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Challenges and Prospects after the Crisis

DOES CORPORATE GOVERNANCE MATTERS TO FINANCIAL MARKETS?

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Outline

Introduction

There is a general consensus among economists that capital market development increases the corporate governance standards. The corporate governance can play important role in improving firms' access to capital and in attracting global portfolio equity.

Not less important, empirical studies indicate that corporate governance improve firms evaluation and their performance. All of these mechanisms and effects of better corporate governance have positive impact and promote capital market development.

The main aim of the study is to investigate does corporate governance matters to capital markets for the sample of 38 European economies in the period 2006-2014.

Literature review

The earlier stream of the empirical literature related to stock market development has focused on macroeconomic and institutional specific determinants. For example, Carcia and Liu (1999) found that set of macroeconomic factors are the most important determinants of stock market development, while sevaral other studies have shown that legal protection for investors is positively associated with capital market development, Djankov at el. (2007).

Our paper contributes to the literature in a way that it applies more appropriate panel technique (System Generalized Method of Moments) to investigate the relationship between corporate governance and stock market development in European economies (developed EU, New EU members and non-EU countries). The paper uses sevaral new macroeconomic and financial specific determinants (foreging direct investment, stock price volatility, and banking sector development) as controling variables.

Theoretical considerations

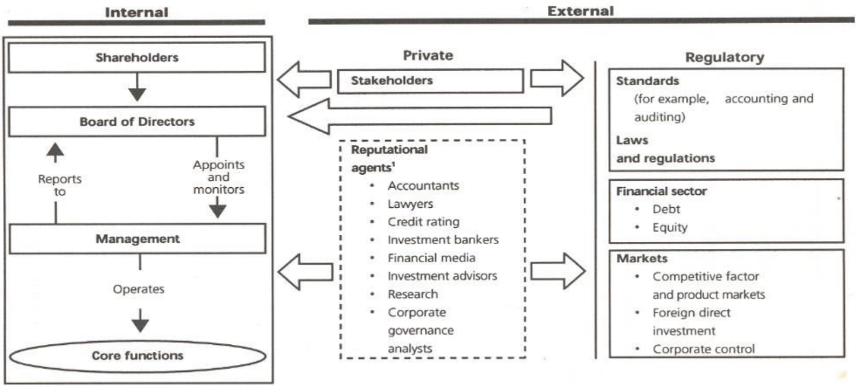
Corporate governance is, to a large extent, a set of mechanism through which outside investors protect themselves against expropriation by the insiders. In general, expropriation is related to the agency problem described by Michael Jensen. Importantly, when the legal system does not protect outside investors, corporate governance and external finance do not work well.

Enforcement of laws is as crucial as their contents. In most countries, laws and regulations are enforced in part by market regulators, in part by courts, and in part by market participants themselves.

Corporate governance theories and surveys.

Actors in corporate governance

Figure 1: Modern corporations are disciplined by internal and external factors



1. *Reputational agents* refer to private sector agents, self-regulating bodies, the media, and civic society that reduce information asymmetry, improve the monitoring of firms, and shed light on opportunistic behavior.

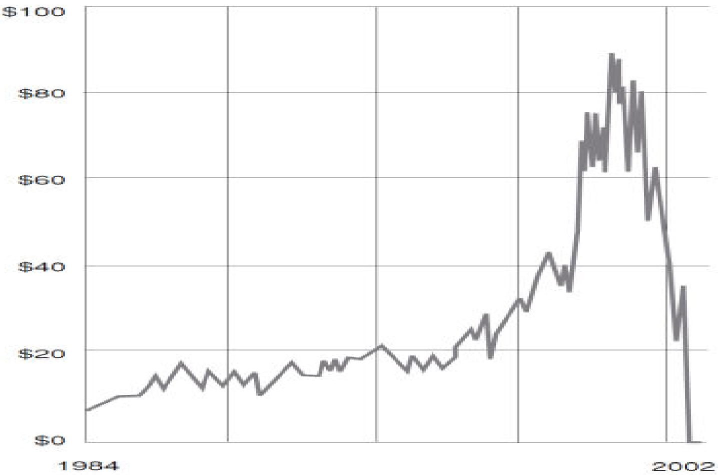
History of corporate governance

Year	Corporate Event
1600s:	The **East India Company** introduces a Court of Directors, separating ownership and control (U.K., the Netherlands)
1776:	**Adam Smith** in the «Wealth of Nations» warns of weak controls over and incentives for management (U.K.)
1844:	First Joint Stock Company Act (U.K.)
1931:	**Berle and Means** publish their seminal work «The Modern Corporation and Private Property» (U.S.)
1933/34:	The Securities Act of 1933 is the first act to **regulate the securities markets**, notably registration disclosure. The 1934 Act delegated responsibility for enforcement to the SEC (U.S.)
1968:	The EU adopts the first **company law directive** (EU)
1987:	The **Treadway Commission** reports on fraudulent financial reporting, confirming the role and status of audit committees, and **develops a framework for internal control**, or COSO, published in 1992 (U.S.).
Early 1990s:	Polly Peck (£1.3bn. in losses), BCCI and Maxwell (£480m) **business empires collapse**, calling for improved corporate governance practices to protect investors (U.K.)
1992:	The **Cadbury Committee** publishes the first code on corporate governance; and in 1993, companies listed on **U.K.'s Stock Exchanges** are required to disclose governance on a «comply or explain» basis (U.K.)
1994:	Publication of the **King Report** (S. Africa)
1994, 1995:	**Rutteman** (on Internal Control and Financial Reporting), **Greenbury** (on Executive Remuneration), and **Hampel** (on Corporate Governance) reports are published (U.K.)
1995:	The Russian **Law on Joint Stock Companies** is adopted (Russia)
1995:	Publication of the **Vienot Report** (France)
1996:	Publication of the **Peters Report** (the Netherlands)
1998:	Publication of the **Combined Code** (U.K.)
2001:	**Enron Corporation**, then the seventh largest listed company in the U.S., declares bankruptcy (U.S.)
2001:	The **Lamfalussy** report on the Regulation of European Securities Markets (EU) is published
2002:	Publication of the **German Corporate Governance Code** (Germany)
2002:	Publication of the FCSM **Russian Code of Corporate Conduct** (Russia)
2002:	The **Enron collapse** and other corporate scandals lead to the **Sarbanes-Oxley Act** (U.S.); the **Winter** report on company law reform in Europe is published (EU)
2003:	The **Higgs** report on non-executive directors is published (U.K.)
2004:	The Parmalat scandal shakes Italy, with possible EU-wide repercussions (EU).

Scandals

Company	Year	Country	Detail
Daewoo	1998	South Korea	Accounting fraud and embezzlement by former CEO
Flowtex	1999	Germany	Insolvency after exaggerating sales figures
Enron	2001	USA	Bankruptcy of the seventh largest US company due to accounting fraud
Marconi	2001	UK	Bankruptcy due to overpriced acquisitions and to neglecting of controls
Swissair	2001	Switzerland	Insolvency due to wrong strategy, inefficiencies of the board
HIH	2001	Australia	Stock market manipulation
OneTel	2001	Australia	Overstretching of budget for overambitious acquisitions
Allied Irish Bank (AIB)	2002	Ireland	Loss of $691m in unauthorized trading
Worldcom	2002	USA	Company collapses with $41bn debt due to fraudulent accounting
Tyco	2002	USA	Overstretching of budget for overambitious acquisitions leading to bankruptcy
Vivendi	2002	France	Overstretching of budget for overambitious acquisitions leading to losses of $23.3bn
Royal Ahold	2003	Netherlands	$500m accounting fraud
Parmalat	2003	Italy	Undisclosed debts of €14.3bn
Volkswagen	2005	Germany	Abuse of corporate funds to provide inappropriate benefits

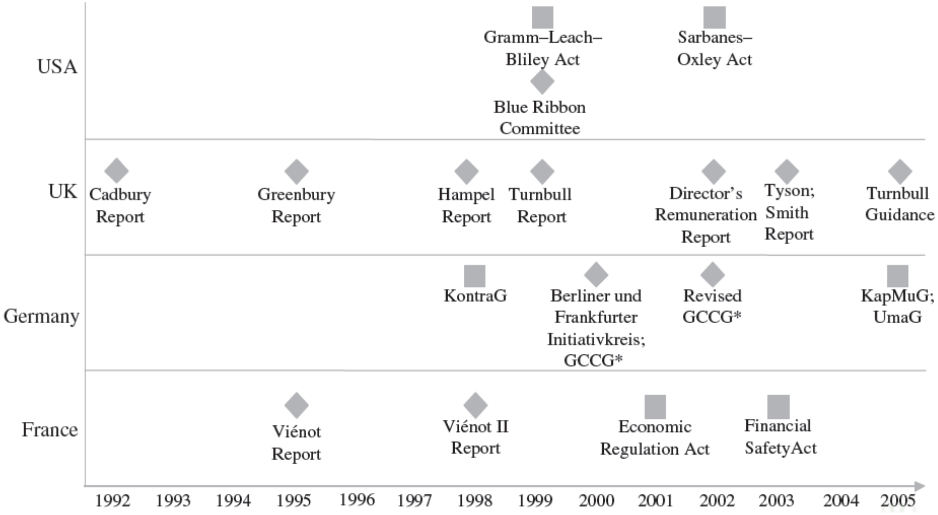
The smartest guys in the room



Enron Stock Price

Data Source: New York Stock Exchange, Nasdaq OTC.

Legal framework



Research methodology

In order to fulfill the main aim of the paper, dynamic panel data model (system GMM) is used for several reasons.

It accounts for the endogeneity of lagged dependent variable and for the potential endogeneity of some other explanatory variables. Also, this method deals with well-known econometric problems such as omitted variables and error measurement. These problems can produce potential bias in coefficients and standard errors estimations.

The system GMM (system generalized method of moments) estimator introduced by Arrelano and Bover (1995) and further developed by Blundell and Bond (1998) is appropriate for panel data like the one used in this paper with relatively large N (number of countries) and small T (number of years).

Sample and data

The broadest dataset used in the empirical research includes **28 EU countries** (Austria, Belgium, Croatia, Czech Republic, Demark, Estonia, Hungary, Latvia, Lithuania, Finland, France, Iceland, Ireland, Italy, Germany, Greece, Netherlands, Norway, Portugal, Poland, Romania, Spain, Sweden, the Slovak Republic, Switzerland and Slovenia), **4 EU candidate countries** (Macedonia, Serbia, Montenegro, and Turkey), **1 potential candidate** (Bosnia and Herzegovina) and **6 non-EU European countries** (Armenia, Georgia, Kazakhstan, Russian Federation and Ukraine)and covers **annual data** in the period 2006-2014. The choice of dataset is based on the availability of data for European countries.

Econometric model specification

The general form of the two-steps Arrelano-Bond model specification has the following structure:

$$CMD_{it} = \alpha CMD_{i,t-1} + \beta M_{it} + \gamma F_{it} + \varphi CG + \lambda Y_{i} + \mu_{i} + u_{i}$$

where, CMD_{it} is the capital market development in country i over time period t measured by the stock market capitalization relative to GDP; $CMD_{i,t-1}$ is a lagged value of capital market development, i.e. lagged dependent (endogenous) variable which allows for a dynamic structure of the model: vector, M_{it}, contains **macroeconomic specific determinants** which vary over i and t; vector, F_{it}, represents the **financial specific determinants** of stock market development, while the vector, CG_{it}, is represented by the proxy variables that capture the **corporate governance** as a main interest variable in this empirical work.

The symbol, Y_i within the equation is related to interaction variable that measure whether the EU status of the countries is important in the relationship between the corporate governance quality and capital market development. The other part of the equation contains individual (unobservable country-specific) effects μ_i, along with the independently identically distributed stochastic disturbance term u_{it}.

Variables

Proxies for **capital market development** include Stock Market Capitalization relative to GDP and Stock Market total traded value relative to GDP

We use a set of **macroeconomic specific determinants.**
- annual growth rate of real GDP as a measure of economic performance;
- inflation rate as a measure of macroeconomic stability, and
- investment rate measured by the gross fixed capital formation relative to GDP

Proxies for **financial specific determinants** are: Bank Credit to private sector relative to GDP which represent the **banking sectors development** and Stock price volatility (the average of the 360-day volatility of the national stock market index) which measure the **capital market (in) stability**.

Efficacy of corporate governance, protection of minority shareholders' interest, and corporate ethics are used as proxy variables to measures the **quality of corporate governance.** This variable is derivate by the Executive Opinion Survey (EOS) and reported from the World Economic Forum (WEF).

Estimated results based on dynamic panel investigation

DEPENDENT VARIABLE: Stock market development	(Model 1)	(Model 2)	(Model 3)	(Model 4)
INDEPENDENT VARIABLES:				
L1. Stock market development	0.436***	0.444***	0.474***	0.403***
	(0.000)	(0.000)	(0.000)	(0.000)
Investment rate	0.690*	0. 749***	0.933***	0.561***
	(0.074)	(0.000)	(0.000)	(0.000)
Growth rate	0.885***	0.945***	0.816***	0.877***
	(0.000)	(0.000)	(0.000)	(0.000)
Banking sector development	0. 272***	0.301***	0.245***	0.313***
	(0.000)	(0.000)	(0.000)	(0.000)
Inflation rate	-1.405***	-1.294***	-1.279***	-1.394***
	(0.001)	(0.000)	(0.000)	(0.000)
Stock price volatility	-0. 457***	-0. 435***	-0.489***	-0.464***
	(0.000)	(0.000)	(0.000)	(0.000)
Foreign direct investment	0.276**	0.311***	0.346***	0.339***
	(0.028)	(0.000)	(0.000)	(0.000)
Efficacy of corporate governance	12.238***			18.488***
	(0.016)			(0.000)
Protection of minority shareholders' interest		7.762***		
		(0.000)		
Corporate ethics			4.435**	
			(0.022)	
Efficacy of corporate governance*EU status				-3.517*
				(0.055)
Constant	-57.704	-41.089	-27.928	-74.773
	(0.009)	(0.001)	(0.001)	(0.000)
Hansen test (p-value) (Ho: instruments are valid)	0.096	0.052	0.051	0.073
Arellano-bond AR(2) test (p-value) (Ho: no second order serial correlation)	0.08	0.05	0.04	0.05
Observation	194	194	194	194
Number of countries	34	34	34	28

Note: ***statistical significance at the 1% level, ** at 5% level, * at the 10% level (in parenthesis are p-values).
All models estimated by System GMM using robust, two-step method.
Source: Authors' calculation

Robustness tests

We have carried out several standard specification tests (Hansen test and Arellano-Bond test for AR(2)) in order to verify the reliability of our estimates.

The result of the Hansen test supports the validity of the over-identifying restrictions (the p-value is under the critical value, so we failed to reject the null hypothesis that the instruments are valid)

Arellano-Bond test AR(2) indicates the absence of second order serial correlation in all regressions (the p-value is not significant, so we failed to reject the null hypothesis for no second order serial correlation).

Conclusions and main findings

The estimated results indicate that growth rate of real GDP and foreign direct investment are positively and significantly associated with capital market development, while inflation rate and stock price volatility as measures of macroeconomic and financial instability have negative influence on capital market activity. Moreover, the results found that banking sector and capital markets are complementary, suggesting that the increasing trend of bank credit to private sector stimulates capital markets.

More importantly, the estimated results demonstrate positive and significant relationship between corporate governance and capital market development after controlling for fundamental macroeconomic and financial specific determinants. These results indicate that corporate governance facilitates the capital market development in European economies.
Finally, the results found that EU status of the countries has significant influence on the relationship between corporate governance and stock market development.

Thank you for your attention!