Gerschenkron Revisited: The New Corporate Russia

Nadia Vanteeva and Charles Hickson

Abstract: Our analysis is based on firm-specific data compiled from the Russian Trading System stock exchange and SKRIN (СКРИН in Russian) database. We seek to identify the factors behind Russia’s dramatically improved corporate sector performance from the beginning of the 2000s to December 2007. We argue that improved long-term corporate performance was a consequence of several policy initiatives associated with the state-dominated banking sector, which enabled state-subsidized investment funds to be channeled from a structurally reengineered energy sector to targeted investment projects located in other industries. We claim that Russia’s industrial strategy closely conforms to Alexander Gerschenkron’s catch-up theory.

Keywords: Gerschenkron, Russian banks, state-directed subsidy

JEL Classification Codes: O38, O43, P26

We test the effect of reforms that were introduced in Russia at the beginning of the 2000s in the banking industry. Such reforms were designed to improve the efficiency of both the allocation and utilization of state-subsidized investment funds to targeted corporations located in favored economic sectors. The banking reforms were an integral part of an overall strategy by the early first Putin regime designed to promote long-term corporate performance, an important aspect of which was to more closely involve the central state in firm-level investment decision-making.

Following Alexander Gerschenkron (1962), and later Jonathan Doh, Hildy Teegen, and Ram Mudambi (2004) and Paul M. Vaaler and Burkhard N. Schrage (2009), we concentrate on the potential role of the state in improving corporate performance. In an earlier work, we (Vanteeva and Hickson 2012) argue that corporate reforms introduced by the state worked specifically to better assure both the state and outside investors against the propensity of inside investor-managers (oligarchs) to strip firms of assets, behavior which infamously rose to epidemic

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proportions during the Yeltsin regime’s privatization of industries (Hoff and Stiglitz 2004; Hoffman 2002).

Specifically, our focus is on measuring the effect of investment funds on firm-level long-term performance. However, we also measure the effect of the series of state reforms in the energy sector during the sample period from 1998 to 2007 that enhanced energy-sector earnings of the government. We also test the effectiveness of the banking system reorganization during this period, which was brought under state control (Kalyuzhnova and Nygaard 2009; Vernikov 2007). While under the previous Yeltsin regime’s privatization scheme, state funds were channeled through banks, the banks operated without effective monitoring. This led to a rapid growth of underfunded banks with maleficient business practices, and through such banks the quasi-owner managers, in charge of former state enterprises, were able to transfer misappropriated funds abroad. In situ managers widely stripped their former state enterprises of assets (for example, see Black, Kraakman and Tarassova 2000; Sonin 2000). Thus, under the former Yeltsin regime, such funds simply evaporated through the banking system.

After bank restructuring, the flow of loanable funds channeled through the state controlled banking system had a significant effect on firm long-term performance. We argue that such evidence of improved long-term corporate performance is de facto evidence of a reduction in hold-up behavior on the part of owner-managers of firms and lower-level bureaucrats, both of whom are widely believed to be the culprits of the asset-stripping of firms during the worst years of the Yeltsin regime.

Our study presents an opportunity to revisit Gerschenkron’s “catch-up theory,” particularly as he applied it to Tsarist Russia. Gerschenkron based his theory on observing the pattern of industrialization of European countries during the late nineteenth and early twentieth centuries. He postulated that the more backward the economy, the greater was its potential for rapid industrial growth achievable through borrowing advanced technology from its more developed neighbors (Gerschenkron 1962, 8-9). He added that rapid industrialization could be achieved even if the adopting economy lacked its own sufficient pools of skilled labor or a sufficient supply of free unskilled labor as the former could be imported, while labor saving technologies could be substituted for the latter. For this reason, during the late nineteenth century, he believed that relatively backward economies tended to industrialize, combining highly capital-intensive basic industries with large-scale plant production.

Technology characteristics, coupled with the push to simultaneously generate growth in several complementary industrial sectors, created a demand for large flows of investment funds. Gerschenkron observed that in countries like France, Germany, and Austria this demand was met by the evolution of new form of investment banking, called unified banks. Unified banks, like the older English deposit banks, collected savings from a wide net of depositors, but differed from them in that they were designed to make large and long-term investments in specific large-scale industrial firms. This strategy also required that unified banks actively monitor their firm-specific investments by playing an active role in corporate governance (Gerschenkron 1962, 11-16).
Gerschenkron argued that Russia’s delayed industrialization was due to the truculence and moral turpitude of its conservative ruling classes. In particular, the failure of the country to develop necessary prerequisite institutions, such as a property protecting legal system, a business friendly state bureaucracy, or a capable banking and financial system. His assessment of the existing ruling class was, in large part, based on the failure of the earlier reforms under Nicholas II. For example, the spread of western intellectual ideas among younger urban elites during the mid-nineteenth century had, among other things, brought the prospect of adopting a western commercial judicial system to replace the existing inquisitorial structure. The latter was prone to capricious political and bureaucratic interference, and Gerschenkron and others blamed it for fostering a climate of dishonesty in Russian commercial relationships. Widespread dissatisfaction with the inquisitorial system fueled a dramatic increase in students studying western law. Some accounts estimate that over 50 percent of Russian university students by the end of the 1860s were studying Roman law (Smith 1996).

The wave among a new elite, calling for judicial reform, succeeded in having a new legal code adopted, which contained civil statutes based on those of Hanover. In addition, reforms in jurisprudence led to—at least, on paper—a system of independent courts with jury trials and the creation of a professional bar association. However, from the outset, the legal reforms were strongly opposed by powerful elements within the traditional ministries, and the old inquisitorial system continued to prevail in the provinces. An independent judiciary would prove difficult to sustain under an autocracy, and during the conservative reaction that followed the assassination of the reforming Tsar in 1881, the new legal reforms simply failed to take root (Smith 1996).

Nineteenth-century Russian banking consisted of numerous owners with substantial liquid savings (e.g., Falkus 2008), but they lacked the ability to expand their deposits. Banks also could not channel such deposits to meet the demands for large-scale industrial investment. For example, there were only a few small deposit banks in existence. Furthermore, these banks were guilty of corruption, and, consequently, they were widely distrusted (e.g., Chandrasekhar 2005). As Gerschenkron put it, Russian banking during nineteenth century had “elevated fraud to the level of general business practice” (Gerschenkron 1962, 20).

To top it all, the perverse manner in which the serfs were emancipated in the 1860s impeded the free movement of rural labor into industry. Although the former serfs received allocations of land from the rural aristocracy, the transfer prices set by the government were way over market prices. The former serfs were, therefore, saddled with large debts, which led to high redemption levies. Newly established village communes, or obshchina, were held collectively responsible for all the debts and taxes of its villagers. Thus, they were empowered to collect the debts and taxes from the entire obshchina. The communes even had the power to demand payments from former villagers who were now working in cities, as well as to demand the return of villagers who were employed in industry. Such barriers to labor mobility were only eliminated under the Stolypin reforms of 1906–1910.
Beginning under Ivan Vyshnegradsky (Russia’s finance minister between 1887 and 1892) in the 1880s, and in the later decades of Sergei Witte (a highly influential policy-maker during the reign of Nicholas II), a state-owned railway network was built, eventually spanning the entire country. In the 1890s, the pace of industrialization accelerated with new enterprises launched in the iron, coal, and machine industries, all of which were partially or entirely state-funded, with money raised through both direct and indirect taxes (Gerschenkron 1962, 17). For example, the iron, coal, and railway sectors were particularly subsidized (Drummond 1976; Gatrell 1994; Tompkins 1933; Willis 1897). Other policy reforms extended protection from competition to the new industries. High import tariffs were erected and the government encouraged cartelization of firms. This allowed industrial firms to raise domestic prices. The state also guaranteed these firms large profits.

During the same period, the country adopted the gold standard. It did so in order to attract foreign loans. Foreign investors were also encouraged to invest in the new industries through subsidiaries operating under state license (Hogan 1993). Gerschenkron postulated that the monetary reforms attracted substantial levels of foreign capital, which ended up funding a significant portion of the country’s industries. Many scholars, such as Olga Crisp (1953), Paul R. Gregory (1991), and Margaret Miller (1967), confirmed Gerschenkron’s conclusion.

Gerschenkron argued that the path of Russian economic transformation was *sui generis* in that it was through the agency of the state. There is some evidence that a few industrial firms may have been established independently through private capital (Crisp 1973, 590). However, the scale of the Russian industrialization plans required the marshalling of large resources under a state-mandated plan. The Russian experience most likely encouraged Gerschenkron to believe that a country could always find an alternative path to industrialization. However, he also postulated that Russia’s industrialization resulted from the motivation to modernize its military capabilities (Gerschenkron 1962, 17).

The Russian industrialization drive achieved dramatic results (Gerschenkron 1962; Gregory 1991). For example, Russian railways between 1880 and 1900 experienced higher growth than even those in the US.¹ Iron and coal outputs increased about fourfold during the 1887–1899 period, and an industrial boom spurred a surge in construction (Geyer 1987). Nevertheless, there were negative aspects to Russia’s rapid industrial transformation, having to do with an inefficient mix of output. The most important aspect of this was a fall in agricultural output due to the heavy taxes imposed on it. The policies also suppressed consumer goods

¹ Between 1880 and 1900, Russian railways registered a growth rate of approximately 133 percent, while U.S. railway attained a growth rate of about 113 percent. However, in real terms, the US had 193 thousand miles of tracks, compared with only 35 thousand miles in Russia (see Fordham University Modern History Sourcebook, *Tables Illustrating the Spread of Industrialization*, *Historical Statistics of the United States: Colonial Times to 1970*, and *Encyclopedia of World History: Age of Revolution and Empire, 1750 to 1900*).
production in favor of capital goods production. In addition, high import tariffs, high tax rates, and cartel pricing for industrial products combined to produce a de facto policy of forced savings on the unlucky generation of Russians who shouldered these burdens. Gerschenkron argues that the severity of the forced-savings policy varied according to the exigencies of military needs. This, according to him, led to a pattern of industrialization by fits and starts, characterized by shifting periods of accelerated production and sectorial recessions (such as the recession in the early 1890s), the worst aspect of which was a dire agricultural depression.

In summary, Gerschenkron offered an intuitive blueprint for jump-starting industrialization in backward economies through borrowing technology from more developed economies. We add that the Vyshnegradsky-Witte strategy was also an effective second-best strategy for jump-starting the Russian economy beginning in the late nineteenth century. Large-scale industrialization spurred by the government may have been impossible otherwise due to latent predatory behavior of local bureaucrats and firm owner-managers. Gerschenkron’s model, despite the criticism leveled at it, remains a viable alternative for currently weak economies facing similar problems (Crisp 1991; McCloskey 1991). We argue that the present Russian government strategy can be described as Gershenkronesque in that the state is once again involved in allocating subsidized investment funds to targeted commercial sectors.

We only address the issue of the efficiency of Putin’s reforms during our sample period, very much in line with Oliver Williamson’s view (1985) that it is efficiency and not the exercise of power that explains economic organization (Dugger 1990). Nevertheless, the ability of the Russian state to distribute resources in favor of particular groups is obvious. For example, as we noted above, the Yeltsin regime tended to favor the existing managers of former state enterprises and local bureaucrats, while the Putin administration prefers the long-term St. Petersburg associates (Nilsen 2006). This aspect of Russia’s corporate history may conform to the perspective of the old institutional economics that state power is necessary in order to distribute resources (Kanel 1974; Macneil 1980; Palermo 2000). This history even supports the hypothesis that the state defines the boundaries of economic activity by sustaining certain power relationships (Parto 2005). However, we leave these aspects of Russian corporate history to future study.

**Changes in State Policy Underpinning Russia’s Corporate Revival**

**Significant Changes in State Energy Policy**

Dramatic improvement in the performance of the Russian corporate sector began at the turn of the new millennium. Undoubtedly, the sharp rise in export revenue, attributable to a substantial increase in world energy prices, was a major contributing factor (Tabata 2002). For example, from the early to mid-2000s, the value of oil and gas exports increased to approximately 60 percent of total export earnings. The energy sector accounted for about 30 percent of all foreign direct investment and oil and gas
industry earnings, together, accounted for 30 to 40 percent of the government’s total revenues (Rautava 2004).²

Clifford Gaddy and Barry Ickes (2005) split natural resource rents into five different components: formal taxes, profits, price subsidies, informal taxes, and excess costs of production. We simply treat rents as revenue obtained from the sale of resources minus the cost of production (Gaddy and Ickes 2005). Anna G. Vdovichenko and Vikoroja G. Voronina (2006) and Philip Hanson (2007) find that such rents fund investments in other industries which are deemed nationally important (Peshkova 2008). These authors’ findings are consistent with those of the government that specifies a redistribution of energy-sector rents to other favored industrial sectors (Butt et al. 2008). For this purpose, a Stabilization Fund was established in Russia, which was divided into a Reserve Fund and National Welfare Fund. By 2007, this fund had an estimated value of 158 billion dollars, constituting approximately 12 percent of the country’s GDP (Ericson 2009).³

The amount of available funds for redistribution from the energy sector crucially depended on the bargaining power of the state vis-à-vis foreign and domestic energy companies (Osipov 2006). One would expect the central state to win the lion’s share of rents over many competing firms as it enjoys a monopoly of issuing licenses for exploration and extraction contracts.⁴ Yet, on reflection, we should expect that the state’s negotiating power would depend on its ability to prevent energy companies, through side payments, from exploiting latent rivalry among its local government officials. This problem would be more severe in the case of multinational conglomerates.

There is a long history of predatory behavior by regional state officials in Russia, perhaps in part because they view it as a traditional right. For example, in the fourteenth century, under the sistema kormleniya, regional bureaucrats were allowed by the Tsar to “exploit their constituencies for private gain” (Ledeneva and Shekshnia 2011, 7). Peter the Great made such extortionary behavior illegal, and, despite legal reforms since then, it persists to this day. For instance, a common practice is to disrupt tendering processes through informal networks in order to extort bribes. In particular, local bureaucrats commonly block approvals for oil exploration and extraction licenses until they receive a bribe (Adachi 2009).⁵

During the 1990s, oligarchs dominated major energy firms to the point that they controlled most of the oil sector (Guriev and Rachinsky 2005; Hill and Fee 2002;

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² See the official statics of the U.S. Energy Information Administration.
³ The National Welfare Fund is also used to support social welfare.
⁴ Under contractual agreement, the central state offers an investor an exclusive right to explore and extract resources from a specific geographical location for a certain period of time (Heinrich, Kuszniir and Pleines 2002).
⁵ Evgeny Dmitriev (2004) draws attention to Vladimir Butov, a regional official who was accused of withholding a license approval for a major oil-field development in northern Russia. There were also criminal proceedings issued against Butov for his efforts to get a license for Lukoil in 2001 (Akhtyrov 2003).
Hoffman 2002; Wolosky 2000). Significantly, the energy-sector oligarchs, often in collusion with local government officials, rushed to form lucrative partnerships with foreign oil firms (Hill and Fee 2002). They also freely misappropriated assets belonging to these enterprises (Barnes 2007). Such practices, in conjunction with falling oil prices, caused a decrease in the value of oil production by approximately 50 percent between 1988 and 1998. As energy-sector rents declined to minimal levels, investor-managers amassed high personal fortunes.

Under the Putin regime, asset-stripping declined substantially, however, as Gaddy and Ickes (2005, 2009) point out. The persistence of weak property rights encouraged firm owners to overly discount their firms’ capital. Gaddy and Ickes also argue that the state often informally shares energy-sector rents with private firms in compensation for insecure property rights. However, our focus is particularly on performance of long-term projects, requiring longer-term investment horizons.

Beginning early in the Putin regime, the central state strengthened its control over the oil industry through a series of regulatory changes and through a partial re-acquisition of energy sector firms (Sagers 2006). Philip Hanson (2009) finds that, between 2003 and 2007, the percentage of companies controlled by the state increased from 24 percent to just below 40 percent. Also, the change in the Subsoil Law of 2002 granted the federal government exclusive ownership over resources, with exploration and production rights then leased to private agents. Over this period, there was an increase in production sharing agreements, and foreign investors were attracted – though with limited extraction privileges – to particular natural resource deposits.

International companies were encouraged to enter joint ventures in the Russian hydrocarbon industry, but only by forming partnerships with native Russians who held majority stakes (Erochkine and Erochkine 2006; Hanson 2009; Locatelli 2006). Clifford Gaddy (2004) suggests that foreign firms were encouraged to invest in order to undermine dishonest oligarchs (Gaddy 2004, 350). But the government also encouraged joint ventures with state-owned companies, as in the case of Rosneft and Exxon Mobil for the purpose of exploiting Artic-sheLF resources. However, one can also rationalize such partnership requirements as designed to diffuse industry technology. There is also the rationalization that the government hoped to increase the future pool of bidders for new extraction licenses. Consequently, the future bargaining power of the state would be increased vis-à-vis international conglomerates. This would have also enhanced the state’s present bargaining power as the industry was growing at the time.

Despite these restrictions, foreign investors received substantial earnings during the early 2000s and thus were keen to partner in developing Russia’s natural resource base (Ehrstedt and Vahtra 2008; Hare et al. 2004). For instance, energy firms from

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8 In 2003, the Yukos case attracted a lot of negative media attention, when the former head of the company, Mikhail Khodorkovsky, was placed under arrest for tax evasion, and Yukos assets were subsequently sold to the state-owned company Rosneft. While this case had an adverse effect on Russia’s investment climate, this impact was short-lived.
France, Norway, Germany, Italy, Netherlands, the US, and Japan invested in the sector. Between 2000 and 2006, the Russian stock market rose by approximately five hundred points. Furthermore, over 40 percent of this growth was attributable to two major oil companies Gazprom and Rosneft, both of which operated as partnerships between the state and foreign investors (Harris 2009). In particular, the UK was the largest source of foreign investment in the energy sector, with British Petroleum (n.d.) enjoying profits amounting to over four times its initial investment.\footnote{Available from The Economist (2012).}

However, high earnings enjoyed by foreign oil companies may simply reflect the level of risk associated with long-term, large, lumpy, and asset-specific investments in an uncertain political and legal environment (Reynolds and Kolodziej 2007). But, correspondingly, the reforms undertaken in Russia also worked to increase state coffers through enhanced revenue.

\section*{A Revitalization of the Banking Sector}

It is often asserted that increased funds from enhanced natural-resource earnings are sufficient to explain Russia’s corporate revival during this period. However, such a view fails to grasp the magnitude of the preexisting moral hazard problems that had led to actual divestment in many enterprises during the previous Yeltsin regime. Consequently, it is of particular interest to assess the effectiveness of the new regime’s reforms of the banking system.

Under the Yeltsin privatization scheme, banks operated without effective constraints, leading to an explosion of under-funded banks, termed “mushroom” banks (Gidadhubli and Kumar 1999). Understandably, such banks were fraught with moral hazards and consequently became infamous for issuing large quantities of poorly defined financial instruments, typically far in excess of bank assets. In addition, the new breed of bankers generally had little to no previous bank management experience.\footnote{Due to incompetent decision-making and concentrated lending to favored firms and individuals, defaulted loans represented 10 percent of the country’s GDP by 1997 (Meyendorff and Snyder 1997).} Thus, the new banks engaged in highly risky investments that eventually fueled speculative bubbles. Their investment portfolios amounted to little more than a series of Ponzi schemes, accompanied by implausible promises of high returns designed to lure individuals with small savings. The end came when the system of “mushroom” banks collapsed in spectacular fashion overnight into insolvency (Bhattacharya 2003; Pistor and Spicer 1996; Rock and Solodkov 2001).

Nonetheless, the manager-owners of new financial intermediaries had strong political ties to the Yeltsin regime. Thus, unsurprisingly, the management of such banks, during this period, facilitated the transfer of misappropriated company funds abroad at the behest and in favor of the new quasi-owner managerial elite (Berglof and Bolton 2002; Buyske 2007; Gidadhubli and Kumar 1999; Laeven 2001; Spicer and Pyle 2003; Thomson 2002). Moreover, even central bank funds that were initially
targeted for various investment projects were reportedly also misappropriated by government officials and other insiders. Large amounts of central banks funds were routinely converted into U.S. dollars through the newly constituted Russian foreign exchange market, and they, too, ultimately found their way into the personal overseas accounts of these officials (Rock and Solodkov 2001).

The above developments came to a head during the financial crisis of August 1998, which culminated in the collapse of the currency and the suspension of its payment system. For example, the state postponed payments on foreign debt and defaulted on its rouble-denominated public debt (Sutela 2000), inevitably forcing the Russian government to borrow substantially from several world organizations, such as the World Bank and the IMF ($6.3 and $19.3 billion, respectively, by the end of 1998). Part of the package was a demand by the country’s foreign creditors and the IMF to require restructuring of the Russia’s payment system in order to meet its debt obligation (Scharf 2007).

Sequential to the IMF-mandated restructuring of the Russian foreign credit system, at the turn of the millennium, was a reform of the banking system to prevent a recurrence of casino style banking. Other banking reforms aimed to prevent banks from surreptitiously misappropriating the funds of large industrial enterprises. For example, the government established the Agency for Restructuring Credit Organizations, which was responsible for making sure that “bad” banks were closed, while also recapitalizing potentially profitable banks and creating a deposit insurance scheme (which was back-stopped by the state). One crucial outcome was the revitalization of the Savings Bank of the Russian Federation (Sberbank), which had been allowed to languish under the Yeltsin regime. Sberbank emerged after the financial crisis of 1998 as the only bank to be trusted by both savers and investors (Buyske 2007; Peresetsky, Karminsky and Golovan 2007). Part of the banking restructuring of Sberbank included its acquisition of the assets of eight of Russia’s largest banks. Consequently, by 2005, Sberbank was so dominant that it was reported to hold over 80 percent of consumer deposits. One can estimate that, through Sberbank and the other large state-owned bank Vneshtorgbank, the state-owned banks directly controlled 41 percent of banking sector loans. But this estimate is much too low, because the state also acquired a substantial stake in and exercised a considerable influence over the management of several other large and medium banks.

Juliet Johnson (2004) points out that the regime introduced amendments to the Law on the Central Bank in 2002 that set up the National Banking Council. This Council was predominately made up of government official and began to increase control over the Central Bank’s activities. Inevitably, these initiatives led to an

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9 Available at www.law.harvard.edu/programs/about/pifs/lhm/sp26.pdf.
10 See Russia’s Uncertain Economic Future, Compendium of Papers submitted to the Joint Economic Committee Congress of the United States in 2001, see also Lucy Chernykh and Rebel A. Cole (2010).
increased direct and/or indirect state ownership of banks. For instance, Andrei Vernikov (2010) finds that state-owned banks had had combined assets of 15.8 trillion roubles by 2010, in contrast with approximately one trillion roubles in assets in 2001. In addition, the market share of state-controlled banks reached almost 54 percent in 2010, compared to 36 percent in 2001, whereby indirectly state-owned banks tended to grow faster than all other types of banks. This estimate is consistent with the work of Zuzana Fungacova and Laura Solanko (2009), who find that the state’s ownership share in the banking industry accounts for approximately 50 percent of the banking sector’s assets, and the five state-controlled banks account for 37 percent of those assets (Anzoategui et al. 2012).

Nevertheless, after the afore-mentioned banking reforms, several private pocket or oligarchic banks remained and tended to be owned by enterprises located in the extracting and metallurgical industries. Such banks primarily offer financial services, such as overseeing these companies’ accounts, as opposed to acting as financial intermediaries (Gnezditskaia 2003; Styrin 2005). However, the number of such banks remains relatively small, and public banks have overtaken both private domestic and foreign banks in Russia (Vernikov 2009).

Despite these reforms, Pascal Alphonse, Jacqueline Ducret, and Eric Severin (2006) argue that Russia’s banking sector is still fraught with moral hazards and still incapable of satisfying the borrowing requirements of industry.11 Svetlana Kirdina and Andrei Vernikov (2013) do a further analysis of the Russian banking sector, finding that private banks were always incapable of supporting the country’s growth, while state banks have a significant impact on liquidity and, more importantly, are traditionally employed as vehicles for lending on behalf of the state. It is perhaps in response to such concerns that a New Investment Fund in 2000 was founded. The Fund was set-up for the purpose of “assisting in the development of basic strategic industries, first and foremost, of transport, communications and utility infrastructure, as well as technology and innovation” (Budžhetnaya Politika 2006–2008, 4). Evgeny Yakovlev and Ekaterina Zhuravskaya (2006) find that state subsidies and state-subsidized loans almost doubled between 2000 and 2003 over the period from 1996 to 1999. Similarly, Alexey Vedev (2008) finds that state subsidies were in the form of direct funds as well as subsidized credit interest rates or credit guarantees.12

Although many authors (for example, Fungacova and Solanko 2009) find that banks’ credit to firms increased dramatically over our sample period (1998–2007), financial intermediaries accounted for only a small share of company financing, with firms tending to rely more heavily on retained earnings and syndicate loans. However, we argue that the role of banks may be under-represented as a large proportion of the

11 Also, the vice-president of Rosbank, one of the major Russian banks, has recently stated that, although private investors are aware of the potential attractiveness of Russia’s banking sector, its present form is shaped by many risks (OPBP 2007).
12 Also see www.archive.premier.gov.ru, as well as Alvin Rabushka and Michael S. Bernstam (2006) and David Johnson (2009).
flow of targeted investment funds may be shepherded through the state-banking sector. In addition, the banks are also more closely monitored by the Central Bank of Russia, which requires that all commercial banks license the investment funds they offer to every credit institution. With enhanced state monitoring and rationing of investment funds, many of the private and most of the semi-private (especially large) firms may be financed through government-influenced loans. For example, Anastasia Gnezditskaia (2003) notes that blue-chip and natural resource companies are the main borrowers of Sberbank.

More generally, it is reported that the expansion of state banks after the August 1998 crisis in Russia was accompanied by a significant increase of lending (government bank loans grew by approximately 80 percent, see Havrylchyk 2004), as well as a major expansion of long-term credit instruments (Sutela 2005). Zuzana Fungacova and Laurent Weill (2009) find that bank credit amounted to 40 percent of GDP in late 2000s, whereas almost 50 percent of the total banking sector’s assets constituted credit to firms. Similarly, Diego Anzoategui, Maria Soledad-Martinez-Peria, and Martin Melecky (2012) find that 59 percent of bank income is derived from business lending. More importantly, Erik Berglof and Alexander Lehmann (2009) show that the rapid expansion of bank finance played a positive role in Russia’s economic growth, especially when banks extended their credit maturity date (to above one year) to enterprises.

In summary, we argue that the reforms introduced by the Putin regime in the energy sector worked to enhance the flow of investment funds to the corporate sector. Thus, an increase in the energy sector’s rents should be positively correlated with the improved long-term performance of firms. The caveat is, of course, that the employment of such funds are productively utilized and not siphoned off at the corporate level through asset-stripping, or more subtly applied to shorter-than-optimal investment projects. In addition, after the banking reforms, we should expect a strong positive relationship between the level of bank loans and the long-term performance of firms. We should also expect firms to enjoy higher long-term performance when a financial institution is present in their ownership structure as this will signal a continued availability of subsidized investment funds.

Finally, as we have argued in a previous work (Vanteeva and Hickson 2012), direct state involvement in the corporate governance of a firm, receiving subsidized investments, should also be positively correlated with the firm’s long-term performance. Therefore, the presence of even partially state-owned banks in the firm’s shareholder structure should have an additional positive effect on the firm’s long-term performance. The present use of the state banking system is consistent with a historical pattern of Russian financial intermediation (Kirdina and Vernikov 2013), and it is fundamentally similar to the strategy of its late-nineteenth century Tsarist ancestor, which is held to be a stereotypical model for Gerschenkron’s “catch-up theory.” The obvious caveat here is that the state strategy is one of picking winners – that is, it is able to copy more advanced technologies of western economies.
Methodology

Data Sources

Our main focus is to test the effectiveness of the reforms initiated by the early Putin regime which dramatically reversed the earlier laissez-faire policies of the 1990s, particularly those that led to the reintroduction of state coownership of natural resource, banking, and other major Russian corporations. Specifically, we test the impact of the explicit reforms regarding the changes in the energy sector that facilitated the rents flowing to the state and the effectiveness of the banking and financial reforms that allowed the channeling of funds to the corporate sector. Consequently, our sample period includes the introduction of the above initiatives and ends the last full year before Putin’s first tenure officially ended in May of 2008.13

Our dataset draws on firm-specific information from SKRIN (СКРИН in Russian) and the Russian Trading System (RTS) stock exchange from the beginning of 1998 through the end of 2007. Meaningful corporate-level data did not become available until 1998, although the RTS was founded in 1995. However, we end our sample period in 2007, which was the last full year of the first Putin tenure, as well as the year preceding the 2008 world financial crisis that had a severe impact on Russia. Consequently, this year should provide a good terminal point in assessing the effectiveness of the Putin regime’s reforms.

RTS was one of Russia’s leading stock exchanges between 1995 and 2011.14 Its index was based on the fifty most liquid and capitalized Russia’s companies, accounting for 85 percent of the total market capitalization. Over the 1998–2007 period, the number of companies trading on the RTS increased from approximately one hundred and fifty to slightly over four hundred. However, due to missing and incomplete data, our final dataset is composed of 2,036 firm-year observations. The financial information we compile on RTS-listed corporations includes annual key financial indicators, such as market capitalization figures, share prices, and key balance sheet information. We also have detailed ownership data and other firm-specific information. Our primary data source is the SKRIN database, which was founded by shareholders of the National Association of Securities Market Participants. The SKRIN database makes available the annual and quarterly reports of public companies from 1998 onward in their original format. In addition, we also use RTS records and the websites of individual companies.

Definition of Variables

For our analysis, we chose to concentrate on long-term corporate performance rather than corporate short-term profit. For this purpose, we apply two measures of

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13 We also wish to minimize the effect of the 2008 global financial crisis on our findings.
14 RTS merged with MICEX in 2011 to create the Moscow Exchange.
Tobin’s Q, which is broadly defined as “the ratio of the market value of the firm’s assets relative to the replacement cost of the firm’s assets” (Wolfe 2003, 156). As the firm’s asset market value and asset replacement cost are not directly accessible from company accounts, we employ two common proxies that are frequently used as proxies for Tobin’s Q. Following Eugene F. Fama and Kenneth R. French (2005), Hong Chen, Murray Z. Frank, and Owen Q. Wu (2005), as well as Rajesh K. Aggarwal and Andrew A. Samwick, (2006), our first proxy – denoted by TQ1 – is defined as the sum of the book value of debt and the market value of equity, divided by total assets. This variable is able to capture any amount by which the market value of a firm may be above its book value (especially over the longer term). Based on the work of Kee H. Chung and Stephen W. Pruitt (1994), our second proxy – denoted by TQ2 – is defined as the market value of all shares plus the book value of long-term debt and the difference between current liabilities and current assets, all divided by the total value of the firm’s assets. So, compared to TQ1, the latter measure takes into account any additional book value that is attributable to a firm’s short-term operations.

Berglof and Lehmann (2009) argue that long-term firm performance depends crucially on the availability of longer-term credit. Our focus is to gauge any positive effect on the long-term performance of firms that may be attributable to long-term loans which, in our case, are overwhelmingly in the form of bank debt with a maturity greater than one year. To capture this effect from 1998 to 2007, following Yoshiro Miwa and Mark Ramseyer (2002), we compute the book value of long-term bank loans for each firm over its total assets. As we anticipate that the level of bank loans closely corresponds to the level of subsidized funds (Rabushka and Bernstam 2006), we can assume that the magnitude of bank loans, which have been channeled to a firm, is positively correlated with its long-run performance.

Miwa and Ramseyer (2002) argue that firms with a financial-institution shareholder presence enjoy easier access to a steady stream of lower-cost loans.15 Such an advantage for firms should also lead to enhanced longer-term performance. Consequently, we include a dummy variable taking on a value of “1” if a particular firm has such a financial institution as one of its major shareholders, and a value of “0” otherwise.16 However, in Russia, it is important to recognize the intricate inter-relationship between state authorities and the success of particular companies in attaining subsidized investment finds. Therefore, we include a dummy variable, taking on the value of “1” if a state or partially state-owned financial intermediary is a major shareholder in a firm, with a value of “0” otherwise.17 If the state-financial-institution-

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15 Also see Olena Havrylchyk (2004).
16 Key shareholders were identified from company reports. Although reports disclose information on all shareholders owning more than 5.0 percent of capital, we find that Russia’s corporate ownership is extremely concentrated, and the average fraction of capital owned by a major shareholder is 50 percent, while no financial institution owns less than 10 percent of capital.
17 As the state can generally subsidize interest rates on loans obtained from commercial banks, we should not expect to find substantial differences between the “borrowing” effect of wholly and partially state-owned and private financial institutions, and state ownership may perhaps correspond to a substitute monitoring device (ILO 2009).
representation variable on corporate boards serves to better assure that loans are appropriately allocated — which is particularly important when loans are applied to large and lumpy investments as is often the case with longer-term projects — then the state-bank presence should greatly improve longer-run performance of firms. On the other hand, if the presence of a state or partially state-owned financial institution on corporate boards is simply a consequence of political patronage, then such loans should, at best, have only a negligible effect on the long-term performance of firms.

We also include several control variables that could influence the long-term corporate performance of firms. First, we include a firm-size control variable. Following the method of Gerald R. Salancik and Jeffrey Pfeffer (1980), Philip G. Berger and Eli Ofek (1995), as well as Mara Faccio, Larry Lang, and Leslie Young (2001), we use the natural log of total assets.\(^{18}\) To capture any possible effect due to firms’ profitability, we include the variable defined as net profit before interest and taxes, divided by sales (Loughran and Ritter 1997; Machin and Van Reenen 1993; Schranz 1993). To account for any long-term effect on our firm-performance measure, we include a dummy variable, taking the value of “1” if a corporation had existed prior to the economic restructuring policy of the 1990s in Russia, with a value of “0” otherwise. This also indicates that the firm was a former Soviet enterprise.

To account for any effect on long-term performance due to ownership concentration, we include a proxy defined as the percentage of capital owned by the largest shareholder in a firm. It appears that Russian firms tend to have highly concentrated ownership structures, with a 50 percent stake on average held by the largest investor. As globally rising oil prices during this period are widely believed to have had a significant positive effect on Russia’s corporate sector, we introduce an oil price variable. However, we are more interested in whether any fortuitous earnings from rising oil prices actually generate positive cross effect on firms located in other industries, or whether the energy sector solely enjoyed this windfall. Therefore, we include an energy sector dummy variable, taking the value of “1” if the firm is located in the energy sector, with a value of “0” otherwise. Table 1 offers a summary description of variables used in the regression analysis.

Findings

Descriptive Statistics

Table 2 reports some summary statistics over our sample period (1998–2007). It is divided into three sub-periods: Panel A spans 1998–1999, Panel B spans 2000–2003, and Panel C spans 2004–2007. Respectively, the above sub-periods generally coincide with the end of the Yeltsin era, the formative years of the successor Putin regime, and the later years of the first Putin regime when the institutional reforms (discussed

\(^{18}\) The natural logarithm is commonly employed when the reported results are in the form of percentages. It is particularly useful when there is a large spread of values, such as firm size, in order for the values of the variables to be more evenly distributed.
above) had matured. We note that Tobin’s Q1 rose sharply from 0.357 in the first period to 1.335 in the last period, suggesting an overall dramatic improvement of the long-term performance of firms.\textsuperscript{19} Table 2 also indicates higher profitability ratios over the sample period, demonstrating a consistent strengthening of the country’s corporate sector.

From Table 2, we can see that long-term debt as a proportion of the overall corporate capital structure increased rapidly: the mean long-term debt increased from 0.033 in Panel A to 0.084 in Panel C. We also note a steady increase in company size, which is consistent with the willingness of Russian firms to increasingly undertake large investments. Finally, Table 2 shows that the ownership concentration mean increased from approximately 41 to 53 percent from 1998 to 2007.

Table 1. Definition of Variables

| Variable                  | Description                                                                 |
|---------------------------|-----------------------------------------------------------------------------|
| Tobin’s Q                 | TQ1 \((V_t + LTD_t + STD_t) / A_t\). The market value of equity plus book value of debt, divided by total assets (Aggarwal and Samwick 2006; Chen, Frank and Wu 2005; Fama and French 2005) |
|                           | TQ2 \((V_t + LTD_t + (CA_t - CL_t)) / A_t\). The market value of equity plus book value of long-term debt and the difference between current assets and current liabilities, divided by total assets (Chung and Pruitt 1994) |
| Bank loan                 | LTD/A. The ratio of book value of long-term bank loans to total assets (Miwa and Ramseyer 2002) |
| Financial institution     | Equals “1” if the firm has a financial institution as its major shareholder, and “0” otherwise |
| State financial institution| Equals “1” if the firm has a wholly or partially state-owned financial institution as its major shareholder, and “0” otherwise |
| Size                      | LnA. The natural log of total assets (Berger and Ofek 1995; Faccio, Lang and Young 2001; Salancik and Pfeffer 1980) |
| Profitability             | E_t/Sales. The ratio of earnings before interest and taxes to sales (Loughran and Ritter 1997; Machin and Van Reenen 1993; Schranz 1993) |
| Firm longevity            | Equals “1” if the firm had existed during the Soviet era, and “0” otherwise |
| Ownership concentration   | Fraction of capital owned by the largest shareholder, expressed in percent |
| Energy firm               | Equals “1” if the firm belongs to the energy sector, and “0” otherwise |
| Oil price                 | Natural log of world oil price* |

Notes: All financial data is expressed in thousands of Russian roubles.
* Oil prices were obtained from the New York Mercantile Exchange (NYMEX n.d.) and British Petroleum (n.d.).

The Role of Subsidized Loans

The dataset consists of unbalanced panel data. Econometric tests suggest that a random effects model serves as the most effective tool to test the relationship between firms’ Tobin’s Q and independent variables. However, as a robustness check, we apply

\textsuperscript{19} We primarily introduce TQ2 measure as a robustness check and, therefore, do not include it in the descriptive statistics.
both random and fixed effects models. A random effects model allows some omitted variables to vary across time, and others across entities, which is particularly important given the nature of this study. By comparison, a fixed effects model picks up a specific-firm effect.

Our regression takes the following form:

\[ Y_{it} = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \epsilon_{it} \] (1)

As mentioned above, our two proxies for Tobin’s Q serve as our dependent variable, while our key variables of interest are long-term bank loans and the presence of a financial and state financial institution in a firm’s shareholder structure. The remaining variables act as control variables.

Table 2. Summary Statistics for Firms Trading on RTS Between 1998 and 2007

| Variable | No. of obsrv. | Mean | Standard dev. | Min. | Max. |
|----------|---------------|------|---------------|------|------|
| Panel A: 1998–1999 |
| Tobin’s Q \((V_t+LTD_t+STD_t)/A_t\) | 165 | 0.357 | 0.490 | 0.003 | 3.644 |
| Size \((LnA_t)\) | 269 | 15.082 | 1.626 | 10.941 | 20.985 |
| Longterm debt \(LTD_t/A_t\) | 269 | 0.033 | 0.084 | 0.000 | 0.598 |
| Profitability \(E_t/Sales_t\) | 139 | 0.080 | 0.429 | -0.119 | 0.805 |
| Ownership concentration (%) | 270 | 41.304 | 17.679 | 7.000 | 99.000 |
| Panel B: 2000–2003 |
| Tobin’s Q \((V_t+LTD_t+STD_t)/A_t\) | 531 | 0.508 | 0.615 | 0.001 | 4.878 |
| Size \((LnA_t)\) | 710 | 15.661 | 1.691 | 9.664 | 21.626 |
| Longterm debt \(LTD_t/A_t\) | 710 | 0.061 | 0.121 | 0.000 | 0.984 |
| Profitability \(E_t/Sales_t\) | 639 | 0.103 | 0.202 | -3.047 | 0.969 |
| Ownership concentration (%) | 696 | 45.185 | 17.889 | 6.000 | 99.000 |
| Panel C: 2004–2007 |
| Tobin’s Q \((V_t+LTD_t+STD_t)/A_t\) | 670 | 1.335 | 1.289 | 0.001 | 14.320 |
| Size \((LnA_t)\) | 829 | 15.944 | 1.994 | 9.083 | 22.291 |
| Longterm debt \(LTD_t/A_t\) | 827 | 0.084 | 0.135 | 0.000 | 0.943 |
| Profitability \(E_t/Sales_t\) | 732 | 0.125 | 0.489 | -2.936 | 0.988 |
| Ownership concentration (%) | 791 | 53.328 | 19.453 | 8.754 | 99.000 |

Table 3 presents the results from our regression analysis. We employ a generalized least squares approach (random effects model, the results of which are reported in columns 1 and 2). We also employ a generalized method of moments (GMM) approach in order to deal with endogeneity problems. These results are

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20 The Hausman test indicated that the null hypothesis of both estimation methods, yielding similar coefficients, was not rejected. Therefore, we used the random effects model as it produced more efficient estimators.

21 As the random effects model does not exclude the possibility of autocorrelation, we employed Jeffrey M. Wooldridge’s (2002) test for first order autocorrelation. Consequently, we adjusted the model to allow an estimation of a linear model with AR(1) disturbance (in line with Cantarero and Lago-Penas 2010).

22 We employ the Arellano-Bond approach.
reported in columns 3 and 4 of Table 3. Table 3 shows that bank loans have a large positive effect on Tobin’s Q. The variable has a coefficient of 2.379 and 1.408 in columns 1 and 2, respectively, and a coefficient of 2.614 and 1.596 in columns 3 and 4. The variable is also statistically significant at the 1.0-percent level in all regressions. These strong results lend support to the view that larger flows of long-term subsidized debt produce a higher long-term performance rate. Although, following Michael Jensen (1986), we might argue that high-debt levels serve as a monitoring tool through which long-term corporate performance can be enhanced. However, this argument may be more suited to more sophisticated capital markets, where large amounts of private corporate debt instruments are frequently traded. This is not a good description of Russia’s financial markets, particularly during the period from 1998 to 2007.23 Our results are more consistent with Kirdina and Vernikov’s (2013) hypothesis, arguing that the state has been traditionally involved in channeling funds to investment projects, as well as contributing to liquidity creation in Russia.

Table 3. Effect of Bank Loans on Firms’ Tobin’s Q

| Variable                  | TQ1       | TQ2       | TQ1 (GMM)  | TQ2 (GMM)  |
|---------------------------|-----------|-----------|-----------|-----------|
| Bank loan                 | 2.379***  | 1.408***  | 2.614***  | 1.596***  |
|                           | (0.394)   | (0.395)   | (0.259)   | (0.252)   |
| Size                      | -0.006    | -0.010    | -0.129*** | -0.085**  |
|                           | (0.034)   | (0.034)   | (0.044)   | (0.042)   |
| Profitability             | 0.016     | -0.001    | 0.026**   | 0.029***  |
|                           | (0.014)   | (0.004)   | (0.011)   | (0.011)   |
| Ownership concentration   | 0.012***  | 0.012***  | 0.008***  | 0.007***  |
|                           | (0.003)   | (0.003)   | (0.002)   | (0.002)   |
| Firm longevity            | -0.820*** | -0.828*** |           |           |
|                           | (0.156)   | (0.156)   |           |           |
| TQ(L1)                    |           |           | 0.346***  | 0.285***  |
|                           |           |           | (0.077)   | (0.093)   |
| Constant                  | 1.010*    | 0.673     | 1.881**   | 1.455**   |
|                           | (0.551)   | (0.550)   | (0.923)   | (0.658)   |
| No. of observations       | 1189      | 1189      | 780       | 780       |
| R²                        | 0.158     | 0.157     |           |           |
| Wald chi² value           | 221.95*** | 227.39*** | 233.40*** | 190.26*** |

Note: *, ** and *** denote significance at the 10, 5.0, and 1.0 percent levels, respectively.

From Table 3 we cannot clearly determine the effect of a firm’s size on its long-term performance. However, the findings in column 3 and 4 suggest that firm size has a slight negative effect on Tobin’s Q. Perhaps it can be argued that while company assets can generate higher earnings, they can also be subject to higher hold-up costs in an economy fraught with a weak property rights system.

23 See Pascal Alphonse, Jacqueline Ducret, and Eric Severin (2006).
A number of studies have found a positive effect on the long-term performance of firms due to enhanced book-value profitability. Higher book-value profitability is typically associated with positive earnings announcements (Barberis, Shleifer and Vishny 1998; Daniel, Hirshleifer and Subrahmanyam 1998). In our case, Table 3 shows that the effect of book-value profitability is very small and the variable is statistically significant in columns 3 and 4 only. Thus, there appears to be no strong relationship between a firm’s profitability and its Tobin’s Q. Our results agree with many other studies that concentrate on developing economies. Typically, such studies fail to find any significant positive effect of positive earnings announcements on Tobin’s Q proxies (DeFond, Hung and Trezevant 2007).

Our findings also suggest that the degree of ownership concentration, which are significant at the 1.0-percent level, has only a slightly positive effect on a firm’s Tobin’s Q. For example, the magnitude of variable coefficient ranges from 0.007 to 0.012. Although our results are generally consistent with findings on other developing economies (Joh 2003), it is important to recall that Russian companies have high ownership concentration ratios. Consequently, in the Russian case at least, the positive effect on Tobin’s Q may be a consequence of an ownership type rather than the concentration of capital ownership per se.

Finally, our results show that in the first two columns a firm’s Tobin’s Q is adversely affected by firm longevity. The longevity parameter estimate is both large and significant. At first, such findings may appear unsurprising, as “old” firms tend to exhaust their growth opportunities (Evans 1987a, 1987b; Variyam and Kraybill 1992). However, over the sample period, many “old” Russian enterprises received substantial investment funds. This phenomenon can be rationalized by the fact that the longer-existing firm dummy may have been adversely impacted by the earlier, unsuccessful privatization initiative.

As it is widely accepted that rising oil prices had a significant impact on the Russian economy, we introduce the oil price variable, acting as a macroeconomic variable, into our regression (columns 1 and 2 of Table 4). Unsurprisingly, with average coefficient value of 1.268, the variable is large in magnitude, and it is statistically significant at the 1.0-percent level. Nevertheless, we also note that the inclusion of this variable in our regression does not lead to alternative results produced for the key variable in that the bank loan coefficient still has a large magnitude and is statistically significant at 1.0-to-5.0 percent level.

We are interested in the extent of transfers of natural resource rents marshalled into other economic sectors, and in comparing the long-term performance of energy-sector firms with that of firms located in other industries. Figure 1 shows that Russia’s energy sector firms have a high value, evidenced by a Tobin’s Q rising rapidly from 2000 to 2006–2007. Yet, from Figure 2, we can see over the period that there is also an increasing discrepancy between energy firms’ revenues and their final profits over

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24 The firm longevity variable is dropped from the regression output due to fixed effects being omitted from the Arellano-Bond estimation in columns 3 and 4.
the sample period (1998–2007). This is particularly evident during the early Putin regime, where rapidly increasing sales were combined with falling profits. Such a widening "gap" infers that an extensive proportion of gains at that time were being redirected to other important industries, consistent with the government’s stated aim to broaden Russia’s overall economic base (Butt et al. 2008).

Table 4. Effect of Energy Rents on Firms’ Tobin’s Q

| Variable               | TQ1 (1)      | TQ2 (1)      | TQ1 (2)      | TQ2 (2)      |
|------------------------|--------------|--------------|--------------|--------------|
| Bank loan              | 1.855***     | 0.880**      | 2.379***     | 1.407**      |
|                        | (0.382)      | (0.382)      | (0.394)      | (0.395)      |
| Size                   | -0.052       | -0.036       | -0.017       | 0.001        |
|                        | (0.034)      | (0.033)      | (0.036)      | (0.035)      |
| Profitability          | 0.012        | 0.001        | 0.017        | -0.001       |
|                        | (0.014)      | (0.004)      | (0.014)      | (0.004)      |
| Ownership concentration| 0.003        | 0.003        | 0.012***     | 0.012**      |
|                        | (0.002)      | (0.003)      | (0.003)      | (0.003)      |
| Firm longevity         | -0.377**     | -0.386**     | -0.822***    | -0.830***    |
|                        | (0.159)      | (0.157)      | (0.157)      | (0.156)      |
| Oil price              | 1.252***     | 1.284***     |
|                        | (0.117)      | (0.116)      |
| Energy sector          |              |              | 0.230        | 0.222        |
|                        |              |              | (0.246)      | (0.248)      |
| Constant               | -2.830***    | -3.239***    | 1.149**      | 0.804        |
|                        | (1.337)      | (0.643)      | (0.570)      | (0.569)      |
| No. of observations    | 1189         | 1189         | 1189         | 1189         |
| R²                     | 0.164        | 0.161        | 0.159        | 0.159        |
| Wald chi² value        | 240.25***    | 241.95***    | 224.11***    | 229.62***    |

Note: *, ** and *** denote significance at the 10, 5.0, and 1.0 percent levels, respectively.

Columns 3 and 4 of Table 4 report our findings after we have included an energy sector dummy variable in the regressions. Table 4 shows that the energy sector dummy is insignificant, indicating that energy firms do not necessarily enjoy higher Tobin’s Q over firms located in other industries. Thus, it appears that energy sector firms were unable to capture increasing economic rents generated by rising world prices of oil and gas during this period from 1998 to 2007, which is consistent with the state’s objectives to collect and redistribute energy profits to other sectors (Locatelli 2006).

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25 We do not have complete profit data for 1998.
26 Note that private investors do not face expropriation as the energy firm dummy does not have a negative impact on Tobin’s Q.
The Role of Emerging Financial Institutions

We argue that Russian financial institutions primarily perform as conduits for state-sponsored loans to chosen firms in preferred industries. Consequently, we are interested in whether a firm enjoys a stable and favorable access to a flow of subsidized funds. As noted above, the presence of a prominent state-financial
institution, rather than simply a political patronage, might subject a firm to central-state monitoring to better assure a more appropriate allocation of its investment portfolio. Table 5 lists the number of financial institutions registered as major shareholder of firms. It shows that this number increased from twelve in 1998 to ninety-eight in 2007, with the number of state financial institutions exhibiting a continuous upward trend.

Table 5. Number and Type of Financial Intermediaries Registered as Firms’ Major Shareholder for Companies Trading on RTS during 1998–2007

| Year | No. of firms with non-state financial intermediary as a largest shareholder | No. of firms with state-influenced financial intermediary as a largest shareholder | Total no. of firms with financial intermediary as a largest shareholder |
|------|-----------------------------------------------------------------|-----------------------------------------------------------------|-----------------------------------------------------------------|
| 1998 | 11                                                             | 1                                                               | 12                                                             |
| 1999 | 18                                                             | 5                                                               | 23                                                             |
| 2000 | 26                                                             | 8                                                               | 34                                                             |
| 2001 | 28                                                             | 14                                                              | 42                                                             |
| 2002 | 35                                                             | 13                                                              | 48                                                             |
| 2003 | 53                                                             | 19                                                              | 72                                                             |
| 2004 | 60                                                             | 17                                                              | 77                                                             |
| 2005 | 57                                                             | 20                                                              | 77                                                             |
| 2006 | 51                                                             | 36                                                              | 87                                                             |
| 2007 | 49                                                             | 49                                                              | 98                                                             |

There is strong evidence in other economies that the presence of a financial institution on shareholder boards produces a positive effect on corporate value. This is particularly the case in countries (notably Germany and Japan), where financial intermediaries with large equity holdings play a significant corporate governance role. For example, Gary Gorton and Frank A. Schmid (2000) find a positive relationship between bank control rights stemming from equity ownership and improved firm performance in Germany. Furthermore, Steen Thomsen and Torben Pedersen (2000) find that European firms that have strong ownership ties to financial institutions, as measured by market-to-book ratios, also tend to have a higher shareholder value. Stijn Claessens, Simeon Djankov, and Gerhard Pohl (1997) examine a voucher privatization scheme in the Czech Republic. They find that ownership, stemming from bank-sponsored funds, also generates higher corporate profit. But the above comparisons may not be relevant in the Russian case because the state has an overwhelming grip on the financial sector, as noted above. Nevertheless, the relationship remains of interest, and we expect a positive effect on long-term performance when we find a financial-intermediary presence on corporate boards.

In Table 6, we report our results. As expected, the presence of a financial institution on a firm’s shareholder board has a positive effect on that firm’s long-term performance, where the variable coefficient has an average value of 0.228, with a statistical significance ranging between the 1.0 and 10 percent. More importantly, Table 7 shows that the presence of a state-financial institution has an even more
dramatic impact on a firm’s Tobin’s Q, where the coefficient of this variable has a value range of 0.236-0.506, with increased level of significance.\footnote{When we applied the difference of means test we determined that the two means are significantly different from each other at the 1.0-percent significance level.} These results support our hypothesis that financial intermediaries act as conduits for state-sponsored loans to industries, but perhaps more importantly, support our view that state-financial institutions perform a positive role in enhancing corporate performance. Our findings are also consistent with Kirdina and Vernikov (2013), who believe that the lending of state banks brings positive financial results.

Table 6. Effect of the Financial Institution Shareholder on Firms’ Tobin’s Q

| Variable                  | TQ1       | TQ2       | TQ1 (GMM)  | TQ2 (GMM)  |
|---------------------------|-----------|-----------|------------|------------|
| Financial institution     | 0.270**   | 0.314***  | 0.134*     | 0.192***   |
|                           | (0.115)   | (0.114)   | (0.070)    | (0.068)    |
| Bank loan                 | 2.416***  | 1.453***  | 2.568***   | 1.540***   |
|                           | (0.394)   | (0.395)   | (0.260)    | (0.251)    |
| Size                      | -0.010    | 0.006     | -0.142***  | -0.104**   |
|                           | (0.034)   | (0.034)   | (0.044)    | (0.043)    |
| Profitability             | 0.017     | -0.001    | 0.025**    | 0.028***   |
|                           | (0.014)   | (0.004)   | (0.011)    | (0.010)    |
| Firm longevity            | -0.804*** | 0.809***  |            |            |
|                           | (0.158)   | (0.157)   |            |            |
| Ownership concentration   | 0.012***  | 0.012***  | 0.007***   | 0.006***   |
|                           | (0.003)   | (0.003)   | (0.002)    | (0.002)    |
| TQ (L1)                   | 0.347***  | 0.405***  |            |            |
|                           | (0.077)   | (0.089)   |            |            |
| Constant                  | 1.017*    | 0.692     | 2.318***   | 1.702*     |
|                           | (0.554)   | (0.553)   | (0.677)    | (0.660)    |
| No. of observations       | 1189      | 1189      | 780        | 780        |
| R²                        | 0.157     | 0.155     |            |            |
| Wald chi² value           | 219.57*** | 223.65*** | 243.49***  | 206.62***  |

Note: *, ** and *** denote significance at the 10, 5.0, and 1.0 percent levels, respectively.

Robustness Checks

As we stated above, although the Hausman test suggests that the random effects model is appropriate for our study, we also employ the fixed effects model as a robustness check. The latter controls for the possibility that the selected companies may be favored by financial institutions or the central government. We report our results in Table 8. As evident from the fact that the magnitude of all variables has increased, it can be seen — if anything — that the presence of a financial institution or
Table 7. Effect of the State Financial Institution Shareholder on Firms’ Tobin’s Q

| Variable                  | TQ1       | TQ2       | TQ1 (GMM)  | TQ2 (GMM)  |
|----------------------------|-----------|-----------|------------|------------|
| State financial institution| 0.492***  | 0.506***  | 0.236**    | 0.273**    |
|                           | (0.096)   | (0.098)   | (0.121)    | (0.128)    |
| Bank loan                 | 2.284***  | 1.310***  | 2.686***   | 1.670***   |
|                           | (0.392)   | (0.393)   | (0.262)    | (0.249)    |
| Size                      | -0.017    | -0.0004   | -0.135***  | -0.099**   |
|                           | (0.034)   | (0.034)   | (0.045)    | (0.043)    |
| Profitability             | 0.018     | -0.0004   | 0.025**    | 0.029***   |
|                           | (0.014)   | (0.004)   | (0.011)    | (0.010)    |
| Firm longevity            | -0.798*** | -0.808*** |           |            |
|                           | (0.157)   | (0.157)   |           |            |
| Ownership concentration   | 0.012***  | 0.012***  | 0.008**    | 0.007***   |
|                           | (0.003)   | (0.003)   | (0.002)    | (0.002)    |
| TQ (L1)                   |          | 0.351***  | 0.379***   |            |
|                           |          | (0.077)   | (0.086)    |            |
| Constant                  | 1.008***  | 0.667     | 2.197***   | 1.446      |
|                           | (0.552)   | (0.551)   | (0.692)    | (0.665)    |
| No. of observations       | 1189      | 1189      | 780        | 780        |
| R²                        | 0.165     | 0.164     |            |            |
| Wald chi² value           | 234.36*** | 239.46*** | 236.50***  | 194.65***  |

Note: *, ** and *** denote significance at the 10, 5.0, and 1.0 percent levels, respectively.

Table 8. Effect of Bank Loans and the Financial Institution Shareholder on Firms’ Tobin’s Q

| Variable                  | TQ1 (2) FE | TQ2 (2) FE | TQ1 (1) FE | TQ2 (1) FE |
|----------------------------|------------|------------|------------|------------|
| Financial institution     | 0.522***   | 0.561***   |            |            |
|                           | (0.135)    | (0.135)    |            |            |
| State financial institution|           |            | 0.688***   | 0.718***   |
|                           |            |            | (0.119)    | (0.119)    |
| Bank loan                 | 3.307***   | 2.319***   | 3.152***   | 2.145***   |
|                           | (0.470)    | (0.454)    | (0.466)    | (0.466)    |
| Size                      | -0.337***  | -0.309***  | -0.352***  | -0.322***  |
|                           | (0.069)    | (0.068)    | (0.069)    | (0.068)    |
| Profitability             | 0.037      | -0.001     | 0.040      | -0.001     |
|                           | (0.026)    | (0.004)    | (0.025)    | (0.004)    |
| Ownership concentration   | 0.014***   | 0.014***   | 0.014***   | 0.014***   |
|                           | (0.003)    | (0.003)    | (0.003)    | (0.003)    |
| Constant                  | 5.286***   | 4.773***   | 5.367***   | 5.804***   |
|                           | (1.070)    | (1.056)    | (1.048)    | (1.043)    |
| No. of observations       | 1189       | 1189       | 1189       | 1189       |
| R²                        | 0.054      | 0.045      | 0.053      | 0.050      |
| F-test                    | 25.60***   | 23.78***   | 25.31***   | 25.30***   |

Notes: *, ** and *** denote significance at the 10, 5.0, and 1.0 percent levels, respectively.
a state-owned financial institution’s shareholder has an even bigger effect on a firm’s long-term performance. The magnitude of the bank-loan variable coefficient has also increased to an average of 2.731. We note a more pronounced negative effect of the size variable and a slightly increased positive effect of ownership-concentration variable. Finally, we can see that the \( R^2 \) values decline, suggesting that the model is a poor fit. Overall, we show that our results are robust in supporting the hypothesis that during the period from 1998 to 2007 the Russian state was successful in directing and monitoring subsidized investment funds for the purpose of enhancing corporate development.

**Conclusion**

We looked at possible reasons for the reversal of fortune enjoyed by Russian corporations from the late 1990s to 2007. We argued that there is a strong parallel between the corporate policies of the current regime and the Tsarist regime from the end of the nineteenth century to WWI. Both periods serve as examples of Gerschenkron’s catch-up theory. We argued that the later was necessary due to a high propensity of investor-managers to strip companies of assets. Consequently, state control over the banking sector, and thereby control over the flow of subsidized investment funds, is a necessary second-best policy response when effective investor protection laws are absent.

Our finding agree with the typical view that corporate recovery in Russia during our sample period is, in large part, attributable to fortuitously improved terms of trade earnings due to higher oil prices worldwide. But we found that this explanation is incomplete as it fails to answer why the flow of funds from the energy sector, in contrast to earlier times, was successfully utilized at the corporate level. We also find that, in our sample period, the regime was able to capture most of the rents stemming from the energy sector. As we said before, this was accomplished by the central state’s – under the 1992 Subsoil Act – becoming the sole supplier of patent granting extraction rights. The state also passed other laws that enhanced its bargaining power over both foreign and domestic extraction companies.

We also find that after the banking system was substantially reformed and brought under central state control, either through direct ownership or through other means, it was able to more successfully channel funds to targeted investment projects. Our results show that the presence of bank loans has a strong effect on the long-term performance of firms. For example, we picked up a positive effect of a financial institution shareholder, which can signal a continuous flow of subsidized loans. Furthermore, this effect is stronger if the financial institution is partially or wholly state-owned, and state coownership appears to act as an additional monitoring mechanism against the diversion of funds.

Our analysis recognized the historical role of the Russian state in forcing both the path and speed of the economy’s industrialization. The industrializing impetus of the present regime directs the pattern of industrialization to politically favored industrial sectors, with subsidies derived from natural-resource export earnings rather
than from agriculture, as was the case in the late Tsarist and Stalinist eras. But as the present Russian economy also lacks a free market system, so it might similarly suffer from allocational inefficiencies. As Gerschenkron’s catch-up hypothesis allows technology to be easily borrowed in a free market, when the necessary prerequisite institutions have evolved, the question is: Can such institutions in Russia eventually evolve? Other developing economies have managed to do so successfully. Gerschenkron, as noted above, believed that a large motivation of the Tsarist and Stalinist regimes was to bolster their military capability. He also believed that this consideration had – when combined with economic backwardness – undermined the possibility of a western-style economy. Perhaps a similar rationale lies behind the present regime’s motivation for its own version of state-directed industrialization. If so, this would provide an answer as to why Russia fits neatly into Kirdina and Vernikov’s (2013) institutional matrix as an ideal example of a non-market economy.

The path of Russian corporate and economic progress depends on the answer to this question. Thus, a future study on what industries are most favored in Russia would help. However, we would also like to extend our study to encompass a more comprehensive understanding of the nature of Russian corporations, particularly in regards to their use of other funds and their dividend payout policies. Finally, there is the issue of political stability of the coalition of oligarchs. These extensions are all the more important given the more recent swings in the business cycle in Russia.

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