The International Research Project on "Corporate Governance and Integration Process in the Russian Economy" sponsored by Higher School of Economics, Hitotsubashi University, Japan Center for Economic Research, Ministry of Education and Sciences in Japan, and University of Kyoto

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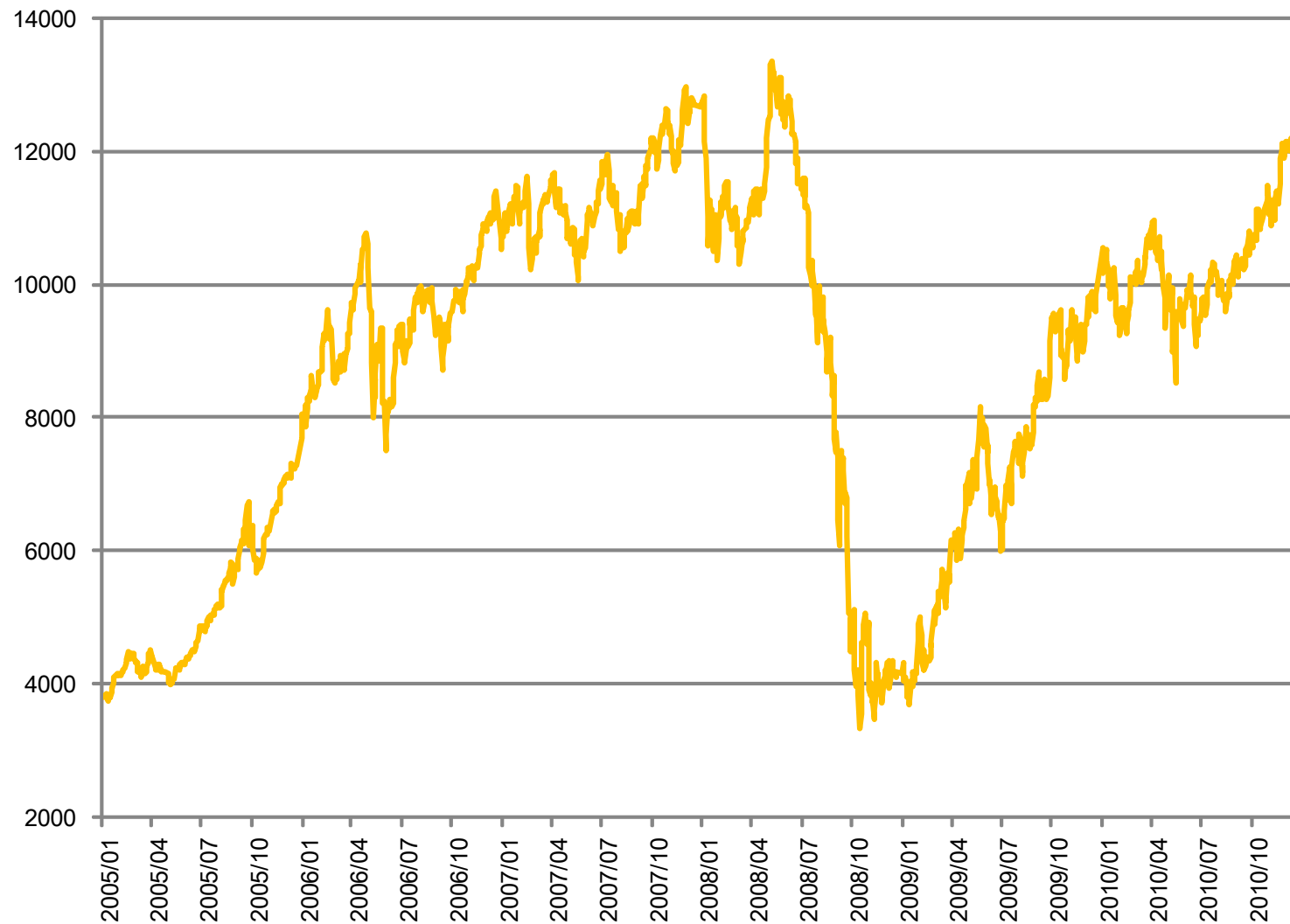# Global Financial Crisis, Corporate Governance, and Firm Survival The Russian Experience

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The fluctuation of the Russian securities market: 2005-2010

Note: This figure plots the Ruble-denominated closing prices of the RTS Index from 1 January, 2005, to 31 December, 2010. The RTS Index is one of major stock price indices in Russia. The data is derived from the MICEX and RTS groups' website (http://rts.micex.ru/).

The dynamics of the market exit rate in Russia: 2008-2010

$y = 0.0011x - 39.773$

$R^2 = 0.3637$
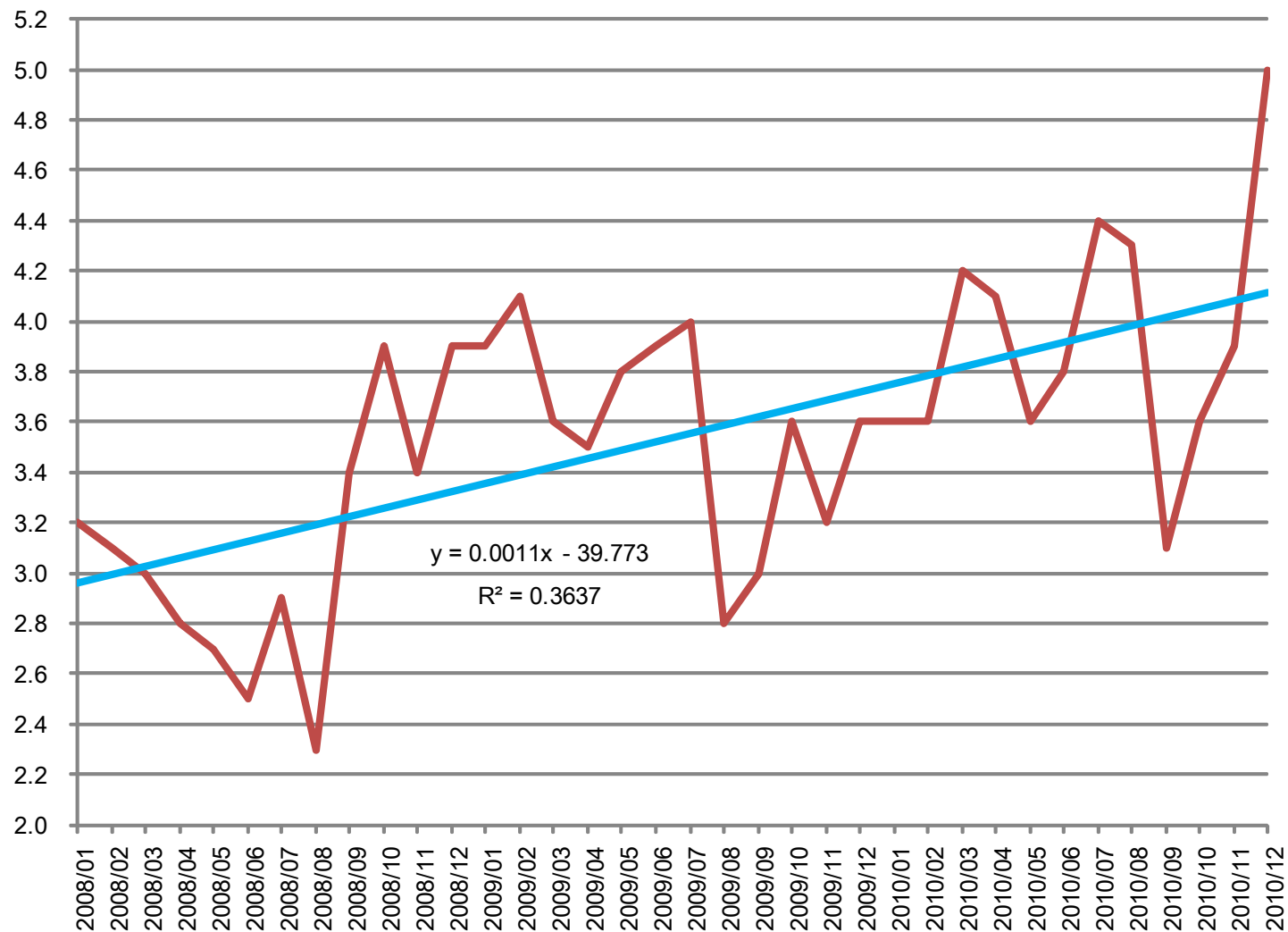
Note: This figure illustrates monthly changes in the number of liquidated firms and organizations per 1,000 registered entities in Russia. The unit in the vertical axis is a firm (organization). The original data is available at the website of the Federal State Statistics Service of the Russian Federation (http://www.gks.ru/wps/wcm/connect/rosstat/rosstatsite/main/).

In this paper...

- Using an original dataset of industrial firms obtained from large-scale panel enterprise surveys, I report the survival status of Russian companies before and after the global financial crisis (i.e., the period from 2005 to 2009), then empirically examine the determinants of firm survival.
- I estimate the Cox proportional hazard model to verify my testable hypotheses regarding the relationship between corporate governance and firm survival.
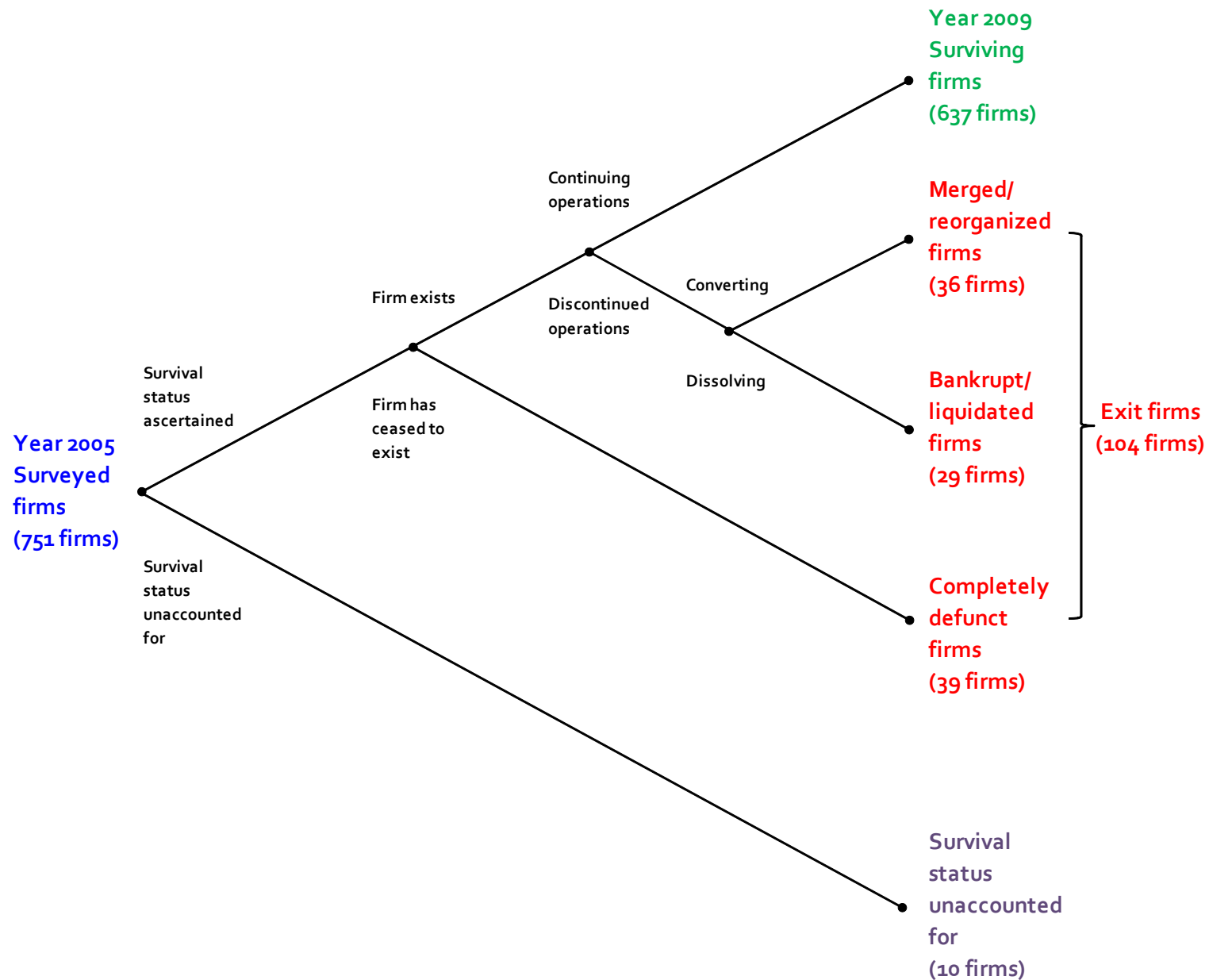
In this paper... (2)

- The estimation results strongly suggest that the independence of company's governance bodies, their human resource abundance, and influence over corporate management are statistically significant factors affecting firm survival in Russia.

- Empirical evidences in this paper also indicate that there is a significant difference in the economic logic for firm survival between independent firms and group companies.
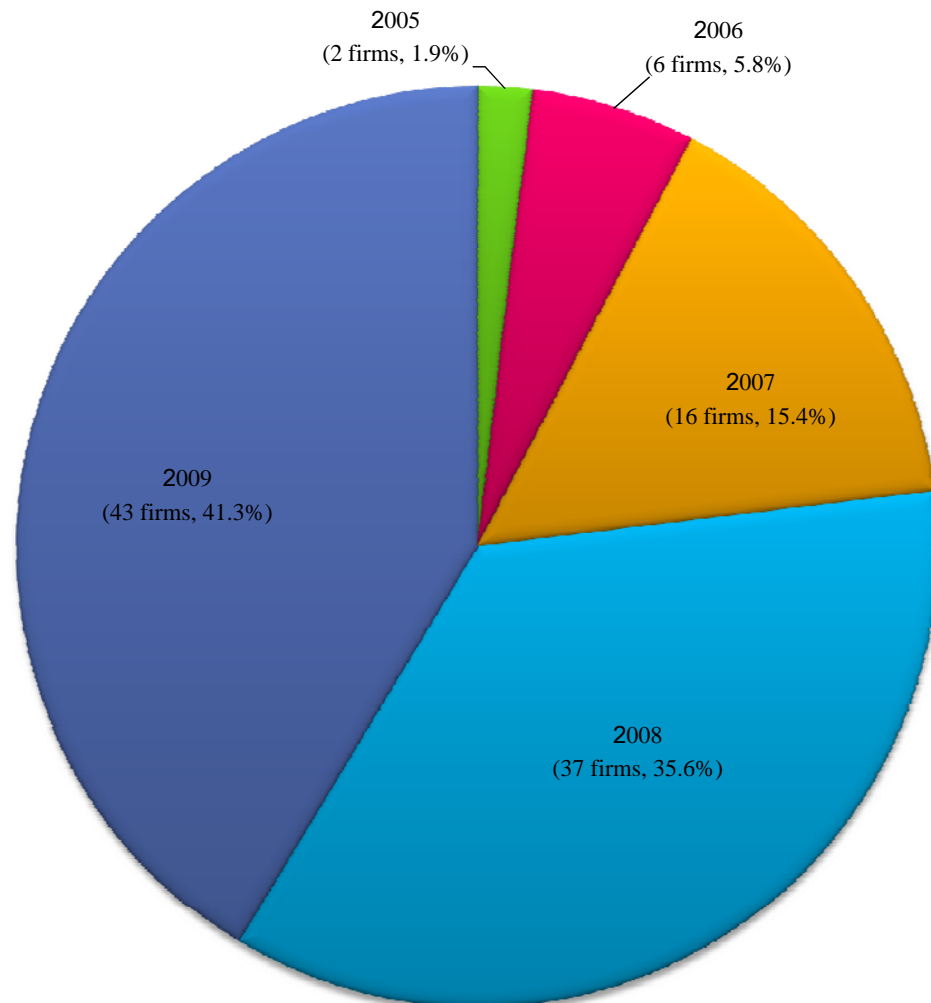
The survey data

- In 2005, a Japan-Russia research team carried out a nation-wide questionnaire survey of 822 joint-stock companies including 751 industrial firms. The firms are located in the 64 federal districts of Russia.
- The follow-up survey was organized and performed by a team of Japanese researchers between October and December of 2009 to investigate into the survival status of the industrial firms surveyed in 2005.
- Because the shutdown year of some firms could not be identified by the on-site survey, I carried out additional identification work by using various information sources.
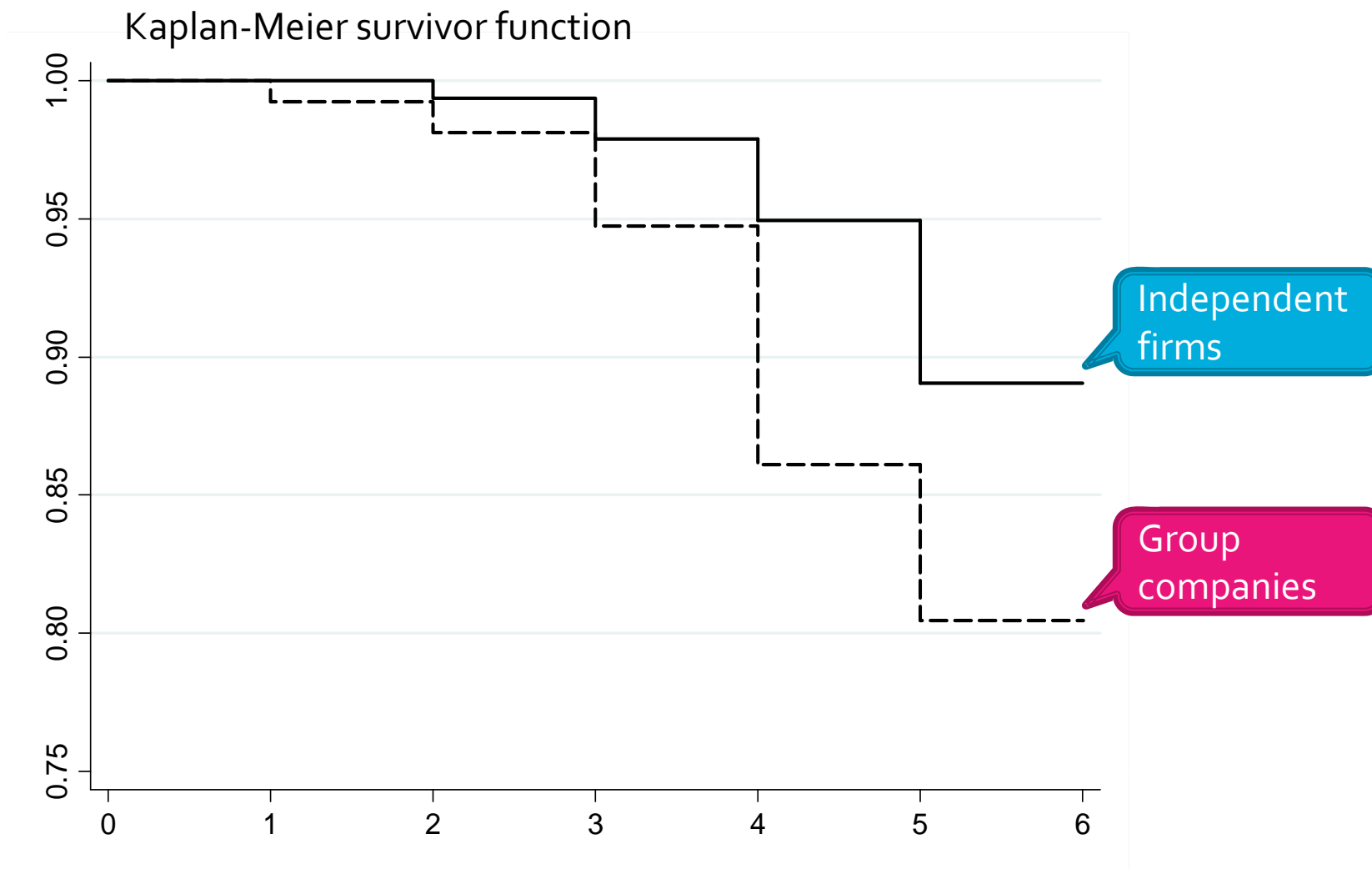
Survival status of 751 Russian industrial firms

Year 2005 Surveyed firms (751 firms)

Survival status ascertained

Survival status unaccounted for

Firm exists

Firm has ceased to exist

Continuing operations

Discontinued operations

Converting

Dissolving

Year 2009 Surviving firms (637 firms)

Merged/ reorganized firms (36 firms)

Bankrupt/ liquidated firms (29 firms)

Completely defunct firms (39 firms)

Exit firms (104 firms)

Survival status unaccounted for (10 firms)

Breakdown of the 104 exit firms by shutdown year

2005 (2 firms, 1.9%)
2006 (6 firms, 5.8%)
2007 (16 firms, 15.4%)
2008 (37 firms, 35.6%)
2009 (43 firms, 41.3%)

Of 104 exit firms, 80 companies were forced to discontinue their operation in 2008, when the global financial crisis came to the surface, or in the following year, 2009, when severe economic recession was observed in Russia. This hard fact highlights how the historic financial shock dealt a fatal blow to many fragile businesses in Russia.

Gap in the survival probability between independent firms and group companies

Kaplan-Meier survivor function

Survival status of Russian firms: summary of the survey results

- The survival status of 741 of the 751 industrial firms was confirmed. Among these 741 firms, 39 (5.3%) had completely ceased to exist.
- 65 firms (8.8%) still existed, but their business had been discontinued.
- The remaining 637 firms (86.0%) were found to have maintained business activities without any drastic changes in their company profile.
- Against expectation, the survival probability of group companies (exit rate is 0.195) is lower than that of independent firms (0.109).

Hypothesis to test

◆**H$_1$**: *The independence of governance bodies from top management is positively correlated with the survival probability of the firm.*

◆**H$_2$**: *The abundance of human resources available to the governance bodies is positively related to the survival probability of the firm.*

◆**H$_3$**: *The governance bodies' influence over corporate management is positively correlated with the survival probability of the firm.*

Theoretical predictions regarding the determinants of firm survival

	Correlation with the firm survival probability
Independence of the governance bodies	+
Abundance of human resources available to the governance bodies	+
Governance bodies' influence over corporate management	+
Affiliation with a business group	?
Selection of an open joint-stock company as the form of incorporation	?
Establishment spun off from a state-owned (municipal) company or a former state-owned (ex-municipal) privatized company	-
New establishment as a private company	-
Company size	+
Business diversification	+
Business internationalization	+
Intensity of R&D/innovation activities	+
Good financial performance	+
Sound liability structure	+
Fund procurement from the capital market	-
Fund procurement from financial institutions	+
Operation in a regulated industry	-

Note: This table summarizes the theoretical predictions of the impacts of factors that may affect the survival probability of Russian firms on the basis of the discussion in Section 3 of the paper. The sign '+' denotes a positive correlation between a given factor and the survival probability, '-,' for a negative correlation. The question mark, "?," means that the impact is unpredictable.

Empirical methodology

- To verify the hypotheses, I estimate the Cox proportional hazard model in the form:

$$\ln h(t|x_{i1}, \cdots, x_{in}) = \ln h_0(t) + \sum_{j=1}^{n} \beta_j x_{ij}.$$

- The Breslow (1974) method is adopted to deal with the right-censoring.
- Parameter estimate β to be reported in this paper is the hazard ratio.
- Estimation of the Cox model is conducted using not only the observations of the entire sample but also those of two subsample groups of independent firms and group companies.

Variables used in the empirical analysis

Definition of variables (variable name)	Descriptive statistics	
	Mean	S.D.
(A) Variables for the independence of governance bodies		
Ownership share of outside shareholders (*OWNOUT*)	1.772	2.096
Outsideness of the chairman of the board of directors (*BOALEA*)	0.817	0.870
Proportion of outsider directors (*BOACOM*)	0.473	0.348
Proportion of outsider auditors (*AUDCOM*)	0.403	0.399
Audit firm attribute (*AUDFIR*)	0.339	0.575
First principal component score for the independence of the governance bodies (*INDSCO*)	0.000	1.492
(B) Variables for the abundance of human resources available to governance bodies		
Ownership share of commercial banks (*OWNBAN*)	0.145	0.593
Total members of the board of directors (*BOAMEM*)	6.595	2.389
Total number of outsider directors (*OUTDIR*)	3.250	2.812
Total number of insider directors (*INSDIR*)	3.326	2.440
Total members of the audit committee (*AUDMEM*)	3.522	2.143
Total number of outsider auditors (*OUTAUD*)	1.398	1.700
Total number of insider auditors (*INSAUD*)	2.110	1.983
First principal component score of variable for the human resource abundance of the governance bodies (*HUMSCO*)	0.000	1.504
(C) Variables for the governance bodies' influence over corporate management		
Influence of the general shareholders' meeting (*INFGSM*)	1.292	0.771
Influence of the chairman of the board of directors (*INFCHA*)	1.233	0.715
Influence of the board of directors (*INFBOA*)	1.575	0.627
Influence of the audit committee (*INFAUD*)	0.591	0.705
Influence of the audit firm (*INFAUF*)	0.515	0.602
First principal component score of the influence of the governance bodies (*INFSCO*)	0.000	1.272

Summary of estimation results

Variable	Effect on firm survival (hazard ratio)		
	All firms	Independent firms	Group companies
(A) Effect of the independence of the governance bodies			
Outside shareholding (*OWNOUT*)	1.004	0.973	1.005
Outsideness of board chairman (*BOALEA*)	1.021	1.055	0.971
Proportion of outsider directors (*BOACOM*)	0.913	1.864 *	0.264 **
Proportion of outsider auditors (*AUDCOM*)	0.353 **	0.411 **	0.233 ***
Audit firm attribute (*AUDFIR*)	1.096	1.135	1.104
First principal component score (*INDSCO*)	0.867 *	0.931	0.678 ***
(B) Effect of the abundance of human resources available to the governance bodies			
Ownership of commercial banks (*OWNBAN*)	0.988	0.651 ***	1.085
Number of board directors (*BOAMEM*)	0.974	1.116	0.756 **
Number of outsider directors (*OUTDIR*)	0.940 ***	1.072 *	0.780 ***
Number of insider directors (*INSDIR*)	0.991	0.932	1.068
Number of audit committee members (*AUDMEM*)	1.047	1.055 **	1.020
Number of outsider auditors (*OUTAUD*)	0.943	1.001	0.885 **
Number of insider auditors (*INSAUD*)	1.087 ***	1.073 ***	1.177 ***
First principal component score (*HUMSCO*)	0.843	0.946	0.739
(C) Effect of the governance bodies' influence over corporate management			
Influence of the general shareholders' meeting (*INFGSM*)	1.334 *	1.278 *	1.528 *
Influence of the chairman of the board of directors *(INFCHA)*	0.771	0.800	0.710
Influence of the board of directors (*INFBOA*)	0.681 **	0.603 **	0.845
Influence of the audit committee (*INFAUD*)	0.665 **	0.570 ***	0.763
Influence of the audit firm (*INFAUF*)	0.617 ***	0.716	0.451 **
First principal component score *(INFSCO)*	0.855 ***	0.857 *	0.840

Empirical results and conclusions

- Among the 741 large and medium-sized industrial companies that had been investigated in 2005, 104 actually exited from the market by the 4th quarter of 2009, and these exits were largely from 2008 to 2009.
- The estimation of the Cox proportional hazard model strongly suggest that the independence of governance bodies, their human resource abundance, and influence over corporate management are statistically significant factors affecting the probability of the firm survival in Russia.
- In particular, the variables regarding the board of directors and the board of auditors repeatedly show significant estimates, implying that these two company organs are likely to play a vital role in increasing the survival probability of Russian firms.

Empirical results and conclusions (2)

- However, the estimation results also demonstrate that the presence of the insider auditors and the assertiveness of the general shareholders' meeting have a rather negative impact on firm survival against the hypothesis H2 and H3.
- Moreover, I found that there is a sharp difference in survival logic between independent firms and group companies in the crisis period.
- For the group companies, the independence of governance bodies and their human resource abundance do matter for survival.
- In contrast, for the independent firms, the most important factor for enhancing their survival probability is the practical influence of their company organs on management.

Empirical results and conclusions (3)

- The lower survivability of group companies suggests that Russian business groups tried to overcome the global financial crisis by intensively liquidating or downsizing their affiliates whose profits were low and future prospects uncertain.
- The essence of the empirical evidence in this paper is that corporate governance bodies effective to discipline top management in a Russian firm also serve as important factors in determining a company's survival capability.
- In the above sense , this study demonstrates the need to reconsider skeptical views on the formal corporate governance institutions in Russia.

Thank you for your kind attention!

Global Financial Crisis, Corporate Governance, and Firm Survival
The Russian Experience

THE END