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# Are Russian Commercial Courts Biased? Evidence from a Bankruptcy Law Transplant\*

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## **Abstract:**

We study the nature of judicial bias in bankruptcy proceedings following the enactment of the 1998 bankruptcy law in Russia. The two main findings are as follows. First, regional political characteristics affected judicial decisions about the number and types of bankruptcy proceedings initiated after the law took effect. Controlling for indicators of firms' insolvency and the quality of the regional judiciary, re-organization procedures were significantly more frequent in regions with politically popular governors and governors who had hostile relations with the federal center. Poor judicial quality was also associated with higher incidence of re-organizations. Second, the quality of the regional judiciary affected performance of firms under the re-organization procedure: in regions with low quality judges, firms that were re-organized according to the 1998 law had significantly lower growth in sales, labor productivity, and product variety compared to firms not subject to bankruptcy proceedings. In contrast, in regions with high quality judges, firms in re-organization outperformed firms not in bankruptcy proceedings. This effect of judicial quality on the performance of re-organized firms was stronger when governors were politically popular. These findings are consistent with the view that politically strong governors subverted enforcement of the 1998 bankruptcy law.

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## 1. Introduction

Laws and regulations that may be appropriate for a well-developed market economy might bring unexpected outcomes when transplanted into an emerging market. The performance of legal rules depends upon the environment in which they are applied. The enforcement and application of legal rules can be subverted by powerful actors who have political influence over law enforcers (Glaeser, Scheinkman, and Shleifer, 2003). In addition, law enforcers themselves may have career concerns or preferences for fairness and social justice that drive them to apply the law differentially rather than in a consistent and predictable manner (Gennaioli and Shleifer, 2005, Maskin and Tirole, 2004, Spiller and Gely, 2006). Enactment of Russia's 1998 bankruptcy law provides a useful setting for studying mechanisms behind poor law enforcement. Prior to the enactment of the law, there was virtually no bankruptcy institution. As a result, many firms had accumulated tax arrears and overdue debts and were candidates for bankruptcy after the enactment of the 1998 law. A very small fraction of them, however, actually went bankrupt. The selective application of the law allows us to study the biases in law enforcement.<sup>1</sup> The results help in drawing general lessons on how to transplant legal rules and design them from scratch in emerging markets.

The main goals of Russia's 1998 bankruptcy law were to restructure or close down (if restructuring was not possible) loss-making enterprises and to provide creditors with an effective tool for debt recovery. In 1997, the share of loss-making enterprises in Russia was about 50% and total overdue loans and taxes amounted to 30% of GDP, of which overdue tax liabilities to the consolidated budget were about 7% of GDP (Goskomstat, 1999). The law had been drafted according to the most recent academic standards (e.g., EBRD, 2000a, 2000b; Black and Kraakman, 1996; La Porta et al., 1998). The EBRD (2000b) stated:

*"If applied, consistently within the language of the law, the Russian [insolvency] system may result in the same or greater recovery for a secured creditor than results from many Western systems. ...it could be argued that the Russian bankruptcy system adequately addresses the creditors' bargain and common pool issues..."*<sup>2</sup>

Yet, the law failed to achieve the intended goals. After its enactment, recovery rates remained low and restructuring was sluggish. According to Goskomstat (2001), even after the full recovery from the 1998 crisis the share of Russian loss-making enterprises in 2000 was above 37% and bankruptcy

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<sup>1</sup> Berglof, Rosenthal, and von Thadden (2001) note that "the most striking feature of Russian bankruptcy law, and of Russian corporate law in general, is the enormous discrepancy between laws on the book and the laws as they are enforced" (see also Pistor, Raiser, and Gelfer, 2000).

<sup>2</sup> In addition, Michelle Camdessus, the Managing Director of the International Monetary Fund, stated in his address at the U.S.-Russia Business Council on April 1, 1998: "A new bankruptcy law [...] – though not perfect – should provide a powerful tool for enforcing tax compliance and hard budget constraints."

was initiated against no more than 2% of insolvent firms. The World Bank reports that recovery rates remained below 50% in 2004 (Doing Business, World Bank, 2005).

This paper sheds light on the reasons behind poor law enforcement. Using firm-level data, we find evidence that powerful regional governors in Russia used their influence over judges to subvert the 1998 bankruptcy law. In particular, the political strength of regional governors and their relationship with the federal authorities were the major determinants of the number and type of bankruptcy proceedings initiated by regional commercial courts after the enactment of this law. In addition, in regions with poor quality of courts, the political strength of regional governors had a significant effect on performance of firms in re-organization proceedings.

The fact that the governors managed to affect outcomes of bankruptcy proceedings is an interesting and, to some extent, unexpected finding. Regional governors were competing for influence over law enforcers with a wealthy and powerful coalition of Moscow-based banks owned by Russian “oligarchs” and the federal government. Moscow banks and the federal government were the main creditors of Russian firms at the time.<sup>3</sup> The federal government was primarily concerned with collecting federal tax arrears whereas the oligarchic banks were interested in gaining control over non-paying enterprises in addition to simple debt recovery. In contrast, regional governors, often in coalition with incumbent managers of firms, were interested in keeping financial resources and control over assets in their own hands. The federal government, had it been politically strong, would have had means of influence over both the regional governors and judges. Nonetheless, a large body of anecdotal evidence (e.g., Black et al., 2000; Moss, 2000; Volkov, 2004) suggests that the regional governors’ political control over the judiciary allowed them to leave the federal government and oligarchs empty-handed.<sup>4</sup> Our findings are consistent with this anecdotal evidence.

Volkov (2004) describes how the 1998 bankruptcy law was subverted. The regional governors used the re-organization procedure from this law to protect their regional enterprises from paying taxes to the federal government and also from paying their debts to Moscow-based banks. The automatic stay on assets provision was used to freeze their claims. In many cases, the incumbent managerial team remained in control over the firms under re-organization despite the fact that the law prescribed giving full control to a bankruptcy practitioner appointed upon creditors’ approval. Formally, in these cases the top manager was replaced by his/her closest ally. In some instances,

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<sup>3</sup> The banks based in Moscow (which is one of the 89 Russia’s regions) supplied 45% of total credit to the Russian economy in 1997 and 44% in 1998.

<sup>4</sup> Federal tax arrears were growing throughout the 1990s. In the beginning of 1998, they reached 5% of Russia’s GDP. Cai and Treisman (2004), Sonin (2003), and Ponomareva and Zhuravskaya (2004) discuss theory and evidence of regional governors’ protection of firms from paying federal taxes. Shleifer and Treisman (2000) discuss the reasons and the consequences of federal government’s political weakness.

however, the incumbent management team was replaced by managers who had closer ties with the regional governor. Presumably, this happened when the incumbent managers and the governors did not agree on the terms of sharing the rents from expropriation of creditors. In addition, in some circumstances judges had the power to prolong re-organization proceedings for the so-called “socially important” enterprises for up to 10 years. This clause in the law was often used to maintain the status quo for years. The managers with close ties to regional governors stayed in control, while the federal government and the Moscow-based banks could not recover their claims. Irrespective of what happened to the incumbent management, the bias of bankruptcy court judges towards regional political powers undermined bankruptcy as an institution that protects creditor rights.

Why are regional commercial courts so dependent on regional governors? Judges depend on regional authorities in their career prospects and to a large extent courts depended on regional financing (e.g., Solomon and Trochev, 2005 and Trochev, 2006). Appointments of regional judges required approval of regional authorities. Despite the introduction of life tenure in 1992, several regions continued the practice of having five-year term appointments for judges. After retiring, these judges often continued to work in regional administrations and regional state enterprises as lawyers. Anecdotal evidence also suggests that there is virtually no inter-regional or vertical mobility among the lowest-tier commercial judiciary. Judicial dependence on regional authorities is an example of a more general phenomenon; Stoner-Weiss (2006) describes it as follows: “...Regional and local officials lacking official jurisdictional authority assumed significant responsibilities over federal agents posted in the provinces” (p. 87).

The best-known example of the dependence of commercial court judges on regional political elites was the bankruptcy proceedings of the oil holding Sidanko and its key subsidiaries Chernogoneft and Kondopetroleum in 1999. During the Chernogoneft bankruptcy proceedings, 98% of the creditors voted for a certain bankruptcy practitioner, but the judge overruled their decision and appointed a different candidate connected to another oil company, Tyumen Oil. The court also rejected the offer by Chernogoneft, already in bankruptcy, to pay all creditors in full. Incidentally, the Tyumenskaya Oblast Governor, Leonid Roketsky, happened to be the Chairman of the Board at Tyumen Oil. The latter bought Chernogoneft for \$176 million and Kondopetroleum for \$52 million (a small fraction of the actual market value). Black, Kraakman, and Tarasova (2000) wrote: “Apparently, [...] Tyumen Oil didn't merely bribe judges (Sidanko could have offered its own bribes), but threatened them as well...” The *Economist* (Dec. 4, 1999) wrote that according to allegations of one of the competitors of Tyumen Oil, the company intimidated judges. Sidanko complained that: “If they just stuck to bribing judges, we could play that game too.”

The evidence is not confined to the Tyumen oblast. The so-called Governor's Off-Budget Fund, formed in 1997 in Kemerovskaya oblast, provides another example of well-established political ties between regional governors and large firms, on the one hand, and commercial court judges, on the other. According to the national Russian daily *Izvestia* (September 16, 1999), a deeply-troubled West-Siberian metallurgy firm (ZapSib, Kemerovo's biggest steel plant), despite being in the middle of bankruptcy proceedings, regularly contributed to the governor's fund with the consent of the judge while accumulating large federal tax arrears. Such contributions are a direct violation of the law. Under the governor-controlled re-organization proceedings, the company's debts increased to about \$400 million from \$130 million.<sup>5</sup>

In this paper, we provide systematic evidence that the application of the law was indeed biased in favor of regional authorities. Our empirical strategy is twofold. First, we look at how the initial (i.e., taken before the enactment of the new law) regional factors influenced the probability of a firm to fall into either the re-organization or the liquidation proceedings after the enactment of the law, holding the level of firms' financial health constant. We find that re-organization procedures were more frequently initiated against firms in regions with politically strong governors (who exercised control over courts more easily) and in regions with a higher degree of political independence from the federal center (which made it less politically costly for the governors to expropriate federal tax revenues). In contrast, liquidation procedures were less frequently initiated against firms in regions with a high degree of political independence from the federal center.

Second, we test whether firms that found themselves in re-organization procedures after the enactment of the law restructured as dictated by the law or did not, as the story of bankruptcy subversion by regional governors would suggest. We find that firms that were re-organized according to the 1998 law had significantly lower growth in sales, labor productivity, and product variety when they were located in regions that had low quality judges. In stark contrast, re-organized firms outperformed firms that were not subject to bankruptcy in regions that had high quality judges. The data on quality of regional courts do not allow us to differentiate directly between poor-quality judges who make random mistakes (e.g., because of low skills) and poor-quality judges whose decisions have a systematic bias in favor of a particular party (e.g., regional governors). Yet, we find that the effect of judicial quality on performance of firms in re-organization was stronger in regions that had politically popular governors. Under the assumption that the bias in favor of regional governors increases with governor's political popularity, the evidence suggests that a higher bias

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<sup>5</sup> "Using Bankruptcy As a Takeover Tool: Russian Law Puts Healthy Companies at Risk," *New York Times*, October 7, 2000.

leads to worse performance of firms in re-organization. These findings are consistent with the view that politically strong governors subverted enforcement of the 1998 bankruptcy law.

Our main contribution is to the empirical literature on the economics of judicial bias. (Spiller and Gely, 2006, provide a recent survey of the extensive and burgeoning literature. See also Iaryczower et al., 2002, who consider the problem of judicial independence in Argentina, and Ramseyer and Rasmusen, 1997, whose focus is on Japan.) In contrast to the existing literature, our paper stresses the importance of judicial politics in the environment where there is a vertical conflict in the federal system. We show that judicial politics plays an important role in how federal systems function; in particular, our findings suggest that power of the regions over judiciary may impede federal tax collection system. Thus, we link two literatures: the literature on judicial decision making (Spiller and Gely, 2006) and the literature on fiscal federalism (e.g., Qian and Weingast, 1997; Spiller and Tomassi, 2003; Filippov et al., 2003). We document that the regional governments' political control over regional judiciary was used as a tool for redistributing tax revenue from the federal center to the regions in Russia.<sup>6</sup> For the literature on fiscal inter-governmental relations in Russia, see Shleifer and Treisman (2000), Sonin (2003), Cai and Treisman (2004), Zhuravskaya (2000), and Ponomareva and Zhuravskaya (2004).

Our paper also contributes to the literature on legal transplantation (i.e., Berkowitz, Pistor, and Richard, 2003a, 2003b; Pistor, Raiser, and Gelfer, 2000) by analyzing the consequences of the enactment of a particular legal transplant. We also contribute to the literature on comparative bankruptcy law by analyzing the workings of law enforcement in different institutional environments (see, for instance, Aghion, Hart, and Moore, 1992; Hart, 2000; Bolton, 2002; Ayotte and Yun, 2003; Povel, 1999; World Bank, 2004, 2005; Berkovitch and Israel, 1999; Claessens and Klapper, 2005; Djankov, McLiesh, Shleifer, 2006; Djankov, Hart, McLiesh, and Shleifer, 2006).

Our analysis also suggests that in emerging markets it may be worthwhile to give up some sophisticated features of the law, including judicial discretion, to achieve implementation of the law's basic objectives. This conclusion provides support to the findings of the World Bank's (2005)

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<sup>6</sup> Our findings about the political and, as a consequence, fiscal weakness of the federal center in Russia in the 1990s parallel Spiller and Tomassi's (2003) description of Argentina, where electoral rules make regional governors and party bosses the dominant political force in their regions. As in Russia, the federal center in Argentina has a limited capacity to control governors through budgetary means because of the overly rigid and non-transparent federal tax system. It is worth noting that administrative structures in the two countries (before the Putin's federalism reform of 2004 in Russia) were such that the federal center did not have a direct administrative control over regional governors. (For the ineffectiveness of budgetary means at the center's disposal in influencing regional policies in Russia, see Treisman, 1998, 1999.)

*Doing Business* report that judicial discretion leads to inferior outcomes in countries with weak institutions.

The rest of the paper is organized as follows. Section 2 describes the institutional background and presents details of the bankruptcy legislation as well as basic statistics. Section 3 describes the results of our econometric analysis. Section 4 concludes.

## **2. Institutional Background**

### 2.1. Commercial courts

In Russia, bankruptcy cases are decided by commercial (“*Arbitrazh*”) courts. In 1991, Russia entered economic transition with “*Gosarbitrazh*”, a state judicial organ. Before transition, the main operating objective of *Gosarbitrazh* was to enforce economic plans and the direct political command rather than the law, which often was not even taken into consideration (Hendley, 1999). In 1991, judicial reform transformed *Gosarbitrazh* into a commercial court system with the mission to resolve business disputes. Therefore, the same *Gosarbitrazh* judges within essentially the same courts were expected to depoliticize and use the law to deal with private parties seeking redress for the breach of contract by the state or other private parties. The most commonly considered cases by commercial courts have been contractual disputes; tax disputes between firms and the federal government; disputes over ownership of property and use of land; antitrust, environmental and customs regulation; and questions concerning registration, licensing and certification. The next most common type of case considered in commercial courts has been bankruptcy proceedings. (See Hendley, 1999, for a detailed information on the dynamics of caseload.)

Since 1995, Russian commercial courts have been organized into a three-tier system. There are 81 courts of first instance (i.e., regional courts created on the basis of regional branches of *Gosarbitrazh*), ten appellate courts, and one Higher Arbitrazh Court, which is the commercial court of last instance.

It is important for our story that the law requires the plaintiff to file a suit in the commercial court of the first jurisdiction (regional court) of the region, where the defendant is officially registered. This prevents competition between different regional courts (see, for instance, Shvets, 2005). The jurisdiction of each of the regional courts coincides with the administrative borders of their respective regions.

The ties between judges and regional authorities in many regional courts have been very strong throughout the second half of the 1990s. First, since 1995, judicial appointments required the consent of regional authorities. Formally, all nominations to the position of judge in regional



commercial courts (done by the qualifying committee of judges) are approved by the regional legislative assembly, which in many regions is under political control of the governor (e.g., Trochev, 2004; see also Shvets, 2005, for an extensive description of the formal procedure.) Second, despite the fact that the law requires commercial courts to be financed only from the federal budget, anecdotal evidence suggests that the lack of federal financing led to a common situation in which regional governments covered a large part of courts' expenses from the regional budgets and even supplemented judges' salaries.<sup>7</sup>

There is no agreement in the literature about the quality of Russian commercial courts. On the one hand, Hendley, Murrell, and Ryterman (2001) argue that the commercial court system is less corrupt relative to other institutions in Russia. They provide some evidence based on a survey of Russian entrepreneurs that commercial court judges are regarded as having high ethical standards.<sup>8</sup> In addition, Hendley (1999) argues that there are relatively small delays in commercial court hearings. On the other hand, Black and Tarasova (2000) make the case that commercial courts in Russia are very corrupt and have almost no experience in dealing with complicated business cases. Black and Kraakman (1996) and Hay and Shleifer (1998) discuss evidence of frequent severe delays in court hearings. This paper sheds some light on this debate by providing evidence of inefficient and unfair treatment of bankruptcy cases by Russian commercial courts.

## 2.2. Bankruptcy legislation

Russia has had bankruptcy legislation since November 1992. There is agreement that the 1992 bankruptcy law was quite ineffective: between 1992 and 1998, very few companies went bankrupt (Thompson, 2003). The failure of this law to bring about financial discipline was due to the limited scope of its application and excessively complicated procedures. In order to initiate a bankruptcy procedure according to the 1992 law, the total amount of outstanding debt had to exceed the total book value of a company's assets. In practice, a company manager could simply issue worthless debt to his own firm at a high face value to avoid bankruptcy. (Although illegal in theory, this was a wide-spread practice in the 1990s in Russia, see, e.g., EBRD, 2000a.) Thus, for Russia's

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<sup>7</sup> For example, on September 15, 2003, *BBC Russian service* reported that Russia's Accounting Chamber released a report that the Moscow government directly financed Moscow regional courts in 1998-1999. The BBC refers to a copy of an official report of the Accounting Chamber to the Lower House of the Russian Parliament ([http://news.bbc.co.uk/1/hi/russian/russia/newsid\\_3110000/3110854.stm](http://news.bbc.co.uk/1/hi/russian/russia/newsid_3110000/3110854.stm)). Solomon (2004) writes: "... the majority of courts still depended for their well-being on supplementary payments and allocations provided by local or regional governments." See also Solomon and Trochev (2005) and Trochev (2006).

<sup>8</sup> The survey, however, did not contain any questions on the integrity of judges in bankruptcy proceedings which are the focus of this paper.

companies, courts, and tax collectors, there was no operational bankruptcy legislation in the country before 1998.

The 1998 law was supposed to combine the best portions of the U.S. and UK bankruptcy codes and make the initiation of bankruptcy very easy. Formally, under the 1998 law, if a creditor filed a bankruptcy petition, the following procedure was undertaken. First, a temporary manager, appointed by a bankruptcy court judge, would collect information about the claims on the company and organize a creditor meeting. At the meeting, the creditors would decide if they wanted liquidation or re-organization. Second, the judge would issue a ruling on the liquidation or re-organization of the company, taking into consideration the resolution of the creditor meeting. The judge would appoint a “liquidation manager” if a liquidation were ordered, or an “external manager” if a re-organization were ordered. The judge would not necessarily need to follow the creditors’ request. This clause in the law was motivated by the fact that creditors may opt for an inefficient liquidation. Initiation of both procedures was supposed to deprive the incumbent management of control over the firm.

Thus, the main features of the 1998 law were (i) the dismissal of management upon filing, aimed at hardening budget constraints for managers; and (ii) the judicial discretion to mitigate creditors' tendency to over-liquidate, in case survival is socially efficient. These two features were in contrast with the U.S. bankruptcy law, which emphasizes debtor-in-possession but offers judges fewer opportunities to mandate re-organization than the Russian law. The re-organization procedure in the 1998 Russian bankruptcy law was much harsher on the incumbent management compared to Chapter 11 of the U.S. bankruptcy law and less creditor-friendly than the U.K.’s re-organization procedure, which allowed creditors full control.

In December 2002, a new bankruptcy law was adopted. Although changes introduced by the new law aimed at reducing the outright fraud frequent under the 1998 law, most features important for our story remain intact (see Thompson, 2003, for an overview of main changes).

### 2.3. Basic bankruptcy statistics

The 1998 Russian law was expected to vastly improve managerial incentives because it was supposed to be harsh on the incumbent management. This stood in drastic contrast to legislation in place prior to 1998. The result should have been an improvement of creditor protection and, thus, *ex-ante* efficiency, which is considered crucial for financial development (e.g., von Thadden, Berglof, and Roland 2003; La Porta et al., 1997, 1998, 2000). The hope was that the law would boost development of private credit institutions. In terms of its private credit-to-GDP ratio, Russia was in 84<sup>th</sup> place out of 129 countries (Djankov, McLiesh, and Shleifer, 2006). Indeed, after the law

was adopted, bank credit as a percentage of GDP increased as shown in Figure 1, and so did the number of initiated bankruptcy procedures, as shown in Table 1. These two facts were often interpreted by policymakers as hard evidence of the overall success of the bankruptcy reform. Such interpretation, however, may be misleading. First, an increase in (private) credit can be a consequence of soft budget constraints (Maskin and Xu, 2001), rather than an indication of improvement in *ex-ante* efficiency. This is particularly likely in transition economies. For instance, this is the reason why the private credit-to-GDP ratio in China is above that in many financially developed countries, e.g. Germany and France (Djankov, McLiesh, and Shleifer, 2006). Second, bankruptcy procedures were initiated primarily against fly-by-night firms that had been created primarily for tax evasion purposes and disappeared shortly after registration, while the vast majority of loss-making firms continued to operate, unaffected by bankruptcy. (The 1998 law had no special procedure for the liquidation of an absent debtor.) The analysis in this paper shows that the law had different effects in different regions depending on the quality of the regional judiciary and political strength of regional governors.

Table 2 summarizes basic firm-level characteristics in 1997 for three groups of firms: 1) all firms; 2) firms that fell into the re-organization procedure in 1998; and 3) firms that fell into the liquidation procedure in 1998. These three groups differ both in the average size of firms and average basic performance characteristics, such as labor productivity, labor productivity growth, and profitability. As one would expect, firms under liquidation were the worst performers on average, whereas firms unaffected by bankruptcy procedures were the best. The most noticeable difference among the three groups is the firms' sizes. Liquidation procedures were initiated primarily against small and medium-size enterprises. In contrast, re-organization procedures were initiated against much larger enterprises. On average, sales of firms under re-organization were fifteen times larger compared to sales of firms that entered the liquidation procedure; and the difference in the number of employees was fourfold. Since politicians in all countries generally oppose liquidation of large companies because of the potential social and political consequences of layoffs (e.g., Shleifer and Vishny, 1994; Boycko, Shleifer, and Vishny, 1996; Kornai, Maskin, and Roland, 2003), it is not surprising that small firms were liquidated while large firms were re-organized after the new law took effect. In this paper, we show that preferences for the choice of liquidation and re-organization diverged between the federal and regional governments in Russia.

### **3. Analysis**

#### **3.1. Data**

We compiled data from the following sources: the list of publicly announced re-organization proceedings initiated in 1998 and the first half of 1999 from the “Internet Securities” ([www.securities.ru](http://www.securities.ru)) and the AK&M news service ([www.disclosure.ru](http://www.disclosure.ru)) databases; a comprehensive list of liquidation procedures initiated in 1998 and the first half of 1999 from the Higher Bankruptcy Court Journal (*Vestnik Vysshogo Arbitrazhnogo Suda*); data on firms in 1996-1999 from the Russian Enterprise Registry Longitudinal Database (RERLD, the annual census of large and medium-size industrial enterprises); firm-level financial data from the ALBA data set of balance sheets for large Russian industrial firms; regional statistical data from statistical abstracts Regions of Russia, 1999; the official web site of the Russia's state tax agency; the MFK Renaissance investment bank; the Central Elections Commission of the Russian Federation; and Shvets (2005).<sup>9</sup>

### 3.2. Did regional political characteristics influence the type of bankruptcy procedures?

Our main hypothesis is that regional courts are biased in favor of the regional governors. The two alternatives that we consider are as follows: commercial court judges are either unbiased in their decisions, or they favor the federal government and Moscow-based creditors. We focus on how the *ex ante* characteristics of the firms, their industries, and regions (before the 1998 law was adopted) influenced the odds that these firms ended up in either re-organization or liquidation proceedings or were not subject to either proceeding. In particular, we are interested in whether regional political variables affect the probability of a bankruptcy procedure in a firm, controlling for its financial health. We consider the following two main regional-level explanatory variables.

#### ***Governor's popularity***

If judges consider the regional governor's opinion in their rulings, one would expect that the bias towards governors would be stronger for more popular and, thus, politically strong governors than for less popular and, thus, politically weak governors. We use the share of the votes received by the governor in the first round of the latest regional election prior to the enactment of the 1998 bankruptcy law as a proxy for the governor's popularity. If the regional governors influence court decisions and use re-organization procedure as the tool to protect firms from paying federal taxes and debts (as much of anecdotal evidence suggests), one should expect to see more re-organizations in regions with more popular governors. In addition, since liquidations are politically costly, we

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<sup>9</sup> Available information on bankruptcies in Russia is very limited: we only have access to the lists of firms against which bankruptcy procedures were initiated in 1998 and the first half of 1999. We merge this information to firm-level and regional-level data from other sources. Unfortunately, there are no micro data on who initiated bankruptcy procedures or what the receipts of any of the claim holders were. Therefore, it is important to keep the data limitations in mind during the following discussion of the tests we perform.

expect to see fewer liquidation procedures when governors are popular. If courts are independent or biased toward creditors, the political strength of the governor should not matter for the numbers or types of bankruptcies.<sup>10</sup>

### ***Federal-regional hostility***

Both federal and regional authorities may prefer re-organization over liquidation because they both fear the potential political consequences of large scale unemployment. Yet, if the hypothesis of regional subversion of the bankruptcy institution is correct, there is a direct conflict between regional and federal authorities in which the regional government uses re-organizations to freeze out federal tax claims. Thus, we would expect the governors that were in open political opposition to the federal center to be more active in using bankruptcy as a mechanism of expropriation of federal tax revenues. More hostility in the relationship between the governor and the federal center implies lower political costs of opposition to the center in general, and in bankruptcy proceedings in particular. Thus, if courts are biased in favor of regional governors, we would expect re-organizations to be more likely when the political relationship between the president and the governor are strained. Moreover, as the federal government is fiscally motivated, we would expect liquidations to be more likely when regional and federal governments are friendly to each other compared to a situation when they are at odds with each other and the courts are biased in favor of regional governors. We use an index constructed by MFK Renaissance to measure how hostile the political relationships between the governors and the federal government were in 1997 (larger values indicate more hostility). This index uses information on 1) the frequency of public statements by the governor against the policies of the federal center; 2) the extent to which regional laws and regulations violate federal laws; 3) the level of support for the governor by the president in the latest regional election; and 4) the presence of a bilateral treaty between the region and the center.

We use a measure of regional judicial quality as an important control variable. The unique measure was developed and used by Shvets (2005). It is equal to the average rate of approvals of decisions of regional commercial courts during appeals in higher-jurisdiction commercial courts. In order to construct this measure of judicial quality, Shvets (2005) analyzed an extensive dataset comprised of 5,760 decisions from 81 Russian commercial courts made between 1995 and 2002 that were appealed to the higher-jurisdiction courts. Shvets (2005) argues that it is well known that

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<sup>10</sup> Note that political parties were very weak and played a very limited (if any) role in the Russian politics in the 1990s. In particular, the majority of regional governors, regional legislators, and both presidents did not have a party affiliation during this period. This is why we cannot use data on party affiliations as a proxy for the political control of governors over regional judiciary.

higher-level commercial courts are comprised of much better skilled, motivated, and career-oriented judges. Thus, it should be the case that the rulings of the higher-jurisdiction judges have much lower probability of being erroneous. Shvets writes:

*“Several factors corroborate the conjecture that appellate court judgements are on average closer to the true state of the world than those of lower courts. Applicants for positions of judges in appellate courts are required to possess higher qualifications than do applicants to courts of first instance. All decisions in courts of appeal are made by a panel of three judges, relative to mostly single judge hearings in the courts of first instance. Appellate courts are less dependant on regional authorities than are courts of first instance, whose jurisdiction coincides with that of Russia’s political regions. Finally, from the interviews with people who have participated in the arbitrazh process, I understand that there is a perception in Russia that appellate courts are fairer and more reliable than courts of first instance.”*

Thus, the average rate of approvals by appellate courts – the judicial quality variable constructed by Shvets – is a proxy for the average share of “correct” rulings by regional-level judges. If the average approval rate is high, then one can argue that regional courts are of higher quality because they give relatively more fair trials. It is worth noting that only a very small share of cases goes through the appellate commercial courts, and that is why appellate courts can not be considered as the solution to the problem of poor judicial quality in Russia. The reasons for this are the long delays in consideration and other technical barriers for appeal; see, e.g., Black and Tarasova, 2000.

We estimate the effect of political variables on the probability for a firm to become bankrupt conditional on judicial quality. It is an important control because a systematic bias in judicial decisions should decrease with an increase in judicial quality (irrespective of the direction of this bias). As one would expect in the case of a regional bias in commercial courts, there is a negative correlation of -0.17 between governor popularity and regional judicial quality. Federal-regional hostility and regional judicial quality are weakly positively correlated. Figure A1 in appendix presents non-parametric relationships between judicial quality and our main explanatory variables.

We estimated a multinomial logit regression model on a cross-section of firms. The dependent variable is the probability that a firm, given its characteristics before the adoption of the 1998 law, (1) falls into a re-organization procedure; (2) is liquidated; or (3) is not subject to bankruptcy during a year and a half after the enactment of the new law. We look at *ex-ante* characteristics of firms to avoid endogeneity and to rule out any reciprocal effects of bankruptcy

onto firm characteristics. Our sample consists of 7,815 firms that are drawn from the intersection of RERLD, ALBA, and regional data sets for 1997.

The estimated equation is:

$$\Pr[B_i = j] = F(\beta_1 P_i + \beta_2 H_i + \beta_3 J_i + \beta_4 \mathbf{X}_i + \varepsilon_i) \quad (1)$$

where  $i$  identifies a firm in the sample.  $B_i$  is an outcome after the introduction of the new law; it is equal to one of the three following outcomes for each firm in 1998 and the first half of 1999: 0 if no bankruptcy procedure was initiated (comparison group); 1 if the re-organization procedure was initiated; and 2 if the liquidation procedure was initiated.  $P_i$ ,  $H_i$ , and  $J_i$  denote our measures of the governor's popularity, federal regional hostility, and judicial quality, respectively, in the regions where firm  $i$  is located.  $F$  is a logistic function.  $\mathbf{X}$  is a vector of covariates.

The following variables are used as controls. First, we control for the firm-level characteristics that influence the probability that firm ends up in bankruptcy: leverage ratio (log debt-to-assets ratio), a coefficient of current liquidity (log ratio of liquid assets to short term liabilities), log cost per unit of output, log labor productivity, log labor productivity growth, log of official employment, and three-digit industry dummies. Firm-level controls are necessary to analyze the effect of regional characteristics of firms that, otherwise, would have similar prospects in bankruptcy. Second, we control for gross regional product per capita. This is an important control variable because political characteristics of the regions that we are interested in may be correlated with the regional economic development, which, in turn, may affect the number of regional bankruptcy procedures. All control variables are measured in 1997, before the introduction of the new law. Table 1A (see Appendix) presents summary statistics for the variables used in the regression analysis. We correct standard errors for heteroskedasticity and clusters of  $\varepsilon_i$  within combinations of the regions and two-digit industries (Krishnaiah and Rao, 1994).

Table 3 presents the regression results. We report both the coefficients of the multinomial logit regression and the marginal effects evaluated at the mean levels of independent variables. The table presents coefficients for the re-organization and liquidation outcomes relative to the outcome of “no bankruptcy.”

The hypothesis of a regional bias is supported by the data. As predicted, controlling for firm-level characteristics, the probability of the re-organization procedure initiated against a firm in a region after the enactment of the 1998 bankruptcy law was positively and significantly associated with the political popularity of the regional governor (which makes it easier for him to extend his influence on courts), with the extent of regional hostility towards the federal center (which makes it

less politically costly for the governor to oppose the federal center), and with the extent of deficiencies in regional commercial courts. The probability of a liquidation procedure is unaffected by the governor's popularity or judicial quality but is negatively and significantly related to a higher degree of hostility in political relations between the region and the federal center. This is consistent with our premise that the primary motivation for the federal government is fiscal, and thus it would like to liquidate inefficient firms while the politically motivated regional government wants to keep the firms in operation. These results are very robust in that they do not depend on a particular specification or a particular set of covariates.

The economic significance of these results is as follows. A one standard deviation increase in the measure of governor's popularity leads to a 3% increase in the predicted probability that an average firm ends up in a re-organization procedure. In addition, a one standard deviation increase in regional hostility towards the federal center is associated with a 5% increase in the predicted probability of a re-organization procedure. The numbers are based on the predicted probability of re-organization that is evaluated at the mean value of employment for firms under re-organization procedure and the overall means for all other independent variables. (It is equal to about 2%.) In addition, a one standard deviation increase in judicial quality leads to a 4% decrease in the probability of re-organization.

In contrast, a one standard deviation increase in regional hostility towards the federal center decreases the predicted probability that an average firm ends up in liquidation by 9%. This predicted probability is evaluated at the mean value of employment for firms that are being liquidated and overall means for all the other covariates, which is equal to 0.03%. The numbers are rather small, as most firms in the sample have been unaffected by bankruptcy.

Signs on the coefficients on control variables are also as expected: low levels of current liquidity and labor productivity significantly increase the probability of both bankruptcy procedures. As predicted by political economy models, in which politicians and judges care about employment, we find that firms that end up in liquidation are significantly smaller than average. The size of firms that end up in re-organization is, however, above the size of firms that are unaffected by bankruptcy. This finding is consistent with our basic story because the regional governments are more likely to use the re-organization procedure to protect large, rather than small, firms from the federal government and creditors.

If bankruptcy were independent of politics, regional political variables should have no effect on the probability of bankruptcy procedures unless these variables were correlated with the regional economic distress, and we did control for this possibility. In this case, however, regional political



variables should have had the same effect on the probability of both bankruptcy procedures. In fact, we find opposite effects of regional political variables on the probability of re-organization and liquidation procedures, holding firm characteristics constant. The governor's political strength and hostility towards the center do not seem to correlate with the regional economic distress. The correlation coefficients of these variables with various available measures of the regional economic well-being (for instance, per capita growth, index of resource potential, ratio of per capita income to subsistence level, etc.) are small, positive, and insignificant.

To summarize, we find that regional *political* characteristics had a significant effect on judicial decisions about the numbers and types of bankruptcy proceedings initiated after the 1998 law took effect.

### 3.3. Did re-organization procedures induce restructuring in bankrupt firms?

In this section, we investigate three issues. First, we test whether firms that found themselves in re-organization proceedings after the enactment of the 1998 bankruptcy law restructured as they were supposed to do, or whether they failed to restructure, as our story of subverted bankruptcies suggests. On average, we expect not to observe any effective restructuring following the initiation of re-organization procedures, since these were initiated primarily in order to protect firms from paying federal taxes and overdue debt rather than to re-organize. Second, we test whether restructuring efforts for firms under the re-organization procedures vary with judicial quality. Poor judicial quality means a higher scope for influence over court decisions. Thus, our prediction is that one should observe relatively less restructuring in firms in re-organization where the court quality is poor. Third, judicial bias towards regional governors would be particularly strong where the political popularity of the governor is high and the quality of courts is poor. Thus, we expect a stronger effect of poor judicial quality on restructuring in bankruptcy in regions that have popular governors. We test whether the data support these predictions.

We compare several performance indicators in similar firms belonging to two groups: 1) a group of firms that initiated re-organization procedures in 1998; and 2) a control group. The control group is comprised of two firms (if they exist) for each firm in re-organization. The two firms are chosen from the same five-digit industry as the firm in re-organization, such that they are the closest to the firm in size (one smaller, and another one larger).

We use three proxies for restructuring: log change in sales, log change in labor productivity, and log number of new product varieties between 1998 and 1999. We run OLS regressions for each of these proxies on the dummy variable indicating the re-organization procedure and the interaction

of the re-organization dummy with the measure of judicial quality as well as the triple interaction term of re-organization, judicial quality, and governor's popularity.<sup>11</sup>

In the previous section, we established that selection of firms into reorganization or no bankruptcy after the enactment of the 1998 bankruptcy law depended on the political characteristics of the regions and the initial performance and size of firms. In order to estimate the effect of reorganization procedure on restructuring consistently, we need to condition on variables that affect selection and can potentially be correlated with (future) restructuring. For this reason, we include all control variables from equation (1) as regressors in the estimation.

We estimate the following two equations:

$$\Delta Y_i = \beta_1 R_i + \beta_2 R_i (J_i - \bar{J}) + \beta_3 J_i + \beta_4 \mathbf{X}_i + \varepsilon_i \quad \text{and} \quad (2)$$

$$\Delta Y_i = \beta_1 R_i + \beta_2 R_i (J_i - \bar{J}) + \beta_3 R_i (J_i - \bar{J})(P_i - \bar{P}) + \beta_4 J_i + \beta_5 P_i + \beta_6 R_i (P_i - \bar{P}) + \beta_7 J_i P_i + \beta_8 \mathbf{X}_i + \varepsilon_i \quad (3)$$

where  $i$  indexes firms,  $\Delta Y$  stands for one of the three measures of enterprise restructuring,  $R$  is the dummy indicating firms under re-organization proceedings, and  $J$  and  $P$  indicate our two regional variables of interest: judicial quality and governor's popularity, respectively. Thus, we estimate the effect of judicial quality on restructuring under bankruptcy procedures using a difference-in-differences estimator (equation 2) and the effect of political popularity using a difference-in-differences-in-differences estimator (equation 3). It is important to note that the crucial underlying assumption for the validity of our estimation strategy is that in the absence of cross-regional differences in institutional environment (i.e., in judicial quality and political popularity of the governor) the growth rates of sales and labor productivity of firms in bankruptcy and not in bankruptcy would have differed by a constant factor conditional on control variables  $\mathbf{X}$  and would not have been related to judicial quality.

We subtract sample means from each of the variables in all of the interaction terms in order to make the interpretation of  $\beta_1$  more straightforward. It is equal to the full effect of re-organization on restructuring evaluated at the mean values of  $J$  and  $P$ .  $\beta_1$  in both equations,  $\beta_2$  in equation (2) and  $\beta_3$  in equation (3) are our main parameters of interest.  $\beta_2$  in equation (1) estimates how restructuring in re-organization proceedings depends on judicial quality, whereas the coefficient on the triple interaction term,  $\beta_3$  in equation (3), estimates whether the latter effect is influenced by the political popularity of the governor.

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<sup>11</sup> A word of caution is due here. We look at the restructuring effort within one year from the beginning of re-organization procedure. This is a very short period of time to accomplish restructuring. Thus, one would need to verify robustness of these results in the longer term as more data become available.

Error terms are assumed to cluster at the regional level.  $\mathbf{X}_i$  is a vector of control variables. In order to control for a firm's ability to raise outside finance, which differs for firms in bankruptcy proceedings vs. firms not subject to bankruptcy and can directly influence performance, we include log change in the stock of the outside finance taken from the firm's balance sheet in 1998-1999 in the list of control variables. We run two alternative specifications with different sets of control variables. Our baseline specification includes the full set of covariates from equation (1) in order to condition on variables that affect selection into bankruptcy. In particular, the list of controls includes the following firm characteristics: three-digit industry dummies, 1997 values of log sales, log employment, leverage ratio, current liquidity, log cost per unit of output, log labor productivity, log labor productivity growth between 1996 and 1997. In addition, we control for log gross regional product per capita, political popularity of the regional governor and regional hostility towards the center. The other specification, has more restrictive set of control variables which includes three-digit industry dummies, logs of sales and of employment in 1997, and log change in the stock of the outside finance taken from the firm's balance sheet in 1998-1999.

The number of firms that started re-organization procedures in 1998, for which we have all of the required data, is 115. The resulting sample comprised of the treatment and control groups consists of 278 to 336 firms, depending on the set of covariates and the number of missing observations for some of them. The baseline specification has smaller sample and full set of controls for selection into bankruptcy. The sample becomes larger in the specification with the restricted set of control because the measures of the leverage ratio and current liquidity are available only for a limited number of firms.

Table 4 presents the results of the baseline specification and table A2 in the appendix presents the results for specification with the limited set of controls, but larger sample. The results of the two alternative specifications are very similar both qualitatively and quantitatively.

First, as we have hypothesized, at the mean level of regional characteristics, the re-organization procedure has no effect on any of the restructuring measures, namely, there is no difference in restructuring for firms in and outside of bankruptcy procedures. (None of the coefficients on the re-organization dummy is statistically significant, and their magnitude is rather small.)

Second, as predicted, judicial quality has an important effect on restructuring in bankruptcy. Firms under re-organization proceedings restructure significantly more than firms not subject to bankruptcy in regions with high quality courts and restructure significantly less in regions with low quality courts. The cross-term for the re-organization dummy and judicial quality has a positive and,

for two out of the three measures of restructuring, statistically significant effect. At a level of judicial quality one half a standard deviation below the mean, firms under re-organization proceedings have 13 percent lower growth in sales and 16 percent fewer new product varieties compared to similar firms outside bankruptcy. In contrast, at a level of judicial quality one half a standard deviation above the mean, firms under re-organization proceedings have 7 percent higher growth in sales and only 2 percent lower growth in product varieties compared to similar firms outside bankruptcy. Thus, judicial quality is crucial for enforcing the restructuring of bankrupt firms.

Third, the coefficient on the triple interaction between re-organization, judicial quality and political popularity of the governors is positive and significant for two out of three measures of restructuring (i.e., sales and productivity growth). The size of these effects is as follows: When judicial quality is one half of the standard deviation below the mean and the political popularity is one half of the standard deviation above the mean, firms in reorganization have 12 percent lower growth in sales, 1 percent lower labor productivity growth, and 17 percent lower addition to product varieties compared to firms outside bankruptcy. In contrast, if judicial quality remains one half of the standard deviation below the mean but political popularity decreases to one half of the standard deviation below the mean (holding everything else constant), then firms under reorganization procedure have only 2 percent lower growth in sales and 11 percent lower addition to product varieties compared to firms outside bankruptcy; in addition, firms under reorganization start outperforming firms outside bankruptcy in terms of labor productivity growth – which is 6 percent higher under these conditions. These results are consistent with the theory because they show that with poor-quality courts, an increase in the political popularity of regional governor leads to stronger underperformance of firms in reorganization compared to firms outside bankruptcy. Thus, we also find support for our hypothesis that politically powerful governors adversely affected the outcomes of re-organization proceedings in regions with poor judicial quality. The reason for this is that the bias in favor of regional governors in poor-quality courts increases with governor’s political popularity.<sup>12</sup>

Overall, the analysis strongly supports our main hypothesis: Russian commercial courts are biased in favor of regional governors.

#### **4. Conclusion**

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<sup>12</sup> The theory does not have a clear cut prediction about the effect of political popularity on restructuring when courts are of high-quality. Our results suggest that when courts are good, political strength of the governor has positive effect on restructuring within reorganization compared to restructuring outside bankruptcy. Thus, having popular governors under good and unsubverted institutions facilitates restructuring in bankruptcy.

Commercial court judges were biased in favor of strong regional governors when considered cases under the Russia's 1998 bankruptcy law. Re-organization proceedings were significantly more frequent in the regions with politically popular governors and governors who had hostile relations with the federal center. Moreover, governors' popularity and the quality of the regional judiciary affected the performance of firms in re-organization: in the regions with poor judicial quality: firms in re-organization proceedings underperformed relative to firms not subject to bankruptcy proceedings, while the opposite was true for the regions with high-quality judges; both of these effects are stronger in the regions with popular governors where the bias in governor's favor is likely to be a more important source of erroneous court rulings.

We show that, first, commercial court judges were biased in favor of strong regional governors in Russia in the 1990s. Second, the political influence of regional governors over judges stripped the federal government of an effective legal tool for collecting taxes. Bankruptcy law did not serve the purpose of protecting the federal government's tax claim on Russian firms. The weak and dependent judiciary played a crucial role in this story. In order to avoid inefficient liquidations, the law gave judges substantial discretion over decisions on the fate of insolvent firms; this discretion was exploited by politically strong regional governors, who have had influence over regional judiciaries. Our analysis of selective application and enforcement of 1998 bankruptcy law in Russia provides an illustration of a role that judicial politics may play in the functioning of fiscal federalism institutions. Judicial quality interacts with fiscal federalism: if there is a fiscal conflict between different levels of government, sub-national authorities' control over judiciary may impede federal tax collection.

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Figure 1. Dynamics of bank credit to firms before and after the enactment of the bankruptcy law of 1998. (Position of vertical axis indicated the date of enactment.)

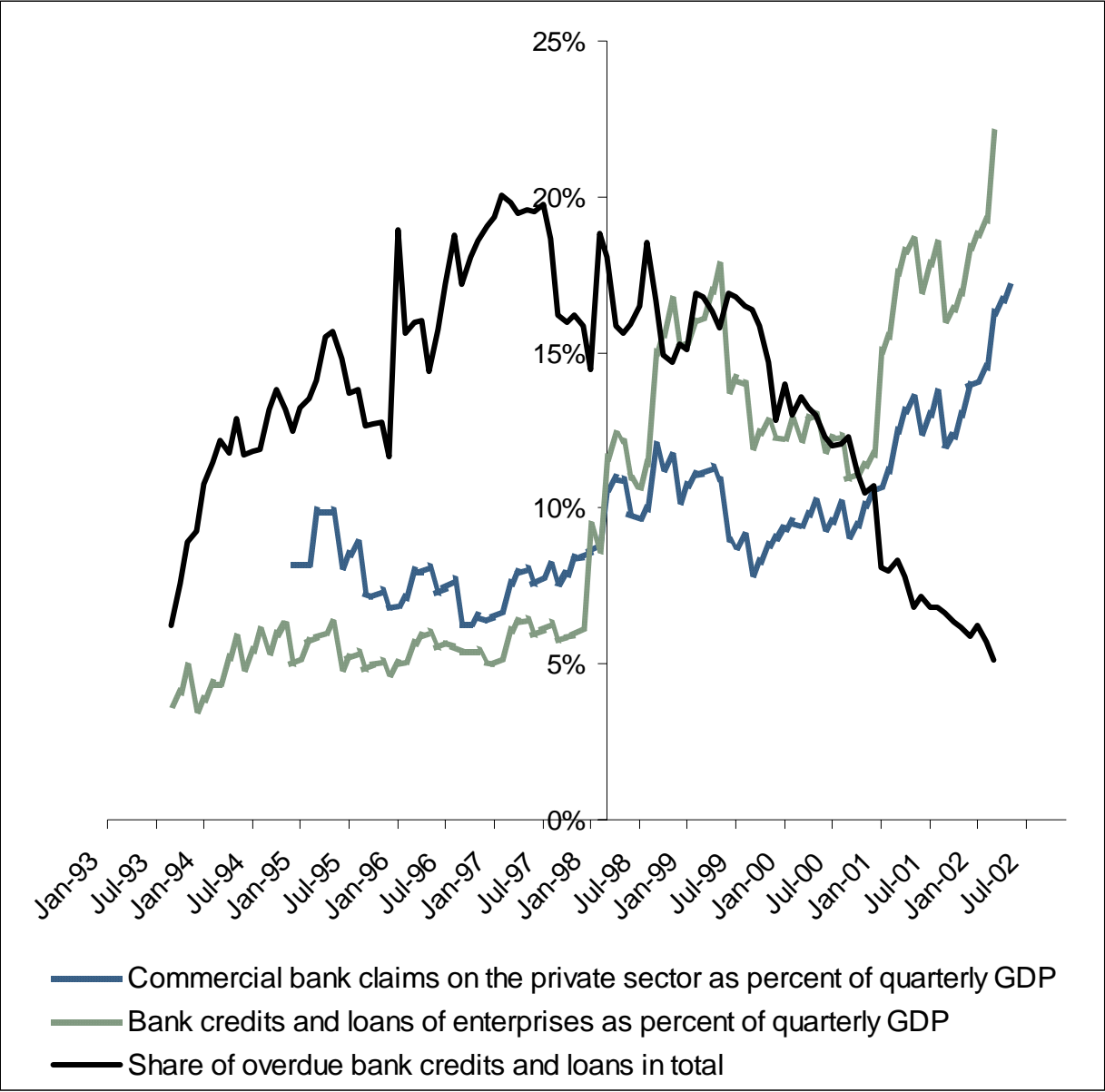


Table 1. Initiation of bankruptcy procedures

Year	Total	Proceedings initiated:
		Excluding proceeding against absent debtors
1993	<100	n/a
1994	240	n/a
1995	1 108	n/a
1996	2 618	n/a
1997	4 320	n/a
1998	8 337	4 893
1999	10 933	5 940
2000	19 041	7 959
2001	56 920	8 538

Source: Higher Arbitration Court of the Russian Federation

Table 2. Firms under different bankruptcy proceedings compared to the population of firms

	Significant difference b/w R & L at 5% level	Firms that fell into re-organization proceedings in 1998		Firms that fell into liquidation proceedings in 1998		Population of firms	
		Median	Mean (SE)	Median	Mean (SE)	Median	Mean (SE)
Employment (persons), 1997	Y	796	2,027 (202)	240	472 (45)	143	489 (11)
Sales (Rb.), 1997	Y	18,471	225,491 (50,562)	3,282	14,620 (4,785)	4,516	44,692 (3,806)
Cost per ruble of output (Rb.), 1997	Y	112	143 (7)	135	206 (45)	97	117 (0.97)
Labor productivity (Rb./employee), 1997	Y	27	58 (6)	15	21 (2)	37	58 (62)
Labor productivity growth (%), 1996-1997	Y	-17	-18 (2)	-29	-25 (3)	-5	-4 (34)
Balance sheet net profit (Rb.), 1997	N	-287	-4,349 (2,042)	-297	-3,935 (962)	11	3,334 (437)

Table 3. Initiation of bankruptcy procedures and ex ante firm characteristics: Multinomial Logit estimation

	Re-organization		Liquidation	
	Coefficient	dP(1)/dx	Coefficient	dP(2)/dx
Regional political popularity of the governor	0.98 [0.500]*	0.00282 [0.00143]**	-0.533 [0.552]	-0.00008 [0.00009]
Regional hostility towards the center, 97	0.214 [0.071]***	0.00062 [0.00023]***	-0.173 [0.074]**	-0.00002 [0.00001]*
Regional judicial quality, 95-02	-3.052 [1.182]***	-0.00878 [0.00376]**	0.013 [1.098]	0.00000 [0.00016]
Firm's leverage ratio, 97	0.103 [0.072]	0.0003 [0.00021]	0.136 [0.060]**	0.00002 [0.00001]*
Firm's current liquidity, 97	-2.097 [0.244]***	-0.00603 [0.00067]***	-3.95 [0.436]***	-0.00056 [0.00018]***
Firm's log cost per unit of output, 97	0.092 [0.208]	0.00026 [0.00060]	0.028 [0.176]	0.00000 [0.00003]
Firm's log labor productivity, 97	-0.308 [0.113]***	-0.00089 [0.00036]**	-0.504 [0.112]***	-0.00007 [0.00003]**
Firm's log labor productivity growth, 96-97	0.047 [0.154]	0.00013 [0.00045]	-0.062 [0.079]	-0.00001 [0.00001]
Firm's log enterprise employment, 97	0.775 [0.069]***	0.00223 [0.00036]***	-0.25 [0.104]**	-0.00004 [0.00002]**
Log gross regional product per capita, 97	0.005 [0.236]	0.00002 [0.00068]	-0.004 [0.255]	0.00000 [0.00004]
3-digit industry dummies included	YES	YES	YES	YES
Frequency of the outcome		2.79%		2.34%
Predicted probability		0.0063		0.00035
Observations			7815	
Pseudo R-squared			0.36	

Note: Comparison group is no bankruptcy. Clusters for combination of 2-digit industry and region are allowed. The second column for each outcome reports the marginal effects. (Marginal effects for all three outcomes sum to unity.) Marginal effects are evaluated at the mean values of independent variables. Robust standard errors are in brackets. \* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%.

Table 4. Ex post restructuring and re-organization procedure: OLS, all controls for selection included

	Log change in sales, 98-99	Log change in labor productivity, 98-99	Log new product varieties, 98-99	Log change in sales, 98-99	Log change in labor productivity, 98-99	Log new product varieties, 98-99
Re-organization	-0.032 [0.107]	0.04 [0.089]	-0.096 [0.078]	-0.003 [0.110]	0.067 [0.088]	-0.076 [0.081]
Judicial quality	-0.4 [0.665]	-0.573 [0.552]	-0.618 [0.678]	-0.284 [0.656]	-0.519 [0.524]	-0.62 [0.748]
Judicial quality <sup>D</sup> * Re-organization	2.328* [1.208]	1.454 [0.918]	1.637* [0.880]	1.558 [1.111]	1.016 [0.931]	1.599* [0.938]
Judicial quality <sup>D</sup> * Re-organization * Political popularity <sup>D</sup>				16.518** [7.504]	13.116** [6.352]	6.053 [5.978]
Political popularity <sup>D</sup> * Re-organization				0.107 [0.541]	0.186 [0.422]	-0.101 [0.368]
Judicial quality * Political popularity				-0.728 [4.763]	-3.423 [4.372]	-7.181 [5.295]
Political popularity	-0.157 [0.241]	-0.161 [0.231]	0.068 [0.228]	-0.102 [0.286]	-0.162 [0.300]	0.126 [0.272]
Regional hostility towards the center, 97	-0.019 [0.036]	-0.009 [0.032]	-0.004 [0.037]	-0.029 [0.036]	-0.016 [0.032]	-0.003 [0.036]
Log outside finance, 98-99	0.126*** [0.029]	0.110*** [0.026]	0.002 [0.023]	0.126*** [0.028]	0.111*** [0.025]	0.004 [0.023]
Log sales, 97	-0.022 [0.094]	-0.006 [0.074]	-0.179 [0.135]	0 [0.086]	0.006 [0.071]	-0.187 [0.134]
Log employment, 97	-0.045 [0.111]	-0.013 [0.086]	0.405*** [0.140]	-0.068 [0.102]	-0.025 [0.084]	0.420*** [0.142]
Leverage ratio, 97	0.03 [0.056]	0.04 [0.041]	0.02 [0.035]	0.028 [0.058]	0.043 [0.041]	0.03 [0.033]
Current liquidity, 97	0.041 [0.064]	0.044 [0.058]	0.023 [0.059]	0.034 [0.062]	0.042 [0.058]	0.028 [0.058]
Log cost per unit of output, 97	-0.039 [0.245]	-0.118 [0.186]	-0.015 [0.135]	0.016 [0.251]	-0.082 [0.190]	-0.009 [0.136]
Log labor productivity, 97	-0.101 [0.138]	-0.190* [0.106]	0.144 [0.173]	-0.117 [0.133]	-0.202* [0.105]	0.149 [0.172]
Log labor productivity growth, 96-97	0.142 [0.114]	0.11 [0.106]	-0.04 [0.074]	0.15 [0.116]	0.115 [0.108]	-0.043 [0.074]
Log gross regional product per capita, 97	0.081 [0.140]	0.134 [0.110]	-0.167 [0.134]	0.057 [0.135]	0.112 [0.107]	-0.183 [0.136]
3-digit industry dummies	YES***	YES***	YES***	YES***	YES***	YES***
Observations	290	290	278	290	290	278
R-squared	0.25	0.26	0.31	0.27	0.27	0.32

Note: Robust standard errors are adjusted for clustering at the level of the regions in brackets. \* significant at 10%, \*\* significant at 5%; \*\*\* significant at 1%. Coefficients at “Re-organization” show the full marginal effect of re-organization procedure on restructuring evaluated at the mean values of governor’s political popularity and judicial quality because before taking the cross-terms we subtract means from these variables (this is indicated by the superscript “D”).

## APPENDIX:

Table 1A. Summary statistics for variables used in regression analysis

Variable	Obs	Mean	Std. Dev.	Min	Max
<u>Ex-ante firm characteristics regression:</u>					
Outcome (0-no bankruptcy; 1-re-organization; 2-liquidation)	7815	0.0756	0.3428	0	2
Regional political popularity of the governor, before 98	7815	0.5205	0.1745	0.166	0.9454
Regional hostility towards the center, 97	7815	2.6828	1.353	1	5
Regional judicial quality, 95-02	7815	0.8065	0.084	0.3333	0.9639
Firm's leverage ratio, 97	7815	0.5109	0.7602	0.02	14.7466
Firm's current liquidity, 97	7815	1.2119	1.277	0.0072	38.3556
Firm's Log cost per unit of output, 97	7815	4.6938	0.4452	1.1314	10.8422
Firm's log labor productivity, 97	7815	3.7405	1.2975	-5.9135	9.4803
Firm's log labor productivity growth, 96-97	7815	0.0599	0.653	-24	6.035
Firm's log enterprise employment, 97	7815	5.647	1.3942	0	11.4057
Log gross regional product per capita, 97	7815	9.4984	0.4259	8.5423	11.0892
<u>Ex-post restructuring regressions:</u>					
Dummy for re-organization	337	0.3442	0.4758	0	1
Log change in sales, 98-99	337	0.0333	0.7748	-3.93	2.4878
Log change in labor productivity 98-99	337	0.1035	0.6623	-2.907	2.6042
Log new product varieties, 98-99	321	0.5343	0.633	0	2.7726
Log output, 97	337	5.5734	2.1299	-2.8944	10.9948
Log employment, 97	337	6.6602	1.3619	1.6094	10.1598
Log outside finance, 98-99	337	-1.4205	1.9547	-8.7501	2.8258

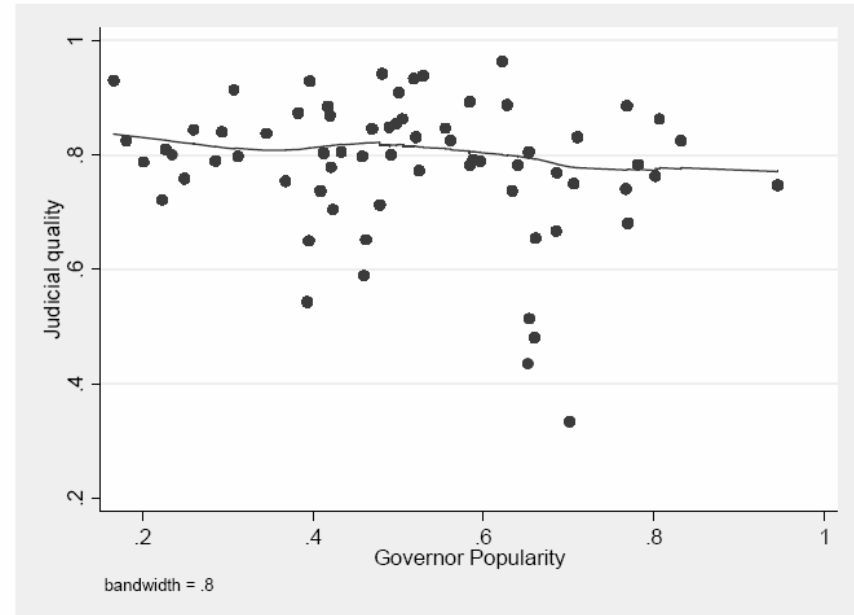
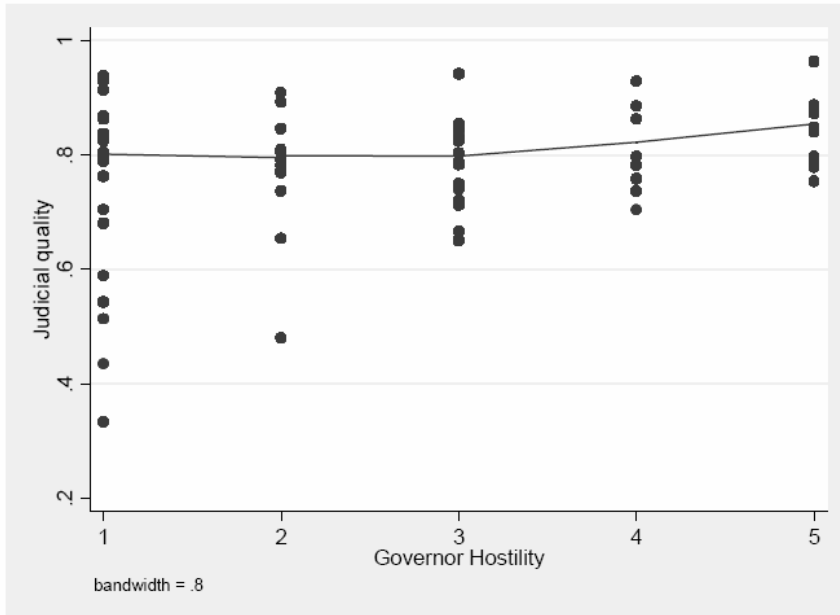


Table A2. Ex post restructuring and re-organization procedure: OLS, larger sample, restricted set of controls for selection

	Log change in sales, 98-99	Log change in labor productivity, 98-99	Log new product varieties, 98-99	Log change in sales, 98-99	Log change in labor productivity, 98-99	Log new product varieties, 98-99
Re-organization	0.006 [0.089]	0.056 [0.076]	-0.106 [0.070]	0.037 [0.094]	0.085 [0.076]	-0.087 [0.072]
Judicial quality	-0.593 [0.662]	-0.910* [0.532]	-0.401 [0.632]	-0.594 [0.646]	-0.896* [0.515]	-0.405 [0.691]
Judicial quality <sup>D</sup> * Re-organization	2.004* [1.178]	1.392 [0.893]	1.408* [0.790]	1.658 [1.045]	1.108 [0.895]	1.263 [0.881]
Judicial quality <sup>D</sup> * Re-organization * Political popularity <sup>D</sup>				13.100* [7.727]	11.761* [6.202]	6.441 [6.056]
Political popularity <sup>D</sup> * Re-organization				0.13 [0.560]	0.051 [0.428]	-0.029 [0.350]
Judicial quality * Political popularity				-0.037 [5.045]	-3.072 [4.364]	-7.112 [5.130]
Political popularity				-0.135 [0.295]	-0.052 [0.268]	0.035 [0.245]
Log sales, 97	-0.079 [0.053]	-0.099** [0.040]	-0.113*** [0.041]	-0.072 [0.052]	-0.097** [0.041]	-0.121*** [0.041]
Log employment, 97	0.051 [0.091]	0.093 [0.065]	0.354*** [0.066]	0.047 [0.090]	0.094 [0.065]	0.367*** [0.065]
Log outside finance, 98-99	0.117*** [0.026]	0.099*** [0.025]	0.001 [0.022]	0.117*** [0.025]	0.100*** [0.024]	0.004 [0.023]
3-digit industry dummies	YES***	YES***	YES***	YES***	YES***	YES***
Observations	336	336	320	335	335	319
R-squared	0.23	0.23	0.3	0.24	0.24	0.31

Note: Robust standard errors are adjusted for clustering at the level of the regions in brackets. \* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%. Coefficients at “Re-organization” show the full marginal effect of re-organization procedure on restructuring evaluated at the mean values of governor’s political popularity and judicial quality because before taking the cross-terms we subtract means from these variables (this is indicated by the superscript “D”).

Figure A1. Non-parametric relationships between governors' hostility toward the federal center and governors' popularity, on the one hand, and regional judicial quality on the other.



Note: The line in each graph represents a *lowess* smoother.