in sales year-on-year; and Log(sales), the logarithm of sales in million USD. Bootstrap standard errors are in parentheses (controlling for firm clusters in OLS models).
, **, * Significant at the 10, 5, and 1 percent levels, respectively.*

In Panel A of Table 5, we show that oligarch-controlled firms have lower valuations than firms with other types of controlling shareholders during the Yeltin era (column 1). The coefficient for the oligarch dummy equals –0.274 (significant at the 10 % level) and implies that the valuation of oligarch-run firms is about 29% lower than in firms with other types of large owners[20]. In column 2 of Panel A, we show that the coefficient for the valuation of oligarch-controlled firms is –0.16, which implies that valuations are lower than in firms with other domestic, private controlling shareholders taken as the reference group (although not significant at conventional levels).

Panel B of Table 5 shows the valuation of oligarch-controlled firms during the Putin administration. Oligarch-controlled firms' valuations are significantly higher (at the 5 percent level) than those of firms with other types of controlling shareholders (column 3). The coefficient for the dummy variable for oligarch control equals about 0.30 and implies that the valuations of oligarch firms are about 34 percent higher than in non-oligarch firms during the Putin era (column 3).[21] When the oligarch dummy is compared with other private domestic owners, the coefficient is positive though not statistically significant (column 4).

Panel C of Table 5 shows that the valuation of oligarch firms is significantly different between the two political regimes. The coefficient for the interaction between oligarch control and the Putin era equals about 0.46 (columns 5 and 6 of Table 5) and is statistically significant at the 1 percent level. In Panel D of Table 6, we re-estimate the models in Panel C using yearly industry-adjusted valuations, and obtain coefficients of 0.279 and 0.267 for the interaction between the oligarch dummy and the Putin regime (columns 7 and 8, respectively), though the statistical significance drops to 10 percent in Panel D. The results in Panels C and D of Table 5 indicate that the valuations of oligarch-controlled firms significantly differ between the Yeltsin II and Putin I periods.

The coefficient for firms controlled by a foreign owner is positive and significant in the OLS specifications in Panels C and D of Table 5. Table 5 also shows that the fraction of cash-flow rights held by the controlling shareholder regardless of type (labelled 'Ownership') is positively related to firm valuation in support of the incentive effect (Jensen and Meckling, 1976), although the variable is generally not statistically significant.[22]

---

20 We calculate this as the coefficient for the oligarch dummy (0.27) divided by the average Tobin's q-ratio for non-oligarch firms during the Yeltsin period (0.93) (see Table 3).

21 We obtain this figure by dividing the oligarch dummy (0.30) with the average non-oligarch Tobin's q during the Putin era (0.89).

22 Bevan et al. (2001) find that the ownership structure is unrelated to firm performance, and Filatotchev et al. (2001) find that ownership concentration is negatively related to firm performance in Russian firms in the 1990s.

The impact of cross-listings and firm valuations is also shown in Table 5. Prior research suggests that firms can opt for a more shareholder-friendly-legal regime by cross-listing its shares on markets which offer better shareholder protection (La Porta et al., 2000), and that such cross-listings should have a more positive effect on firm valuations the lower the shareholder protection is in the country of incorporation (Doidge et al., 2004). The coefficient for having a cross-listing abroad is positive and significant during the Yeltsin era (Panel A), but statistically insignificant for the Putin era (Panel B).[23] In unreported estimations, we included a variable measuring the interaction of a cross-listing and the Putin regime and found a positive and significant effect in the OLS model but no significant effect in the firm fixed effects model. Taken together, our results on cross-listings suggest that there is a positive impact on valuations during the earlier part of the sample period, the variable may also be correlated with unobservable effects which may prevent an interpretation of a strong causal relation between cross-listings and valuations obtained in the OLS model.

[23] Regressions with different levels of cross-listings (discussed in Section 3.2) show that the positive effect of cross-listings is mainly driven by cross-listings of the OTC or Exchange trading type, and most strongly for level 1 (OTC trading) which is the most common type of cross-listing in the sample, rather by cross-listings of the type Reg S or 144a. Thus, the results give some support to the argument that firms that have opted for a stricter cross-listing enjoy higher valuations.

Table 6. *Alternative specifications*

	Panel A	Panel B	Panel C
	Heckman sample selection model	Firm fixed effects	Dependent variable: industry-adjusted MV/Sales
	(1)	(2)	(3)
Constant	−0.259	0.653	−0.031
	(0.141)*	(0.550)	(0.226)
Oligarch controlling shareholder	−0.015		−0.190
	(0.126)		(0.173)
Oligarch ownership stake		−0.005	
		(0.004)	
Oligarch × Putin I	0.229		0.358
	(0.124)*		(0.192)*
Oligarch ownership stake × Putin I		0.006	
		(0.003)**	
Putin I	−0.045	−0.036	−0.206
	(0.065)	(0.072)	(0.120)
State controlling shareholder	0.062		−0.162
	(0.074)		(0.129)
State ownership stake		0.006	
		(0.006)	
Foreign controlling shareholder	0.470		0.553
	(0.111)***		(0.234)**
Foreign ownership stake		0.001	
		(0.013)	
Non-oligarch private ownership stake		0.004	
		(0.003)	
Widely held firms	−0.052		−0.125
	(0.132)		(0.156)
Ownership	−0.001		−0.001
	(0.001)		(0.003)
Cross-listing	0.041	−0.037	0.127
	(0.048)	(0.101)	(0.099)
Leverage	0.643	0.126	−0.520
	(0.115)***	(0.263)	(0.319)

Growth	0.097	–0.010	0.132
	(0.070)	(0.086)	(0.134)
Log(sales)	–0.010	–0.133	0.066
	(0.020)	(0.076)*	(0.037)*
Observations	2803	367	384
R^2	–	0.09	0.13

Notes: The table presents coefficient estimates and standard errors (in parentheses) from regressions of valuation ratios on corporate governance variables for a sample of 121 listed Russian firms for the period 1998–2003. The dependent variable is industry-adjusted Tobin's q in columns 1–2, and industry-adjusted market value/sales in column 3. The independent variables are: Oligarch, equals 1 if a firm in a particular year is controlled by an oligarch or a holding company controlled by an oligarch with at least 20 percent of the votes, and 0 otherwise; Oligarch ownership stake, the ultimate cash flow rights held by the oligarch controlling shareholder; State, equals one if the state is the controlling shareholder with at least 20 percent of the votes and zero otherwise; Foreign, equals 1 if a foreign shareholder controls the firm with at least 20 percent of the votes, and 0 otherwise; Putin I, equals 1 for firm-years covering the Putin I era, and 0 otherwise; Oligarch · Putin I, an interaction variable between the Oligarch dummy and the Putin I regime dummy; Oligarch ownership stake · Putin I, an interaction variable between the oligarch ownership stake and the Putin I regime dummy; Widely held, equals 1 if the firm does not have a controlling shareholder with at least 20 percent of the votes, and 0 otherwise; Cross-listing, equals 1 if the firm has cross-listed its shares abroad, and 0 otherwise; Ownership, the fraction of cash-flow rights held by the firm's controlling shareholder; Leverage, total debt divided by total assets; Sales growth, the percentage change in sales year-on-year; and Log(sales), the logarithm of sales in million USD. The standard errors that appear in parentheses below the coefficient estimates control for firm-level clustering. In model 1, standard errors are based on asymptotic properties. Bootstrap standard errors that are reported in columns 2–3. The OLS model in column 3 controls for firm-level clustering.
**, **, ***Significant at the 10, 5, and 1 percent levels, respectively.*

Of the control variables in Table 5, leverage is significantly positively related to firm valuation. The positive effect of leverage on firm valuation is similar to the results on leverage in Black et al. (2006), and suggests that firms with better access to debt capital may also be those firms that have better corporate governance practices as reflected by the higher valuations in these firms. The positive effect of sales growth is as expected although the variable is not statistically significant in all models. Firm size measured by the logarithm of sales is mostly negatively, although statistically insignificantly, related to valuations.

5. SENSITIVITY AND ROBUSTNESS CHECKS

In this section, we address potential concerns with the robustness of the results regarding (1) sample selection, (2) the definition of oligarch firms, (3) oligarchs' ownerships rights, (4) the composition of the sample, (5) alternative valuation measures, (6) accounting data, and (7) employee ownership.

We now consider the problem of sample selection that may arise when we use only a subset of Russian traded firms. To begin, the Amadeus database as of March 2008 contains 458 Russian traded firms, whereas the Brunswick UBS Equity Guides include a

subset of these firms (121 firms included in our study).[24] To address the selection problem, we use the Heckman (1979) two-step model to correct for selection effects. In the first step, we relate the probability of being selected to the Brunswick UBS sample to the variables firm size measured by the logarithm of sales in million USD[25], return on assets, leverage defined as long-term debt divided by total assets covered by the Amadeus database, and year dummies. For the 2,803 firm-year observations in the first step, we find that firm size is positively related to the inclusion into the Brunswick UBS sample (significant at the 1% level), whereas return on assets is negatively related to the inclusion (significant at the 1% level). Long-term debt to total assets is positively although insignificantly related to the inclusion into the Brunswick UBS sample. In the second step displayed in Panel A of Table 6, we find that the sample selection term, λ, is positive but insignificant, which indicates that OLS models are not significantly biased. Furthermore, the differences between the OLS and the Heckman estimates are small and imply similar inferences. Therefore, we conclude that the results seem to be robust to sample selection problems.

We also consider the role of large minority positions held by oligarchs.[26] To do so, we search for ownership blocks by oligarchs in firms with other types of non-majority owners such as the state, foreign multinationals, or other private owners reported to be the largest shareholder. We focus on the role of minority blocks in non-majority-controlled firms because the non-majority owners are easier to contest (Maury and Pajuste, 2005; Shleifer and Vishny, 1997). To explore the role of minority ownership stakes, we classify firm-year observations in which an oligarch has a minority stake with at least 20 percent of votes as an 'oligarch-affiliated' firm.[27] We find 13 such firm-year observations in our sample.[28] However, all but one of these observations occur during the Putin regime, which prevents a separate regime-shift analysis of these minority stakes. Alternatively, when we add the oligarch-affiliated firm-years to the oligarch control dummy used in Table 5 (Panel C), we do not find a significant impact of the regime shift on the industry-adjusted valuations of firms when minority holdings by oligarchs are included. We can therefore only conclude that the impact of the regime shift on valuations holds for firms with an oligarch as the controlling shareholder.

---

[24] Although the number of Russian traded firms with financial statement data is larger in Amadeus, the amount of firms with valuation data is larger in Brunswick UBS Equity Guides.

[25] We use exchange rates reported by the central bank of Russia to convert Rubles into US dollars.

[26] The sample also includes three firm-years in which an oligarch and another large shareholder are reported to have equal ownership stakes for firms with significant owners. To check the sensitivity of our results to these firm-year observations, we estimate the regression models with these observations as either oligarch or non-oligarch firms. We do not find that these alterations would change our main results in Table 5.

[27] We also included in this category the firm Lukoil that has been reported to be affiliated with the oligarch Alekperov (Barnes, 2003), although the fraction of shares controlled by this owner is difficult to estimate for the 1990s. Dropping Lukoil from the sample yields results in line with those in Table 5.

[28] We also investigate the role of oligarch minority holdings in firms majority-controlled by the Russian state. We find one such firm with a minority oligarch position in majority-controlled firms by the state, but we do not find that reclassifying these observations as oligarch-controlled would alter the main results in Table 5.

We examine the robustness of our classification of oligarch firms based on the identity of the largest shareholders. One concern may arise from the use of the 20 % voting rights threshold for oligarch control. In particular, in four of our sample firms the control classification changes between widely held and oligarch control depending on the year, although it may be that the effective control is in the hand of the same oligarch in all the years. We find that the reported results in Table 5 are robust to omitting these four firms. As another robustness check of the oligarch classification, we re-estimate the main regression models using an errors-in-variables model and find that oligarch variable tolerates a 15 % error and still generate the same results.

As an alternative to the oligarch dummy variable, we consider changes in the level of ownership rights by the oligarch. This analysis is motivated by the increasing concentration of ownership rights in the hands of oligarchs (see Table 3). For firm-years with ownership changes unequal to zero, we find that the average yearly change in controlling ownership by oligarchs is +1.77 percent in absolute terms.[29] However, there are some important concerns with utilizing changes in ownership rights. One such concern is that the variability in ownership concentration may arise due to different reporting practices over years that may not imply real changes in incentives.[30] As Chernykh (2008) notes concerning Russia, significant shareholders may have incentives to hide their real ownership because of unclear acquisitions of shares in the past. As we are not able to crosscheck the ownership changes because of data limitations, the degree to which changes are due to reporting practices or reflect real incentives remains unclear.

To the extent that the recorded changes in the level of ownership also reflect real changes in incentives, we can employ the firm-level fixed-effects model.[31] One benefit with the fixed-effects model is that one can assume that unobservable firm-specific effects are constant over time, an assumption that would permit a more accurate measurement of a causal effect between ownership and value. Panel B of Table 6 shows that the interaction between the oligarch ownership stake and the Putin regime is positive and statistically significant.[32] Thus, the results using reported ownership concentration support those obtained using the oligarch controlling owner dummy in the OLS specification.

One concern about the results on the changes in the valuation of oligarch-run firms is that as the pattern arises because of, for example, the entrance of new oligarchs during the Putin regime, the results may not reflect solely the impact of the institutional setting on the valuation of oligarch-run firms under the different policy regimes. We address this concern by analysing a subsample, in which we exclude oligarch-run firms that enter the sample during the latter regime (which reduces the sample by 48 firm-years). If we re-run models 5 and 6 in Table 5 we find that the interaction between the Putin regime and the

29 For oligarch firms, the annual increases are on average 10.29 percent, whereas those with decreases are on average)6.85 percent in absolute terms.

30 Measurement errors may also arise due to different ways of pooling ownership interests by various owners and from calculating ultimate ownership rights.

31 The low frequency of changes in the oligarch dummy over time prevents a meaningful analysis of owner type dummies in the firm-fixed-effects specification.

32 As an alternative to the firm-fixed-effects model, we also estimated this model with an OLS specification controlling for industry effects and firm-level clustering, and obtained very similar results.

oligarch dummy is positive and statistically significant in line with the results for the full sample. However, when we re-estimate models 7 and 8 in Table 5, the interaction between the Putin regime and the oligarch dummy is no longer statistically significant (t-values are 1.37 and 1.41, respectively). The lower significance is likely to be driven by the smaller sample size.

We explore the robustness of the results with respect to alternative valuation measures. First, we use firm value (market capitalization of equity + (total assets) shareholders' equity)) divided by sales as an alternative dependent variable. Column 3 of Table 6 shows that the valuations of oligarch-controlled firms are higher during Putin's administration. Second, we use the market value of equity divided by the book value of equity as an alternative valuation measure. We obtain similar results on the valuation of oligarch firms using the market-to-book value of equity and the Tobin's q measure. Taken together, the main conclusions regarding the oligarch and other ownership variables are similar using Tobin's q, market-to-book ratio of equity and the firm value-to-sales measure.

How sensitive are the results to the accounting method used? We consider firm observations reported using international accounts (IAS or US GAAP) and Russian Statutory Accounts (RSA) in separate regression models. For the reduced samples (though not shown in a table), the results are in line with those reported for the whole sample, namely that the valuations of oligarchs' firms are different for the two political regimes. We thus conclude that our results are not driven by accounting practices that could affect the valuation ratios we use.

We also control for the impact of the employee and management holdings that largely resulted from the design of the voucher privatization in the firms by adding a variable measuring the aggregate ownership rights held by the employees and managers as reported by Brunswick UBS Equity Guides. Although not reported in a table, the coefficient for aggregated employee and management ownership is positive but insignificant. We conclude that employee ownership does not seem to significantly affect valuations or alter the impact of other corporate governance variables.

6. INTERPRETING VALUATION CHANGES

Although our results show that the valuations of oligarch-controlled firms compared to other firms have changed, there are alternative explanations for the results we have obtained. In this section, we discuss alternative, though not mutually exclusive, explanations and offer some additional tests.

6.1 Various explanations and further tests

Although we control for cash-flow incentives in the regressions, the consolidation of ownership rights over time appears to be an important driver behind the value increases in oligarch-controlled firms. To examine the additional effect of the regime change, we first explore how much the holdings of the oligarchs change. Table 4 shows that the

oligarchs have increased their holdings in their firms over time. To further explore the impact of ownership structures, we re-estimate the main regressions in Table 5 on a subsample of 253 firm-years with non-majority ownership by the largest shareholder. Controlling for industry and time effects (using the yearly industry-adjusted Tobin's q-ratio) as well as firm characteristics, we still observe a significant increase in valuations of oligarch firms after the regime shift (significant at the 10 percent level). Thus we conclude that the valuation of oligarch-controlled firms was at least partially affected by the regime change and not solely by the uncontested nature of (majority) ownership suggested in the traditional explanation (Boone and Rodionov, 2002; Hoffman, 2003).

We have assumed that oligarchs that appear on published oligarch lists (Guriev and Rachinsky, 2005) are also politically well connected. However, the degree of political connectedness of individual oligarchs may vary. Without detailed data on the oligarchs' political connections, we can only make predictions for the politically powerful oligarchs as a group and not for the degree of individual oligarch's political connections. As Shleifer and Vishny (1994) note, the valuation consequences of the costs and benefits of politically powerful individuals in firms becomes an empirical question, which we can address for the oligarchs as a group.

The increased enforcement of tax laws initiated in Russia in 2001 should have a positive effect on stock prices as the expropriation of minority shareholders should become costlier and thereby decrease (Desai et al., 2007). To explore this issue further, we regress the models 1 and 2 in Table 5 on individual years 1998, 1999, and 2000 to test whether valuations of oligarch firms had already changed before the tax raids in 2001.[33] We find that oligarch firms' valuations are significantly lower than valuations of other firms for the years 1998 and 1999, but higher although not significantly different from other firms in year 2000, Putin's first year as President. These results do suggest that oligarchs had already started to change their behaviour in the year before the tax raids, which suggests that factors other than the tax law enforcement that we put forward in this paper affected the cost of expropriating minority shareholders.

Although the corporate governance explanations of the valuation changes in oligarch-controlled firms are consistent with both anecdotal evidence and our empirical findings, the political risk explanation (discussed in Section 2) may also be valid. If the political risk hypothesis is correct, one would expect that those firms that were involved in the most controversial privatization schemes should benefit most from the political assurance by President Putin in year 2000, stating that as long as the oligarchs stayed out of politics they could keep their acquired property and would not have to fear nationalization of their assets. To explore this political risk hypothesis, we divide the oligarch dummy into those that acquired their ownership in the controversial loans-for-shares auctions, and those that did not. Empirically, we find that the oligarchs involved in loans-for-shares transactions experienced similar valuation increases (using industry-adjusted Tobin's q-ratios) as the other oligarchs who did not participate in this privatization scheme. We obtain the same result whether we use the full sample or a reduced sample with oligarch firms that have observations during both political regimes. Thus we conclude that there is

[33] See Desai et al. (2007) for details on these tax raids.

no explicit evidence that would make the political risk explanation the dominating explanation for our empirical findings.

6.2. Summary and implications

By combining our results on valuations of oligarch firms with findings on related effects in prior literature, we can form an understanding about the relative importance of different explanations for the regime change effects. To begin, our coefficient estimates in Table 5 show that the valuation of oligarch firms went from the lowest category to the second highest after foreign-controlled firms when comparing the regimes of Yeltsin II and Putin I. Our results indicate that the concentration of ownership by the largest shareholder is positively although insignificantly related to valuations. Thus it appears that ownership concentration alone cannot explain the valuation changes, suggesting that other corporate governance factors and political risk play important roles.

There appears to be an important trade-off between the assumed drop in the value of political connections when Putin reduced oligarchs' political power on the one hand, and the increase in the cost of stealing when subversion of institutions became harder on the other hand. Although Faccio (2006) finds a positive stock price effect when entrepreneurs enter politics, suggesting that political connections are indeed valuable, the impact of the institutional environment on the cost of stealing can be large. Shleifer and Vishny (1997) argue that insiders have been able to expropriate a significant fraction of the value of some Russian firms. Although a precise figure on the impact of the regime change on the cost of stealing is difficult to estimate, the study of Desai et al. (2007) offers some insight into how increased tax enforcement actions in 2001 (averaged over February–May) decreased voting premiums by 7.8 percent for a sample of 59 Russian listed firms. Furthermore, the decline in voting premia was concentrated in the extractive industries ()13.7 percent). They also find that valuations of Russian firms experienced increases in their stock prices after the enforcement actions. Thus, our results suggest that the increase in the cost of stealing outweighs the loss in the value of political connections that followed the regime change.

Changing political risks is another factor affecting the valuation of oligarch firms. It is probable that the observed valuation increases of oligarch firms are partly driven by lower political risk because of Putin's assurance in year 2000 that he would respect the property rights of the oligarchs. Both explanations, that of changing costs of stealing and that of changing political risks, appear to be valid explanations for the valuation changes we observe. Taken together, our results provide support for the hypothesis that regime changes can affect the value of politically connected firms. Our findings thus complement the 'conventional wisdom', arguing that the increases in ownership by the oligarchs drove the valuation changes of oligarchs' firms.

7. CONCLUSION

In this paper, we explore the relative valuation of oligarch-controlled firms as compared to firms with other types of domestic private controlling owners and compared to any other controlling owners for a sample of listed Russian firms during the period 1998-2003. We focus on the questions of if and how the valuations of oligarch-controlled firms differ between the Yeltsin and the Putin era. Thus, our research approach is meant to uncover the valuation effect of the decreasing agency problem between the controlling oligarch owner and minority shareholders during the institutional transition in post-communist Russia.

We find that the valuation of oligarch-controlled firms has increased with the transition from President Yeltsin to President Putin. The market valuation of oligarch-controlled firms is significantly different between the two political regimes. These valuation changes are robust to controlling for industry, for time effects and for firm characteristics. (kop fr pdf)

The results indicate that political regime changes can have an important impact on the valuation of firms with politically powerful owners, such as oligarchs. As we control for effects of ownership concentration by the largest shareholder as well as industry effects, we can interpret some additional effect arising from the regime change. The results are consistent with the idea that the increase in the cost of subverting institutions and thus an increase in the cost of stealing outweighs the possible loss in political connections by the oligarchs after a regime change. The reduction in the risk of expropriation by the state due to Putin's assurance in year 2000 that he will not question the oligarchs' rights to their property may also have contributed positively to the valuation of oligarch firms directly after the regime change.

Our findings on the regime change effect may have different implications depending on the institutional setting in a particular county. If the economic and political institutions are weak, as they have been in Russia, then the valuation patterns following a regime change may hold also on those markets. If institutions are of better quality, a regime change may have a lower impact on the valuation of politically connected firms as the increase in the cost of expropriating minority shareholders may be cancelled out by a small drop in the value of political connections. Further research on regime shifts may show how the valuations of politically powerful firms are affected by a different institutional setting.

References

Aron, L. (2003). 'The Yukos Affair', American Enterprise Institute for Public Policy Research, Fall 2003.

Aslund, A. (2004). 'The misguided blame game', Transition Newsletter, 14/15, pp. 25-26.

Barnes, A. (2003). 'Russia's New Business Groups and State Power', Post-Soviet Affairs, 19, pp. 154-186.

Bevan, A., Estrin, S., Kutznetsov, B., Schaffer, M. E., Angelucci, M., Fennema, J. A. and Mangiarotti, G. (2001). 'The determinants of privatized enterprise performance in Russia', William Davidson Institute Working Paper 452.

Black, B.S., Love, I. and Rachinsky, A., (2006). 'Corporate governance indices and firms' market values: Time series evidence from Russia', Emerging Markets Review, 7, pp. 361-379.

Boone, P. and Rodionov, D. (2002). 'Rent seeking in Russia and the CIS', Brunswick UBS Warburg.

Boycko, M., Shleifer, A. and Vishny, R. (1995). 'Privatizing Russia', Cambridge and London: MIT Press.

Braguinsky, S., and Myerson, R. (2007). 'A macroeconomic model of Russian transition: the role of oligarchic property rights', Economics of Transition, 15, pp. 77-107.

Brunswick UBS (1999-2005). 'Russian Equity Guides.'

Chernych, L. (2008). 'Ultimate ownership and control in Russia', Journal of Financial Economics, 88, pp. 169-192.

Coffee, J. C. (1999). 'The future as history: the prospects for global convergence in corporate governance and its implications', Northwestern University Law Review, 93, pp. 641-708.

Desai, M., Dyck, A. and Zingales, L. (2007). 'Theft and taxes', Journal of Financial Economics, 84, pp. 591-623.

Doidge, C., Karolyi, G. A. and Stulz, R. M. (2004). 'Why are foreign firms listed in the U.S. worth more?' Journal of Financial Economics, 71, pp. 205-238.

The Economist (2004). 'Having it both ways', May 20.

Faccio, M. (2006). 'Politically connected firms', American Economic Review, 96, pp. 369-386.

Filatotchev, I., Kapelyushnikov, R., Dyomina, N. and Aukutsionek, S. (2001). 'The effects of ownership concentration on investment and performance in privatized firms in Russia', Managerial and Decision Economics, 22, pp. 299-313.

Freeland, C. (2005). 'Sale of the century: the inside story of the second Russian revolution', Little, Brown Book Group.

Glaeser, E., Scheinkman, J. and Shleifer, A. (2003). 'The injustice of inequality', Journal of Monetary Economics, 50, pp. 199-222.

Glaeser, E. and Shleifer, A. (2003). 'The rise of the regulatory state', Journal of Economic Literature, 41, pp. 401-425.

Goldman, M. (2004). 'The Rule of Outlaws is Over', Transition Newsletter. 14/15, pp. 23-25.

Goriaev, A., Sonin, K. (2005). Is political risk company-specific? The market side of the Yukos affair', CEPR Discussion Papers No 5076.

Gorodnichenko, Y. and Grygorenko, Y. (2008). 'Are oligarchs productive? Theory and evidence', journal of Comparative Economics, 36, pp. 17-42.
Guriev, S. and Rachinsky, A. (2005). 'The role of oligarchs in Russian capitalism', Journal of Economic Perspectives, 19, pp.131-50.
Heckman, J. (1998). 'Sample selection bias as a spectation error', Econometrica 47, pp. 153-161.
Hellman, J. S. (1998). 'Winners take all: the politics of partial reform', World Politics, 50, pp. 203-234.
Hoffman, D. E. (2003). 'The Oligarchs', New York, Public Affairs.
Jensen, M. C., Meckling, W. H. (1976). 'Theory of the firm: Managerial behavior, agency costs and ownership structure', Journal of Financial Economics, 3, pp. 305-360.
La Porta, R., Lopez-de-Silanes, F. and Shleifer, A. (1999). 'Corporate ownership around the world', Journal of Finance, 54, pp. 471-517.
La Porta, R., Lopez-de-Silanes, F., Shleifer, A. and Vishny, R. W. (2000). 'Investor protection and corporate governance', Journal of Financial Economics, 58, pp. 3-27.
La Porta, R., Lopez-de-Silanes, F., Shleifer, A. and Vishny, R. W. (2002). 'Investor protection and corporate valuation', Journal of Finance, 57, pp. 1147–1170.
Maury, B. and Pajuste, A. (2005). 'Multiple large shareholders and firm value', Journal of Banking and Finance, 29, pp. 1813-1834.
Mitton, T. (2002). 'A cross-firm analysis of the impact of corporate governance on the East Asian financial crisis', Journal of Financial Economics, 64, pp. 215-241.
Financial Times (1996). Moscow's Group of Seven, November 1, pp. 17.
Perotti, E. C. and Gelfer, S. (2001). 'Red barons or robber barons? Governance and investment in Russian financial-industrial groups', European Economic Review, 45, pp. 1601-1617.
Reese, W. A. and Weisbach, M. S. (2002). 'Protection of minority shareholder interest, cross-listings in the United States, and subsequent equity offerings', Journal of Financial Economics, 66, pp. 65-104.
Shleifer, A. and Treisman, D. (2005). 'A normal country after communism', Journal of Economic Perspectives, 19, pp. 151-74.
Shleifer, A., and Vishny, R.W. (1994). 'Politicians and firms', Quarterly Journal of Economics, 109, pp. 995-1025.
Shleifer, A. and Vishny, R. W. (1997). 'A survey of corporate governance', Journal of Finance, 52, pp. 737–783.
Slinko, I., Yakovlev, Y., Zhuravskaya, E. (2004). 'Laws for sale: Evidence from Russia'. American Law and Economic Review, 7, pp. 284-318.
Sonin, K. (2003). 'Why the rich may favor poor protection of property rights', Journal of Comparative Economics, 31, pp. 715-731.
Stiglitz, J. (2002). 'Globalisation and its discontents', New York, W.W. Norton.
Stultz, R. M. (1999). 'Globalization, corporate finance, and the cost of capital' Journal of Applied Corporate Finance, 12, pp. 8-25.
Thompson, W. (2004). 'Putin and the "Oligarchs": A two-sided commitment problem', Chatham House Briefing Note.