**РАЗДЕЛ 1**
**НАУЧНЫЕ ИССЛЕДОВАНИЯ**
**И КОНЦЕПЦИИ**

**SECTION 1**
**ACADEMIC**
**INVESTIGATIONS**
**& CONCEPTS**

# CORPORATE OWNERSHIP, CONTROL AND THE INFORMATIVENESS OF DISCLOSED EARNINGS IN RUSSIAN LISTED FIRMS

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**Absrtact**

Many problems of corporate governance in Russia are beyond the scope of classical agency theory because of highly concentrated ownership structures. Using ownership and financial dataset from UBS Brunswick, we show that the use of accrual based accounting in Russia has resulted in lower informativeness of earnings. Opportunistic earnings management hypothesis holds where majority shareholders (controllers) enjoy short-term benefits of manipulating accounting numbers. Interestingly, the returns (net of market) increase when use of discretionary accruals to manage earnings increases in firms controlled by either state or oligarchs. However, such relationship does not exist when ownership is accumulated without control. We also found that state-owned companies use less discretionary accruals than other control groups. We do not find any evidence supporting performance measure hypothesis where firms manage earnings by discretionary accruals to offset the over or under reaction of economic shock. Highly leveraged firms tend to have positive relationship between earnings management and returns, whereas, both size and growth reflect negative informativeness of earnings. The results describe the concentrated ownership structure in Russia where controlling owners not only, achieve personal targets by over or under-statement of disclosed earnings but also get positive response from the market. This market benefit however, can only be achieved with effective control.

**Keywords**: Ownership structure, earnings management, accruals, disclosure quality, Russia, corporate governance

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## 1. Introduction

Accounting earnings that according to value relevance theorem, reflect the true economic performance of a company, should be priced mechanically into the market value of equity. Dechow (1994) explains the importance of disclosed earnings as a summary measure of the performance of a firm by a large variety of users. Unexpected high earnings increase stock market returns and abnormally low performance decrease returns. This reported performance should be priced accurately and timely resulting in the direct relationship of accounting performance and market returns. There are alternative views as well describing the reasons why this relationship does not hold. First, the conflicts between shareholders (providers of finances) and managers (users of finances) in an agency theory perspective have effect on the quality of disclosed earnings. Managers may extract private benefits by manipulating the actual performance of a firm and thus may expropriate the value of shareholders (see e.g. Berle and Means, 1932; Jenson and Meckling, 1976). This owner-manager conflict in a diffused ownership environment transforms into conflict between majority shareholder (control group)

and minority shareholders (see e.g. Fan and Wong, 2002) in a concentrated ownership environment. Managers in this case, combine their incentives of manipulation with majority shareholder to extract private benefits of control. There are however, costs associated with earnings management such as market reaction of equity price and legal threat from monitoring agencies. This cost-benefit analysis and the extent of ownership concentration determine the extent of earnings management.

Controlling owners may commit low equity investment while maintaining tight control of the firm, creating a separation of control and ownership. Burkart *et al*. (1997) show entrenchment as an agency cost of separation of ownership and control if there is separation between voting and cash flow rights i.e. when voting rights and cash flow rights diverge, the lower cash flow rights may fail to provide sufficient incentives alignment to mitigate the entrenchment effect. Earnings become less informative about stock prices when control exceeds ownership. Therefore, the type of controlling shareholder and extent of control (voting rights) also explains the variations in cross sectional firm performance and relevance of disclosed performance indicators. (see e.g. La Porta *et al*. 1999; Claessens *et al*. 2000) and thus explains the quality of earnings.

Second aspect of low quality of earnings describes the institutional and legal framework of a country affecting the firm-level quality of disclosures. According to Fan and Wong, (2002), globalization and harmonization of International accounting standards may have increased the quantity of accounting information but investors still have reservations about the quality of that reported information. It is commonly believed that rapid transition and globalization have an adverse effect on the quality of earnings. However, recent studies by Ball et. al. (2000) and Ali and Hwang, (2000) argue that in addition to accounting standards, features of the institutional environment such as corporate governance and legal systems can also explain the differences in the properties of accounting information across countries.

The purpose of our study is threefold. First, to detect earnings management with respect to different control groups, second, to test the value relevance of disclosed earnings in line with both performance measure and opportunistic earnings management hypotheses and finally to test hypothesis about the incentives for different control groups in managing the company's reported earnings. This study also tries to understand the causes and circumstances of significant under valuation of Russian firms in line with value relevance theorem, which predicts a direct relationship between firm's performance and stock market return. The study contributes in different ways; first, it provides evidence on a link between earnings management and corporate control in Russia. It also provides evidence of the adverse effects of inefficient measures of privatization undertaken in Russia. Finally, the results support the role of government and its enforcement agencies to protect the rights of minority shareholder and to improve the investor confidence.

We do realize the benefit associated with earnings management when there is no divergence between cash and voting rights. Gaining effective control of a firm enables the controlling owner to entrench themselves by diverting the resources for private benefits. Once the effective control is obtained any increase in voting rights does not further entrench the controlling owner. Moreover, higher cash flow rights in the firm cost more to divert the firm's cash flows for private gain. Gomes (2000) argue that the high ownership concentration can also serve as a credible commitment that the controlling owner is willing to build a reputation for not expropriating minority shareholders. The entrenchment effect of controlling owner is mitigated by alignment effect. The market reacts to announcements and information is incorporated prior to actual disclosure. Hence, investors form their portfolios on the basis of available information and then managers try to meet those expectations in order to gain the investors' confidence and as a result the value of investments increases. Cohen *et al.* (forthcoming) provides some insights about the positive aspects of earnings management however, they also find the earnings management during and after Sarbanes Oxley Act related to dramatic increases in the fraction of compensation derived from executive options.

In Russian case, the most significant determinant to explore is the extent of earnings management in a pyramidal and cross-holding structure. Keeping in view the entrenchment and alignment effects of concentrated ownership in Russia, earnings management in Russian listed firms is a significant way of extracting private benefits. Mega scandal of Yukos Oil Company strengthened the urge for big private firms to disclose as much as possible information to the outside world than ever before (see e.g. Black *et al*. 2006). The Yukos scandal highlighted the earnings management practices of large-scale private companies for tax evasion and Govt's inefficient policies to interfere or to stop expropriation[1]. There may be many factors driving managerial practices, like value enhancing measures before IPOs and SEOs, private benefits extraction including management entrenchment plans, performance based wages, insider trading and other compensation plans which remain beyond the scope of this paper.

We present the explanations for differential informativeness of earnings on stock market returns.

[1] The financial statement of Yukos oil in 1996 showed revenue of $8.60 per barrel, about $4 per barrel less than it should have been. Mikhail Khodorkovski skimmed over 30 cents per dollar of revenue while stiffing his workers on wages, defaulting on tax payments, destroying the value of minority shareholders and not re-investing in Yukos´ oil fields (see Black et al. 2003 for more details)

Our results show that state-owned companies have relatively better quality of earnings. The hypothesis about the entrenchment (short and long term goals of oligarchs and state of extracting benefits) from the direct analysis of earnings management and ownership structure is supported whereas, the alignment effect to minimize the entrenchment effect is not shown. We further show that opportunistic earnings management hypothesis seems prevalent in Russian listed firms. The negative correlation of discretionary accruals with stock returns shows that companies are involved in earnings management where controlling shareholder manage accruals generally to hide poor performance or postpone a portion of unusually good current earnings to future years in line with Healy (1985), DeAngelo (1986) and Guy *et al*. (1996). Companies do not use discretionary accruals to offset the over-reaction of non-discretionary accruals as we do not find any significant positive or negative relationship of non-discretionary accruals and stock returns. Finally, pooled regression analysis shows that given the type of controlling owner, the earnings correlate positively with market adjusted returns whereas the levels of cash flow rights of oligarch and foreign corporations decrease stock returns at a given level of earnings management. We do not find any evidence of accepting the alignment effect hypothesis since the divergence between cash flow rights and voting rights (*VC*) do not show any significant relationship with stock returns at any level of earnings management.

This paper continues as Section 2 presents the motives and bases of our hypotheses on the basis of previous literature. Section 3 describes the emergence of concentrated ownership environment in Russia and how few control groups got powers of major Russian companies during privatization stages. Section 4 describes data and methodology used in the study followed by Section 5 where we present the results of our analysis and paper concludes with section 6.

## 2. Motivation and Hypotheses

Russia provides testing ground to check the impact of weak shareholder protection on the value relevance of reported earnings. The strong affiliations between large owners and managers persist in Russia. The expropriation of minority rights has been common by large shareholders. They can divert the resources of the firm for private benefits and hence dilute the value of shares held be outside minority shareholders. This section discusses the factors that helped shape the concentrated ownership structure in Russia and how this ownership structure may have entrenchment and incentive alignment mechanisms to manipulate the reported performance (see e.g. Morck *et al*. 1988). Furthermore, we discuss the second hypothesis about earnings informativeness of stock market returns with both performance measure and opportunistic hypothesis about earnings process and finally we discuss the hypothesis about relationship between ownership structure and earnings informativeness.

### 2.1. Hypothesis about Ownership Concentration and Earnings Management

In economies where the state does not effectively enforce property rights, the enforcement by individual owners plays a relatively more important role in determining the valuation of the shares. A bulk of property rights literature provides a general framework for analyzing the determinants of corporate share ownership structure. This strand of literature emphasizes the roles of customs, social and legal systems in determining the property right structure and governance systems (see e.g. Coase, 1960; Demsetz, 1964; Cheung, 1970, 1983 and Eggertsson, 1990). The owner of a share is entitled to three categories of property rights that include (i) voting right -owner has the decision right over the utilization of corporate assets, (ii) cash flow right - the owner has a right to earn income and (iii) transfer right – owner has a right to transfer to another party. The effective enforcement of these property rights determines the value of a share. Schleifer and Vishny (1997) and LaPorta *et al*. (1999) argue that investors' rights attached to the security they are buying are important while valuation of their shares especially when managers (control group) act in their own interest.

Fan and Wong (2002) discuss that in economies, where the state does not effectively enforce property rights, the enforcement by individual owners plays a relatively more important role. Shleifer and Vishny (1997) further elaborate that the benefits from concentrated ownership are relatively larger in countries that are generally less developed, where property rights are neither well defined nor protected. The benefits include incentives of control, contracting and entrenchment activities.

Berle and Means (1932) and Jensen and Meckling (1976) argue that insiders do not have full cash flow rights but significant controlling rights of the firm, which intensify the need to analyze the ownership structure with respect to earnings management and valuation to measure the extent of agency problem. This conflict of interest between outside shareholders and managers who own a small portion of equity in a diffused ownership environment (U.S, UK and other western economies) shifts away to conflicts between the controlling owner (possess more than 50% of voting rights) and minority shareholders in concentrated ownership environment like Russia. In this case, the controlling shareholder controls and manages the sources of companies to achieve both entrenchment and alignment incentives by depriving the rights of minority shareholders. The control group join powers with management of the company to divert the resources and manipulate the reported earnings. It further leads to significant under valuation of companies. Thus it is important to

understand the effect of concentrated ownership on earnings management activities before making direct assessment of earnings informativeness.

In line with previous research, we try to investigate earnings management in a highly concentrated ownership environment where few control groups prevail in the market. We test entrenchment effect of control by analyzing the correlations of controlling owner type and discretionary accruals. Additionally, we look into the alignment effect of control i.e. if the divergence between voting and cash-flow right is associated with earnings management. One possible factor to minimize the entrenchment effect of majority shareholder is to get the sufficient voting rights. Once the controlling owner obtains effective control (> 50% voting rights) of the firm, any increase in the voting rights does not further entrench the controlling owner but her higher cash flow rights in the firm mean that it will cost more to divert the firm's cash flows for private gains. Hence, we hypothesize that both levels and types of controlling owner explain the earnings management practices of companies.

In Russia, there are three main control types in 90% of the Russian listed companies. These are State, Oligarchs and Foreign corporations. Managers in Russia are associated with controlling shareholder so we expect the managers' stake in ownership to have the same relationship with quality of earnings as of controlling shareholder. State in Russia owns many of the oil and gas, power and energy firms and has long term goals to enhancing value of those companies. The state owned companies tend to be involved in positive (income enhancing) earnings management because state owned companies have incentives to increase the valuation to get maximum pay offs in case of privatization. Most of state owned companies are the potential targets of being privatized; hence state has incentives to do positive earnings management. On the other hand, oligarchs who already control the firm expecting to have a lower fear of being taken over so they go for short-term goals of tax management. Therefore, we expect oligarchs owned companies to be involved in negative (income decreasing) earnings management. Companies owned by foreigners may exhibit similar short-term earnings management for tax evasion or self-dealing through their holding companies.

Same arguments hold in case of levels of cash flow rights of these majority shareholders. The entrenchment effect decreases with the increase in the level of ownership stake beyond the minimum level needed for effective control and thus has lower private benefits to divert company resources when cash flow rights increase.

### 2.2. Hypothesis about Earnings Management and Stock Returns

In an external corporate governance context, weak legal system and corporate governance mechanism of the country also play significant role in determining the value of the companies, especially in emerging markets. La Porta et al. (2002) argue that the absence of strong legal protection and other external governance mechanism in many emerging economies increase the problem of agency conflicts between insiders and outsiders. Similarly, Hung (2001) shows that the use of accrual based accounting negatively affect the value relevance of financial statements. However this negative effect does not exist in countries with strong shareholder protection. Hence, it is important to understand the causes and circumstances of significant under valuation of firms in line with value relevance theorem in transition markets. In this section, we shall discuss the two different value relevance theorems of disclosed earnings. Accounting earnings that according to value relevance theorem, reflect the true economic performance of a company, should be priced mechanically into market value of equity. Unexpected higher earnings increase stock market returns and vice versa. Performance measure hypothesis claims that reported performance should be priced accurately and timely resulting in the direct relationship of accounting performance and market returns. Managers use discretionary accruals part of the total earnings to produce a reliable and more timely measure of firm performance than cash flows (e.g., Watts 1977, Watts and Zimmerman 1986, Beaver 1989, Dechow 1994, and Dechow et al. 1996). Opportunistic earnings management hypothesis states that managers use discretionary accruals opportunistically to hide poor performance or postpone a portion of abnormally good performance for future periods (e.g. Healy 1985 and DeAngelo 1986).

In an efficient market, capital market participants use all available information to form unbiased expectations of future cash flows in setting security prices. The disclosed earnings contain accruals and cash flows. The earnings would also follow a random walk process similar to that of prices if current accruals would anticipate future cash flows to the same extent as the market and prices would equal the present value of the current earnings. Guy *et al.* (1996) argue that the estimated earnings coefficient in regression with future earnings is smaller because of the deviations from the random walk property and because of the market's anticipation of future earnings beyond the information in the past time series of earnings.

To develop predictions under the performance measure hypothesis, we assume that discretionary and nondiscretionary accruals anticipate future cash flows to the same extent as the capital market. Accruals, that are discretionary from the standpoint of the application of U.S. Generally Accepted Accounting Principles (GAAP) are also hypothesized to anticipate future cash flows because of the influence of efficient contracting and control mechanisms. Under the performance measure hypothesis, managers employ

discretionary accruals to include as much of the impact of current economic events into current reported earnings as possible. Assume that current earnings over-react and thus successive nondiscretionary earnings changes are negatively serially correlated. The performance measure hypothesis predicts that managers use discretionary accruals to eliminate the overreaction. Reported earnings include the shock's net effect in the current period. Reported earnings then follow a random walk and reflect long-term earnings expectations, consistent with the performance measure hypothesis. Discretionary accruals under the performance measure hypothesis assuming a shock to the underlying earnings process are always perfectly (positively or negatively) correlated. So, we expect discretionary accruals to correlate with stock returns. The sign of the correlation under the performance measure hypothesis depends on whether nondiscretionary earnings include an over- or under-reaction to the economic shock. If they include an over-reaction, a discretionary accrual with an opposite sign offsets the shock and the discretionary accrual correlates negatively with the shock and stock return. On the other hand, if nondiscretionary earnings under-react to the shock, the discretionary accrual magnifies that under-reaction. Thus the discretionary accrual correlates positively with the shock and stock return.
Under opportunistic earnings management hypothesis the discretionary accrual is expected to reverse in future periods and nondiscretionary earnings are also expected to decline. This produces negative serial correlation in successive earnings changes. The opportunistic discretionary accrual seeks to undo the shock to the underlying earnings process. The opportunistic accruals smoothen earnings temporarily. For example, in the case of a bad-news current shock, unless underlying earnings exhibit a reversal in the future, the manager potentially faces "accrual bankruptcy" and low future earnings. This outcome is likely because the current period's opportunistic accruals must reverse and there are limited opportunities for the manager to prevent a reversal, particularly if earnings are forecasted to exhibit a further decline. The problem is, however, mitigated in the case of a bad shock if the firm has employed conservative accounting policies in the past. On the other hand, if the current shock is good, and the firm has pursued conservative accounting policies in the past, the likelihood of facing "accrual bankruptcy" is exacerbated. If nondiscretionary earnings overreact (i.e. earnings next period are expected to reverse), then the discretionary accrual that partially offsets the shock is consistent with the performance measure hypothesis. Thus, in the case of earnings overreaction to economic shocks, the performance measure and opportunism hypothesis cannot be discriminated. Under the opportunistic management hypothesis, the discretionary accrual offsets the shock to nondiscretionary earnings. Therefore, it correlates negatively with stock returns.

### 2.3. Ownership Structure and Earnings Informativeness

In order to develop hypothesis about ownership structure and informativeness of reported earnings, we need to discuss couple of arguments in line with entrenchment alignment and information effects. The controlling entrenched owner not only controls the firm but also operates its reporting policies reducing the credibility of the reports. Their credibility is expected to be even lower when the difference between cash flow rights and voting rights increases (Fan and Wong, 2002). The outside investors do not trust reported earnings because the tendency of majority or controlling owner of manipulating performance is directly related to their stake in ownership. The controlling owner may manipulate earnings for expropriation purposes. Gaining effective control of a firm enables the controlling owner to entrench themselves by diverting the resources for private benefits. The levels of cash flow rights with or without effective control will reduce the reputation of disclosed information. The entrenchment effect of controlling owner is mitigated by alignment effect. Once the effective control is obtained any increase in voting rights does not further entrench the controlling owner. Moreover, higher cash flow rights in the firm cost more to divert the firm's cash flows for private gain. Thus effective control and the type of controlling owner have an association with informativeness of disclosed earnings. In line with Gomes (2000) we expect that controlling owner is willing to build a reputation for not expropriating minority shareholders. If the controlling owner unexpectedly extracts more private benefits when she holds a substantial amount of shares, the minority shareholders knowing this will discount the stock price accordingly and majority owner's share value will be reduced. Thus control may have incentives of concentration for a minimum level of voting rights required for effective control.

We expect the earnings informativeness to be reduced with levels of ownership in line with entrenchment effect while the type of effective controller (i.e. the simple majority of voting obtained by a control group) should enhance the informativeness of reported earnings. Furthermore, the divergence between voting rights and cash flow rights has both entrenchment and alignment effects. When the controlling owner is entrenched by his/her voting power and there is large separation of the voting and cash flow rights, the credibility of the accounting information is reduced.

## 3. Development of Concentrated Ownership in Russia

The ownership of listed companies in Russia is concentrated towards few groups who own most of the shares. This concentration was often achieved through poor privatization campaigns by the state

during the earlier years of transition after the fall of communism. These privatization modes included voucher privatization and share-for-loan schemes, which triggered the economy towards a massive but inefficient privatization of previously state-owned corporations.

In late 90s the control over many of the Russian companies was transferred away from the state to big private industrial groups, which were mostly domestic with a few exceptions. The notorious share-for-loan scheme to give loans to government in exchange of shares was not well-managed and none of the loans were ever paid back to investors (industrial groups). It resulted into acquisition of ultimate ownership of the companies by these few groups. It helped in creation of many oligarchs in Russia which now control a significant stake in largest Russian companies in all sectors especially in the oil, power and ferrous metal sectors. This unequal distribution of assets finally resulted into big scandals like Yukos and Gazprom. However, the state remained the most influential control group in Russia along with the oligarchs.

The gap between oligarchs and state widened during President Putin's tenure starting in 1999 because of the extra incentives extracted by strategic owners. These investors then tried to manipulate the actual performance of the companies in order to hide information from the state authorities. This resulted into another move by the state to have state representatives in the board of most of the privatized companies so that the actual performance can also be monitored. Unfortunately, this even did not work properly because of the incentive constraints of these state nominees and their own personal benefits. Even another phase of re-statization of many privatized firms in earlier stages did not bring about the desired results. In fact, it allowed even state owned companies to hide and manipulate the significant accounting information from the general and minority shareholders.

Various control measures include imposing restriction on acquiring more than 20% of a particular company by open market. It needs state approval to gain more than 20% as well as for every additional 5%. If a particular individual (legal entity, group of companies) acquires 30% or more of a company, the buyer(s) must offer to purchase all shareholders' stakes at the weighted average market price over the previous six months or the current market price, whichever is higher. However, this requirement may be waived if 75% of shareholders of a company approve the relevant amendment. There is no federal law imposing restrictions on different classes of investors. Companies may opt to amend the charter to limit a single entity from holding more than a certain proportion of charter capital, although this is very rare. Few companies in Russia place restrictions on foreign participation like Gazprom limits foreign ownership to 20% of charter capital. Foreigners may only buy shares through a depository receipt and do not have access to the underlying shares. However, so-called "grey-scheme" enables foreigners to hold more shares because some Russian domiciled overseas may have even more holdings than the 20% limit through indirect investments. There are also certain laws limiting the foreign ownership in particular company especially in prime entities like UES, with the purpose to retain the national interests alive in these companies. Hence, despite of all these efforts to improve the situation regarding separation of ownership and control in Russia, the fundamental question that "does ownership structure matter when only few groups control the bigger industrial sectors? Or when oligarchs control the highly pyramidal corporate structure in Russia?" still stays unanswered.

## 4. Data and Methodology

We use Modified Jones (1991) model used by Dechow et al. (1995) to measure the level of discretionary (sometimes called as abnormal) accruals from annual financial reports of 98 listed firms at Russian Trading System (RTS) over the period of 1999-2004. The financial data is extracted from Brunswick UBS "Russian Equity Guides" and Thomson One Banker database. Ownership data is collected from different sources including Russian Equity Guides published by Brunswick UBS, SKRIN, Amadeus and sometimes directly from companies' annual reports. The stock price data and RTS market index prices were obtained from Thomson Datastream. Total number of firm years of financial data is 525 whereas the ownership data could only be obtained for 330 firm years during the whole time period. Hence, matching the earnings data with ownership leaves a maximum of 330 observations. We do not include banking and other financial firms due to their different accounting methodologies.

### 4.1. Earnings Management Measure

We rely on earnings management model directly relating income, cash and accruals because it enables us to measure accruals proxy in a time series and cross-sectional way simultaneously and also requires fewer assumptions than other time series and theoretical models. The Jones (1991) model is considered as the milestone (Hermanns, 2006), but there has been some modifications to the original model to increase the predictability and explanatory power of original version e.g. Dechow et al (1995) modified the model by subtracting changes in receivables from changes in revenues in order to control for management's intentions to use its discretion over credit sales which is the easiest way of manipulation in a non-conservative accounting environment. The Jones model identifies accounting fundamentals as the determinants of non-discretionary accruals. Schipper and Vincent (2003) states that the Jones model is a direct estimation model because it identifies accounting fundamentals as determinants of expected accruals Discretionary accruals reflect the

quality of earnings with an inverse relationship, i.e. higher discretionary accruals proxy worse quality of earnings.

Consistent with the earlier studies by Healy (1985) and Jones (1991), total accruals (*TA*) scaled by lagged total assets ($A_{t-1}$) are calculated as

$$TAC_{i,t} = \frac{(\Delta CA_{i,t} - \Delta CL_{i,t} - \Delta Cash_{i,t} + \Delta STD_{i,t} - Dep_{i,t})}{A_{i,t-1}} \quad , \tag{1}$$

where,

$\Delta CA_{i,t}$ = change in current assets for firm *i* in year *t*,

$\Delta CL_{i,t}$ = change in current liabilities *i* in year *t*,

$\Delta Cash_{i,t}$ = change in cash and cash holdings *i* in year *t*,

$\Delta STD_{i,t}$ = change in debt included in current liabilities *i* in year *t*,

$Dep_{i,t}$ = depreciation expense *i* in year *t*, and

$A_{i,t-1}$ = One period lagged (*t-1*) Total Assets.

According the modified Jones Model, the non-discretionary accruals proxy is calculated to eliminate the conjectured tendency of manipulation when discretion is exercised over revenues. Dechow *et al*. (1996) proposed this modification in original Jones (1991) model in order to control for any use of discretion over credit sales. It seems much easier to manage earnings via credit sales rather cash sales. Hence, the estimated non-discretionary accruals are computed as

$$NDAP_{i,t} = \hat{\alpha}_1(\frac{1}{A_{i,t-1}}) + \hat{\alpha}_2(\Delta REV_{i,t} - \Delta REC_{i,t}) + \hat{\alpha}_3(PPE_{i,t}) \cdot \tag{2}$$

We use residual approach to estimate the discretionary accruals from equation (4) where we compute the series of residuals as a proxy for discretionary accruals. The part explained by lagged total assets ($1/A_{t-1}$), change in revenues minus change in current receivables ($\Delta Rev_t$-$\Delta Rec_t$), and property, plant and equipment ($PPE_t$) is considered as non-discretionary or normal part of current total accruals and residuals (i.e unexplained part of total accruals) represent discretionary accruals. That can be used as a proxy for earnings management (Hermanns, 2006). The equation (3) describes the regression model:

$$TAC_{i,t} = \alpha_1 \tfrac{1}{A_{i,t-1}} + \alpha_2(\Delta REV_{i,t} - \Delta REC_{i,t}) + \alpha_3 PPE_{i,t} + \varepsilon_{i,t} \, , \tag{3}$$

where change in revenues ($\Delta REV_{i,t}$), change in receivables ($\Delta REC_{i,t}$) and levels of property, plant and equipment ($PPE_{i,t}$) are all scaled by lagged total assets. The error term ($\varepsilon_{i,t}$) is discretionary accruals proxy ($DAP_{i,t}$) and non-discretionary accruals proxy calculated as the difference between firm i's total accruals (*TAC*) and discretionary accruals (*DAP*) at year t as below:

$$NDAP_{i,t} = TAC_{i,t} - DAP_{i,t} \tag{4}$$

The cash flow from operations ($CFO_{i,t}$) is the difference between net income ($NI_{i,t}$) and total accruals (*TAC*) for each firm-year.

## 4.2. Ownership and Earnings Management

In the second stage of our analysis, the discretionary accruals are regressed in a univariate model settings with different ownership variables including management's stake, state, oligarchs, foreign and local ownership etc along with few control variables to ascertain the true picture of deviations from the efficient market hypotheses, and to test if general and small shareholders are expropriated by the insiders (managers) and controlling owners in Russia. We use univariate regression approach in order to form individual assessment of each control groups with both voting rights and cash flow rights settings. In a traditional earning management models, the regression coefficient of parting variable (in our case, ownership types and levels) will have the predicted sign showing the direction of earnings management (negative or positive) whereas the significance at traditional levels detects the earnings management. Hence, both the direction and the significance of the coefficient are important. The problem of misspecification and omitted variables (see e.g. Dechow et al. 1995) is addressed in the literature by adding few control variables, which strengthen the predictive power of the model. The regression equation takes the form of

$$DA_{i,t} = a + bOWN_{i,t(levels,types)} + dV_{i,t} + e_{i,t} \, ,$$

where ($V_{i,t}$) represent the controls added to address the problems of misspecification. Including industry and year dummies. The cross sectional stacked panel data is used where we have different firm years observations for each ownership variable. Following previous research by Warfield et al. (1995) and Gabrielsen et al. (2002), not only actual discretionary accruals but absolute discretionary accruals are also used to detect the differences in the total levels of earnings management or quality of earnings. The higher the absolute level of discretionary accruals, the lower the quality of earnings. Absolute discretionary accruals are also regressed one by one with ownership variables in order to estimate the difference in the use of discretionary accruals by each controlling shareholder. Equation (5) then takes the shape of

$$ADA_{i,t} = a + bOWN_{i,t(levels,types)} + dV_{i,t} + e_{i,t} \, . \tag{6}$$

## 4.3. Earnings Informativeness

The earnings response coefficient approach is used to estimate the relationship between the accruals and the annual stock returns. We test the earnings response coefficient in corporate governance setting by analyzing the firm performance. We use earnings quality as a measure of firm performance from general shareholder's point of view. The extent by which reported earnings represent the actual performance of the companies is considered as quality

of earnings. Following Guy et al. (1996) we model the market adjusted returns and accruals in different settings. First step is to test the relationship between total accruals and returns in line with the value relevance and performance measure hypothesis as follows

$$CAR_{i,t} = a + b_1 TA_{i,t} + e_{i,t},$$

(7)

where ($CAR_{i,t}$) is the cumulative net-of-market 12 month stock returns at year $t$ for firm $i$. $TA_{i,t}$ is the total accruals for firm $i$ in year $t$. Discretionary accruals ($DA_{i,t}$) under the performance measure and opportunism hypotheses are always perfectly (positive or negative) correlated so we expect discretionary accruals to correlate with stock returns:

$$CAR_{i,t} = \alpha + \beta_1 DA_{i,t} + e_{i,t}.$$

(8)

The sign of the correlation of discretionary accruals under performance measure hypothesis depends on whether nondiscretionary accruals include an over or under reaction to the economic shock. In order to find any predictive measures for non-discretionary accruals of stock market returns, we test whether non-discretionary accruals ($NDA_{i,t}$) contain any over or under reaction to economic shock:

$$CAR_{i,t} = \alpha + \beta_1 DA_{i,t} + \beta_2 NDA_{i,t} + e_{i,t}.$$

(9)

Furthermore, the regression analyses discussed so far include discretionary and nondiscretionary accruals part of total earnings. It is also interesting to test whether operating cash flows predict stock returns. To gain some initial insights into the question, we use the model to add operating cash flows to estimate in a multiple regression as below:

$$CAR_{i,t} = \alpha + \beta_1 DA_{i,t} + \beta_2 NDA_{i,t} + \beta_3 CFO_{i,t} + e_{i,t},$$

(10)

where ($CFO_{i,t}$) is the operating cash flow scaled by one year lagged total assets included in total disclosed earnings for firm $i$ at year $t$.

The main objective of this study is to test the effect of highly concentrated ownership on the informativeness of disclosed earnings. We expect that the quality of earnings should be better in those firms where ownership is more diversified. Alternatively, the performance and quality should be lower in firms with more concentration in ownership. We use pooled cross-sectional regression and firm-specific time-series regression to test our hypothesis. The multivariate model used for the analysis is as follows:

$$CAR_{i,t} = a + b_1 ADA_{i,t} + b_2 (ADA * Size)_{i,t} + b_3 (ADA * Growth)_{i,t} + b_4 (ADA * Lev)_{i,t} + b_5 (ADA * VC)_{i,t} + b_6 (ADA * StD)_{i,t} + b_7 (ADA * OlD)_{i,t} + b_8 (ADA * FoD)_{i,t} + b_9 (ADA * StO)_{i,t} + b_{10} (ADA * OlO)_{i,t} + b_{11} (ADA * ForO)_{i,t} + IND + YRD + e_{i,t}$$

(11)

where $CAR_{i,t}$ is the cumulative market adjusted annual stock return at year $t$ for firm $i$, $ADA_{i,t}$ is the absolute discretionary accruals. $Size_{i,t}$ is natural logarithm of total assets at the beginning of year $t$, Size is included to control for any missing factor that could effect the earnings-return relationship as Atiase (1985) and Freeman (1987) has documented that public disclosure and private development of non-earnings information are increasing function of firm size. $Growth_{i,t}$ is the revenue growth at year $t$ because high growth opportunities are associated with future high earnings or persistence. High growth of revenues may lead to higher expected earnings in future and thus a stronger earnings- return relationship (Collins and Kothari, 1989). On the other hand, high growth firms are more risky, which weakens the earnings-return relationship. We control for any empirical effect that revenue growth may have on earnings informativeness. $Lev_{i,t}$ is the ratio of total debt to assets. Dhailwal *et al.* (1991) argue that leverage could be proxy for the riskiness of debt or default risk. The earnings informativeness of highly leveraged firms is lower. On the other hand, Smith and Watts (1992) suggest that leverage represents the investment opportunities of a firm and mature firms usually have high leverage but more information in disclosed earnings. Hence, leverage can also improve the informativeness of earnings. *VCi,t* is the ratio of voting rights over cash flow rights of the largest controlling owner i.e. the voting right has to be more or equal to 50% in order to have full control of the firm (*VC)* is inversely related to cash-vote divergence by definition). It represents the gap between ownership and control and if we expect alignment effect to have any significance impact on earnings informativeness, then this coefficient should be positively or negatively related to stock returns. $StD_{i,t}$, $OlD_{i,t}$ and $FoD_{i,t}$ are the dummy variables if state, oligarchs and foreign corporations are the controlling owner of the firm respectively. $StO_{i,t}$, $OlO_{i,t}$ and $FoO_{i,t}$ are the total levels of ownership stakes by state, oligarchs and foreign corporations respectively in a firm without any controlling limits. These variables define the difference in slope coefficients for these three major types of owners in Russia. Widely held firms are included as control group to avoid any multicolinearity in the analysis. *IND* and *YRD* are included to control for specific industry and year effects. The model is tested in various specifications capturing a particular variable effect if any on the overall coefficients.

## 5. Results

This section describes the results of estimates of the models presented in previous section. First, we discuss the descriptive statistics of all variables used in our study including accounting and ownership variables. Second, the basic results obtained by earnings management and ownership structure is presented and finally we show the results obtained from the earnings informativeness models and possible association of different ownership variables (levels and types of majority shareholders) in the earnings-return relationship.

### 5.1. Descriptive Statistics

Table 1 presents the descriptive statistics of ownership variables in our study. Panel A describes the levels of cash flow rights for each type of controlling owner. State owns 41% of ownership stake in all sample firms whereas oligarchs own 57% stakes on average in all listed firms in our sample. The portion of foreign ownership in all firms amounts to almost 40%. These levels of ownership also include cash flow rights of each type with and without control. This is important to understand the effect of the presence of other influential shareholder in the firm when control is held by one of the major shareholders in Russia. For example, if oligarch is the controlling owner in a company, the presence of the state as the second largest owner may have an effect on the discretionary powers of managers and the controller. Panel B of table 1 shows the percentage of control by each type. State has the controlling powers (i.e. more than 50% of voting rights) of almost 55% of the total companies. Oligarchs control 37% of the total companies, whereas foreign corporations have 4% of companies under their control and remaining 4% of the companies are widely held. The distribution of companies with respect to industrial sectors is shown in panel C. Power sector remains the biggest sector in Russia with 28% representation in whole sample. Panel D, presents the distribution of companies with respect to compliance of accounting standards. In our sample period, 53% of the companies comply with Russian accounting standards, which mostly are regional power and ferrous metal companies and remaining 47% issue accounting statements according to international accounting standards (IAS/US GAAP). We have firm-specific time series data as well, so any possible effect of shift from Russian standards to International standards is captured as we use accounting standards compliance dummy in all of our analyses.

**[Insert Table 1 about here]**

Figure 1 shows the discretionary accruals across years in whole sample period. Negative (income decreasing) earnings management was more common than positive (income enhancing) management during years 2002 and 2003, whereas on average companies were more involved in positive earnings management during 1999, 2001 and 2004. Figure 1 shows that negative earnings management to avoid taxes took place during tax reforms of 2001-02, whereas lower manipulations took place in 2002 due to lower marginal tax rates (Top statutory tax rate was dropped from 35% in 2001 to 24% in year 2002).

**[Insert Figure 1 about here]**

Absolute levels of discretionary accruals (inverse of the quality of earnings) are shown in Figure 2. The levels of discretionary accruals were highest in 2004, and least in 2002, meaning the disclosed earnings were of better quality in 2002 and worst in 2004.

**[Insert Figure 2 about here]**

We then present the descriptive statistics of stock market returns and other accounting variables used in our analysis (equation 11) in Table 2 below. The average cumulative annual gross and market adjusted returns (*CAR*) across ownership control, industrial sectors and accounting standards compliance are in first two columns of table 2. Widely held companies have higher net-of-market returns but lowest gross returns. Oligarchs controlled companies have 41.7% market adjusted returns as compared to state owned companies that have 29.3% excess returns. Foreign owned companied have negative excess returns, it might be because they are more exposed to international pressures and foreign investors as most of these companies are cross-listed in other markets along-with RTS index which is overwhelmingly dominated by state and oligarchs owned companies who drive the market by controlling the supply and demand forces within Russia. They possess significant amount of liquidity in the market and trade within themselves to affect the market value and stock index. Oligarchs owned companies are the largest companies as they have an average size of more than 34 million US dollars of assets ahead of foreign owned companies with almost 23 million USD of total assets. Oligarchs also have highest leverage indicating a higher riskiness of their equity stake. The revenue growth of almost 36% shows the future profitability and higher consumer base, which is consistent with high returns of oligarchs owned companies. Foreign owned companies have highest market to book ratio representing growth opportunities, high market price can also be representative of more investor confidence. The last two columns of the table 2 represents the profitability of companies where operating and net profit are shown in averages across all ownership types and industrial sectors.

**[Insert Table 2 about here]**

### 5.2. Test of Ownership and Discretionary Accruals

Before making direct prediction about disclosed earnings and stock returns, we perform analysis of directly relating earnings management and ownership structure in order to understand the endogeneity of earnings when ownership is concentrated. Table 3 presents the simple t-test of the levels (absolute values) of discretionary accruals across different ownership, industrial sectors and accounting standards compliance. Difference-in-mean analysis is done to show the direction of earnings management between positive and negative accruals. We divide whole sample into positive and negative discretionary

accruals and results show that the levels of discretionary accruals are significant across all ownership types and industrial sectors. Overall the mean of positive accruals is higher than the mean of negative accruals. The difference of mean 0.051 is significant at 5% level. The quality of earnings of state owned companies is quite bad with positive accruals significantly higher than negative accruals. The same results hold in ferrous metal and power sectors. Earnings management in companies complying Russian accounting standards is significantly higher than those complying international standards while reporting. This result is consistent with previous literature on Russia (e.g. Desai *et al*. 2005). International accounting standards compliance leads to better, timely and transparent disclosure of information. It not only increases quantity of disclosure but quality as well.

**[Insert Table 3 about here]**

Table 4 presents the univariate regression of both signed and absolute discretionary accruals with ownership variables (levels and types). The literature on earnings management model directly relating company fundamentals like income, cash and accruals argue that these models possess the problem of omitted variables and hence very low predictive powers because, there are certain unobservable factors which impact earnings-return relationship other than firm characteristics (Jones, 1991, Dechow *et al*. 1995, Guy *et al*. 1996). We try to control the problem of omitted variables by introducing some industry, year and accounting standard variables in an earnings-ownership relationship. Ownership being one of the variables to affect the earnings management practices of companies should also capture some misspecifications. Ownership levels and control types should have an impact on manipulations. We have shown in table 3 that earnings management is persistent across all ownership types and industrial sectors, hence, it makes more important to assess the quality of earnings with respect to different ownership structures. Both entrenchment and alignment effect if present should explain earnings management (discretionary accruals in our case). White-adjusted t-statistics for all the coefficients are reported due to heteroskedasticity. Table 4 shows that the direction of earnings management is consistent with our predictions based on our hypothesis presented in section 2. Long-term motives (value enhancing) of state owned companies and short-term objectives (tax management) seems supported but we do not find any significant relationship with actual discretionary accruals. However, the levels of discretionary accruals are significantly lower in state-owned companies as compared to others. This is consistent with both types and levels of state ownership.

**[Insert Table 4 about here]**

### 5.3. Ownership and Earnings Informativeness

Results from pooled cross-sectional and firm-specific time-series regressions are similar to those reported below. Table 5 reports the time-series mean of the estimated annual cross-sectional regression statistics. For each model, we report estimated parameters, standard errors and White-adjusted t-statistics for all the coefficients to eliminate heteroskedasticity. We begin with regression on total accruals (panel A). Total accruals are negatively related to returns but this relationship is insignificant at traditional level. Since total accruals include both nondiscretionary and discretionary accruals and performance measure hypothesis expect the negative correlation between two types of accruals. Any over or under reaction of economic shock should be offset by an opposite discretionary accruals. So individual relation with each type of accruals should be measured to make assessment of performance measure hypothesis. Panel B of table 5 shows the regression of returns with discretionary accruals. The coefficient is negative (-0.657, t-value: -1.92) and significant representing negative informativeness of discretionary accruals on stock returns. Opportunistic earnings management hypothesis is supported by the results presented in Panel A and B of table 5, where we see that discretion is used over earnings (accruals part) to get private benefits of ownership which include entrenchment, self dealing or other short term goals e.g. tax management.

We then add nondiscretionary accruals in the regression and results are presented in panel C, it shows no informativeness (0.804, t-value: 0.68) of non-discretionary accruals predicted by performance measure hypothesis. Positive coefficient of nondiscretionary accruals is as expected by performance measure hypothesis but not significant. Therefore, we support the notation that companies in Russia use discretionary accruals for opportunistic purposes. These results are consistent with entrenchment effect of majority shareholders. We further add cash flow component of total earnings to check if there is any relation of cash flow generated directly from operation affect the stock returns. Panel D of Table 5 shows the coefficient estimates of equation (10). Cash flows are insignificantly but negatively correlated with returns. Note that the explanatory power of all models in table 5 is low. In general, the weak association of returns with discretionary and nondiscretionary accruals and negative association of discretionary accruals are inconsistent with the joint hypothesis that the market reacts mechanically to discretionary accruals and that the model accurately identify discretionary accruals. The results also suggest the inefficiencies in Russian market where discretion is used by majority or controlling owners over earnings in general and accruals in particular to opportunistically create sources of expropriation of rights of minority

shareholders. Opportunistic earnings management hypothesis holds.

**[Insert Table 5 about here]**

We also test the relative effect of different ownership variables on the earnings-return relationship. Table 6 presents the results obtained by the pooled cross-sectional regression on returns with different firms characteristics and ownership levels and types. Again we report White-adjusted t-statistics for all the coefficients to capture and eliminate heteroskedasticity. The next step is to check whether different ownership structures explain this use of discretionary powers. For this purpose, we use levels of discretionary accruals in each firm year to find the relationship between returns and levels of earning management (use of discretion) with ownership and firm-specific variables. The levels of discretionary earnings management (ADA) are insignificant but it doesn't contrast to results of simple regression in table 5. Earnings are informative (negatively) but their levels (negative and/or positive) do not explain contemporaneous returns and there relationship also becomes insignificant because of the inclusion of the additional variables. The levels of discretionary accruals of larger firms seem to have lower returns because the Size coefficient is negative but significant in model 3 and 5 where we include control type dummies. Model 1, 2 and 3 show lower informativeness of earnings in high revenue growth firms, which is consistent with the fact that the use of discretion over revenues (especially credit sales) is much easier and high growth firms become more risky thus keeping the levels of accruals constant, an increase in revenue growth decrease contemporaneous market adjusted returns. Leverage is positively related to returns consistent with the view that highly levered firms tend to be mature firms and thus have more credible earnings in spite of any levels of discretion. The results in all models presented in Table 6 support the notation that the presence of creditors in the corporate governance increases the informativeness of disclosed earnings. This result is also consistent with earlier research on other parts of the world[2]. The creditors can be better monitors in countries where legal and investor protection is weak because large creditors put a lighter burden on legal system than the small investors might if they tried to enforce their rights.

In order to investigate the effect of separation of cash flow and voting right on earnings informativeness, we use ratio of voting rights over cash flow rights obtained by each controlling shareholder. To be consistent with entrenchment effect we should observe a significantly positive coefficient of VC which is by definition inversely related to cash-vote divergence. We do not find any significant relationship between cash-vote divergence of controlling shareholder and stock returns. It means that obtaining more cash flow rights than the minimum level needed to effectively control the firm do not produce any addition in the market value of the firm. The result can be considered consistent with alignment effect. The control type dummies are added to check if there is any difference in slope coefficient between CAR and levels of discretionary accruals and the results show that both State and oligarch control is positively related to stock returns at the given level of earning management.

It is very interesting that the credibility of earnings disclosed by both control groups increases when either gets effective control. There can be two explanations of this result. Whether investors consider both of them as credible controllers of firms and do not put much attention over the levels of discretionary accruals used as they are beneficial for all. Or the disclosed earnings simply improve the value relevance of earnings conveying private information to the stakeholders and public. When we add levels of cash flow rights by each type of owner when they are not in control, it further clarifies the phenomena. The results in column 4 and 5 of table 6 show that levels of ownership by oligarchs without control negatively affect the stock returns at a given level of earnings management. It clarifies that its control only that increases the value relevance of earnings not the levels of cash flow rights. This result is again consistent with opportunistic earnings management hypothesis that majority owners and controllers of firm are involved in earnings management (both positive and negative), which in turn give them short-term benefits. Low liquidity of Russian stock exchange, lower dividend payout ratio and significantly lower value of non-voting preferred shares in Russia can also be the results of these short term benefits extraction. The level of foreign ownership also decreases the credibility of earnings and hence reduces the stock returns.

**[Insert Table 6 about here]**

## 6. Conclusion

Using pooled cross-sectional and firm specific time-series regression we test for earnings management practices of Russian listed firms in different ownership setups. We tested the value relevance of earnings with performance measure and opportunistic earnings management hypotheses. Performance measure hypothesis where firms manage earnings by discretionary accruals to offset the over or under reaction of economic shock present in nondiscretionary earnings is not supported.

The use of accrual based accounting in Russia has resulted in lower informativeness of earnings due to use of powers for opportunistic purposes where in a highly concentrated ownership environment the majority shareholders (controllers) enjoy short-term

[2] see Shleifer and Vishny (1997) for a detailed note on the role of large creditors in corporate governance.

benefits of manipulating the accounting numbers. These benefits include, tax management to avoid heavy taxes, entrenchment plans, speculative insider trading before or after disclosure. Accrual accounting is serving the purpose of control group only. We further hypothesized that significant use of discretionary accruals is explained by ownership structure and both control and levels of ownership affect the informativeness of disclosed earnings. The traditional aspect of agency theory where conflicts lie between control (managers) and ownership shifts away to the conflict between majority and minority shareholders in highly concentrated environment of Russia. We found that state-owned companies use lesser discretion to manipulate the earnings than other control groups (oligarchs and foreign corporations). However, the market reaction of accounting numbers is positive with control by either state or oligarch. Leverage increases the informativeness of earnings but size and revenue growth reduce it at given level of discretionary accruals. The levels of ownership stake without control by oligarchs and foreign corporations are negatively related to earnings informativeness.

Cross holdings and business groups of Russian economy do not provide ample opportunities for outside investors to trade on public information. This partly explains the lower liquidity and market valuation of Russian companies. The control of major Russian firm is in the hand of state or those big business tycoons. State firm have some long-term objectives of privatization and increasing the value but they still lack property rights enforcement. In the presence of significant benefits attached to control, the non-voting (preferred) shares have very low value in Russia. We propose that in order to improve the quality of corporate governance and earnings quality in Russia, first there should be full isolation between state and private ownership as sometimes they have common objectives and sometimes they combine powers to design the firm's policy matters. In both cases, minority shareholders suffer so state should first isolate itself from private companies and then make sure that the proper corporate regulations and property rights are enforced. State should more concentrate on its role as a useful monitor than the active participation in the corporate sector.

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## Appendices

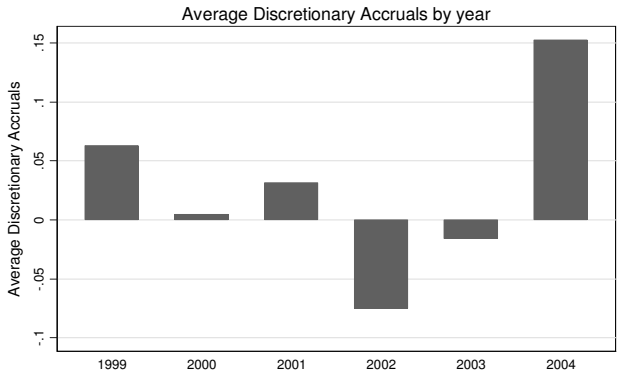


**Figure 1.** Average discretionary accruals across years

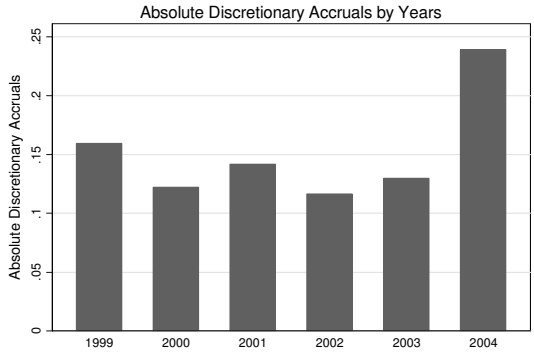


**Figure 2.** Average discretionary accruals across years

**Table 1.** Distribution of ownership levels and types of controlling owner in whole sample period

| | Mean | Median | Min | Max | Obs |
|---|---|---|---|---|---|
| Panel A: Level of ownership | | | | | |
| MOWN | 0.262 | 0.149 | 0.003 | 0.956 | 207 |
| COWN | 0.499 | 0.464 | 0.123 | 0.97 | 315 |
| STOWN | 0.408 | 0.313 | 0.0418 | 0.83 | 195 |
| OGOWN | 0.570 | 0.605 | 0.0793 | 0.97 | 147 |
| FOWN | 0.400 | 0.2704 | 0.0803 | 0.895 | 26 |
| Panel B: Controlling owner type | | | | | |
| State | 0.55 | 1 | 0 | 1 | 182 |
| Oligarch | 0.37 | 0 | 0 | 1 | 123 |
| Foreign | 0.04 | 0 | 0 | 1 | 12 |
| Widely held | 0.04 | 0 | 0 | 1 | 13 |
| Panel C: Industrial Sector's | | | | | |
| Ferrous Metal | 0.16 | 0 | 0 | 1 | 54 |
| Power | 0.28 | 0 | 0 | 1 | 93 |
| Oil & Gas | 0.16 | 0 | 0 | 1 | 54 |
| Telecom | 0.15 | 0 | 0 | 1 | 51 |
| Others | 0.25 | 0 | 0 | 1 | 78 |
| Panel D: Accounting Standards and ADRs | | | | | |
| RSA | 0.53 | 1 | 0 | 1 | 176 |
| ISD | 0.47 | 0 | 0 | 1 | 154 |

The table presents the distribution of ownership across all listed Russian firms in the sample. Panel A presents the levels of ownership stake 8cash flow rights) by all major types of owners like management (*MOWN*), the state (*STOWN*), oligarchs (*OGOWN*) and foreign corporations (*FOWN*). The level of cash flow rights by controlling owner is represented by *COWN*. Panel B shows the types of controlling owners and percentage of companies owned by each type of controlling owner. Panel C describes the distribution of whole sample by major industrial sectors and Panel D shows the percentage of firms complying Russian Accounting standards (*RSA*) and International Accounting Standards (*ISA*) by all firms included in the sample.

**Table 2.** Descriptive Statistics of stock returns and accounting variables used in earnings-return regression

| | Gross Return (%) | CAR (%) | Size (USD million) | Leverage (%) | Revenue Growth | Market To Book | Operating Profit (%) | Net Profit (%) |
|---|---|---|---|---|---|---|---|---|
| Overall | 74.2 | 33.9 | 22983.63 | 10.5 | 34.0 | 1.701 | 11.7 | 5.8 |
| State | 56.7 | 29.3 | 16070.78 | 9.1 | 35.1 | 1.475 | 9.2 | 3.0 |
| Oligarch | 108.8 | 41.7 | 34474.87 | 13.9 | 35.9 | 1.891 | 14.2 | 8.5 |
| Foreign | 79.7 | -27.0 | 22791.37 | 7.5 | 32.9 | 3.453 | 18.3 | 12.3 |
| Widely held | 26.4 | 48.9 | 11216.25 | 0.9 | 5.4 | 1.484 | 18.3 | 13.2 |
| Ferrous Metal | 127.6 | 45.1 | 16450.07 | 5.8 | 41.4 | 1.722 | 16.4 | 9.3 |
| Power | 65.0 | 18.9 | 22827.52 | 5.1 | 6.2 | 0.913 | 3.9 | -0.7 |
| Oil & Gas | 119.0 | 35.1 | 62496.4 | 13.6 | 28.9 | 2.831 | 21.5 | 13.5 |
| Telecom | 36.3 | 24.2 | 5232.68 | 10.5 | 105.6 | 1.660 | 12.5 | 6.2 |
| Others | 64.4 | 51.5 | 11944.4 | 18.1 | 19.2 | 1.900 | 10.8 | 5.6 |
| RSA | 73.7 | 30.5 | 15028.93 | 7.6 | 14.1 | 1.685 | 11.7 | 4.9 |
| ISA | 74.6 | 38.5 | 32074.72 | 13.9 | 57.4 | 1.721 | 11.8 | 6.7 |

The table presents the descriptive statistics of performance indicators. It includes Gross Return (the cumulative annual return on equity), CAR is the market adjusted cumulative annual return; Size is the amount of total assets in USD millions. Leverage is the ration of total debt to total assets in percentage. Revenue growth is the difference in revenue generated in year t by previous year divided by revenues of previous year. Market to Book Ratio is the ratio of market value of equity per share divided by book value of equity. Operating profit and net profits are the percentage over total equity of the firm. The statistics are presented for type of each controlling owner, industrial sectors and accounting standards compliance respectively.

**Table 3.** Difference in mean analysis (t-test) of absolute discretionary accruals

| ADA | Mean | t value | Diff (Pos –Neg) | Min | Max | Obs. |
|---|---|---|---|---|---|---|
| Panel A: Discretionary Accruals across whole sample | | | | | | |
| Overall | 0.1417 | 15.79*** | | 0.0001 | 1.4738 | 330 |
| Positive DA | 0.1700 | 10.01*** | *0.0510* | 0.0001 | 1.4738 | 147 |
| Negative DA | 0.119 | 14.23*** | *(2.85)*** | 0.0002 | 0.6962 | 183 |
| *Panel B: Discretionary Accruals across Ownership levels* | | | | | | |
| State | 0.1202 | 13.77*** | *0.0371* *(2.10)*** | 0.0002 | 0.6962 | 182 |
| Oligarch | 0.1671 | 8.69*** | *0.0601* *(1.59)* | 0.0001 | 1.4738 | 123 |
| Foreign | 0.1591 | 4.71** | *0.0005* *(0.01)* | 0.0066 | 0.3754 | 12 |
| Widely held | 0.1878 | 3.99** | *0.0589* *(0.59)* | 0.0106 | 0.6373 | 13 |
| *Panel C: Discretionary Accruals across Industrial Sectors* | | | | | | |
| Ferrous Metal | 0.1763 | 6.04*** | *0.1025* *(2.20)*** | 0.0068 | 1.1603 | 54 |
| Power | 0.1227 | 9.77*** | *0.0500* *(2.02)*** | 0.0002 | 0.5076 | 93 |
| Oil & Gas | 0.115 | 7.51*** | *0.0096* *(0.30)* | 0.002 | 0.4799 | 54 |
| Telecom | 0.1245 | 9.34*** | *-0.0529* *(-1.39)* | 0.0017 | 0.3967 | 51 |
| Others | 0.1702 | 6.94*** | *0.0629* *(1.25)* | 0.0001 | 1.4738 | 78 |
| *Panel D: Discretionary Accruals across Accounting standards compliance* | | | | | | |
| RSA | 0.1581 | 14.33*** | *0.035* | 0.0002 | 0.7458 | 176 |
| ISA | 0.1231 | 8.54*** | *1.96** | 0.0001 | 1.4738 | 154 |

*, **, *** Significant at 10%, 5% and 1% levels respectively

**Table 4.** Univariate Analysis of Ownership and Earnings Management with controls

| | Signed Discretionary Accruals | Absolute Discretionary Accruals | Controls | No. of Observations | Adjusted $R^2$ |
|---|---|---|---|---|---|
| MOWN | -0.0344 (-0.48) | -0.0025 (-0.04) | Yes | 207 | 6.3/2.2 |
| COWN | 0.0267 (0.48) | -0.0238 (-0.54) | Yes | 330 | 6.3/2.3 |
| STOWN | 0.0487 (1.04) | -0.0733** (-2.22) | Yes | 195 | 6.4/3.1 |
| OGOWN | 0.0368 (0.83) | 0.0447 (1.32) | Yes | 147 | 6.4/2.6 |
| FOWN | -0.1082 (-1.17) | 0.0537 (0.75) | Yes | 26 | 6.6/2.4 |
| STATE | 0.0197 (0.66) | -0.0445** (-2.01) | Yes | 330 | 6.3/3.0 |
| OLIG | -0.0002 (-0.01) | 0.0322 (1.45) | Yes | 330 | 6.2/2.7 |
| FOR | -0.0876 (-1.59) | 0.0175 (0.43) | Yes | 330 | 6.8/2.2 |

** Significant at 5% level

The coefficient estimates of univariate regression with discretionary and absolute discretionary accruals are shown in table above. The equation of discretionary accruals and ownership type and level used is $DA_{i,t} = a + bOWN_{i,t(levels,types)} + dV_{i,t} + e_{i,t}$ and regression equation of absolute accruals is $ADA_{i,t} = a + bOWN_{i,t(levels,types)} + dV_{i,t} + e_{i,t}$. Table shows the coefficients of Management ownership (*MOWN*), Controlling owner's cash flow rights (*COWN*), state ownership levels (*STOWN*) and oligarchs' level of ownership (*OGOWN*). Then *STATE* is the coefficient representing the dummy variable if state is the effective controller of firm. Similarly, *OLIG* and *FOR* are the dummy variables for oligarchs and foreign corporations provided they are the ultimate owner of a firm. Robust t-statistics are in parentheses.

**Table 5.** Pooled regression of cumulative annual market adjusted returns on accruals and cash flow components of earnings

| Model | $\alpha$ | $\beta_1$ | $\beta_2$ | $\beta_3$ | Adj. $R^2$ (%) | F-stat (p-value) |
|---|---|---|---|---|---|---|
| Panel A: Returns on Total Accruals: $CAR_{i,t} = \alpha + \beta_1 TA + \varepsilon_{i,t}$ | | | | | | |
| *Mean* | 0.437** | -0523 | | | 0.3 | 7.38 (0.007) |
| *St. Error* | 0.151 | 0.337 | | | | |
| *t-value* | 2.90 | -1.55 | | | | |
| Panel B: Returns on Discretionary Accruals: $CAR_{i,t} = \alpha + \beta_1 DA_{i,t} + e_{i,t}$ | | | | | | |
| *Mean* | 0.448** | -0.657* | | | 0.4 | 7.32 (0.007) |
| *St. Error* | 0.151 | 0.343 | | | | |
| *t-value* | 2.97 | -1.92 | | | | |
| Panel C: $CAR_{i,t} = \alpha + \beta_1 DA_{i,t} + \beta_2 NDA_{i,t} + e_{i,t}$ | | | | | | |
| *Mean* | 0.461** | -0.657* | 0.804 | | 0.5 | 3.75 (0.025) |
| *St. Error* | 0.160 | 0.356 | 1.183 | | | |
| *t-value* | 2.88 | -1.85 | 0.68 | | | |
| Panel D: Returns on Accruals and Cash Flows: $CAR_{i,t} = \alpha + \beta_1 DA_{i,t} + \beta_2 NDA_{i,t} + \beta_3 CFO_{i,t} + e_{i,t}$ | | | | | | |
| *Mean* | 0.533** | -0.661* | 0.546 | -1.909 | 1.3 | 2.54 (0.057) |
| *St. Error* | 0.239 | 0.361 | 1.126 | 3.194 | | |
| *t-value* | 2.22 | -1.83 | 0.48 | -0.60 | | |

The regression coefficients of each model for earnings informativeness are presented in table 5. $CAR_{i,t}$ is the cumulative market adjusted annual return of form $i$ at year $t$. $TA_{i,t}$ is the total accruals of firm $i$ for year $t$, $DAi,t$ is the discretionary accruals of firm $i$ for year $t$. Similarly $NDA_{i,t}$ and $Cash_{i,t}$ are non-discretionary accruals and cash flows of firm $i$ in year $t$. respectively. All variables are scaled by lagged total assets.

We present the mean value of coefficient, standard errors and corresponding robust t-values.

* significant at 10% level of significance. ** significant at 5% level of significance. *** significant at 1% level of significance

**Table 6.** Pooled regression of returns on absolute discretionary accruals and ownership variables

| CAR | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| Intercept | 0.285 (1.61) | 0.312* (1.71) | 0.287 (1.55) | 0.329* (1.73) | 0.302 (1.58) |
| ADA | 1.454 (1.21) | 1.427 (1.18) | 1.146 (1.24) | 1.633 (1.15) | 1.398 (1.25) |
| ADA*Size | -0.222 (-1.29) | -0.299 (-1.47) | -0.492** (-2.43) | -0.238 (-1.17) | -0.511** (-2.16) |
| ADA*Growth | -0.606* (-1.87) | -0.641** (-2.08) | -1.132* (-1.82) | -0.396 (-0.57) | -0.530 (-0.78) |
| ADA*Lev | 1.735*** (8.75) | 1.671*** (8.46) | 1.523*** (6.87) | 1.687*** (8.21) | 1.490*** (6.52) |
| ADA*VC | | 0.406 (0.65) | -0.221 (-0.29) | 0.465 (0.64) | -0.449 (-0.62) |
| *Control Type:* | | | | | |
| ADA*StD | | | 2.737** (2.21) | | 5.147** (2.50) |
| ADA*OliD | | | 3.171* (1.85) | | 7.386** (2.30) |
| ADA*ForD | | | 0.565 (0.46) | | 12.822 (1.11) |
| *Ownership Levels:* | | | | | |
| ADA*StO | | | | -1.929 (-0.87) | -5.247 (-1.53) |
| ADA*OliO | | | | -1.247 (-0.65) | -6.219* (-1.86) |
| ADA*ForO | | | | -4.260** (2.18) | -17.207 (-1.09) |
| No. of observations | 175 | 169 | 169 | 169 | 169 |
| Adjusted $R^2$ | 1.6 | 1.8 | 2.5 | 2.1 | 3.8 |
| *F-stat* | 20.22*** | 15.08*** | 14.80*** | 13.23*** | 10.40*** |

* significant at 10% level of significance

** significant at 5% level of significance. *** significant at 1% level of significance