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MASTER THESIS

**Corporate Governance Index for the Prague Stock
Exchange and Zagreb Stock Exchange Listed Companies**

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Declaration of Authorship

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Prague, May 18, 2012

Tihana Ibrahimpašić

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„Composite indicators are a way of distilling reality into a manageable form.“¹

¹ Euroabstracts (2003) Mainstremaing Innovation. Published by the European Commission, Innovation Directorate, Vol. 41-1, February 2003.

Abstract

This thesis primarily focuses on the construction of a firm-specific index measuring the quality of corporate governance in the most liquid Czech and Croatian companies. The index is made by following OECD recommendations on construction of composite indicators. It allows comparison of best practices implementation on the overall level, and it also provides with a comprehensive analogy in terms of various governance domains performance. These domains are represented by four sub-indices: Board, Conflict of Interest, Shareholders' Rights, and Transparency and Disclosure. Initial assumption, stating that the Czech companies should have higher overall Corporate Governance Index score than the Croatian companies, is approved. Moreover, the Czech companies have stronger performance in three sub-indices: Board, Conflict of Interest, and Transparency and Disclosure, whereas the Croatian companies have negligible advantage solely with regard to the Shareholders' Rights Sub-index.

Keywords:

corporate governance; corporate governance index; The Czech Republic; Croatia; OECD

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Acronyms

CG – corporate governance

CGI – corporate governance index

CPF – Croatian Privatisation Fund

CLSA - Credit Lyonnais Securities Asia

EBRD – European Bank for Reconstruction and Development

EC – European Commission

ECGI – European Corporate Governance Institute

EU – European Union

OECD – Organisation for Economic Co-operation and Development

FEE - European Federation of Accountants

FTSE - Financial Times Stock Exchange

FDI - foreign direct investment

IMF – International Monetary Fund

ISS - Institutional Shareholder Services

IRRC - Investor Responsibility Research Centre

IPF – investment privatisation fund

PSE - Prague Stock Exchange

SEC - Securities and Exchange Commission

SFRY – Socialist Federal Republic of Yugoslavia

SET - Stock Exchange of Thailand

ZSE - Zagreb Stock Exchange

Master Thesis Proposal

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Proposed Topic

Corporate Governance Index for the Prague Stock Exchange and Zagreb Stock Exchange Listed Companies

Topic Characteristics

Firstly, the thesis will explain corporate governance development in both Czech and Croatian market in last two decades, which is necessary to understand the firm-level corporate governance, measured for the most liquid companies – Prague Stock Exchange companies whose stocks take part in the PX Index, and Zagreb Stock Exchange companies included in the CROBEX10 Index. The analysis will be based on the unique Corporate Governance Index, containing variables that refer principally to the OECD best practice recommendations. The main contribution of this thesis is the index itself, representing the composite indicator consisted of sub-indices covering practices in terms of: board structure and functioning, conflict of interest, shareholders' rights, and transparency and disclosure. It will precisely point out the problematic areas and thus help companies create necessary changes to become more competitive.

Hypothesis:

Prague Stock Exchange listed companies have higher level of governance practices implementation than Zagreb Stock Exchange companies.

Methodology:

The Corporate Governance Index will be constructed as a composite indicator according to OECD recommendations. Variables on fulfillment of certain best practices will be collected by the questionnaire and verified by the author to avoid missreporting. Then the process of index construction will include the following main steps: analysis of index consistency, weighting of sub-indices, aggregation of the Corporate Governance Index.

Outline:

1. Introduction
2. Literature review: starting with theoretical background on corporate governance in transition countries and corporate governance indices
3. Questionnaire to companies listed on Prague and Zagreb Stock Exchanges
4. Development of own corporate governance index
5. Robustness and consistency checks
6. Conclusion and suggestions

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Chapter 1

Introduction

Lately the importance of corporate governance has been magnified worldwide, especially due to proliferation of numerous scandals and crisis, namely cases like Enron, WorldCom, Adelphia Communications, Tyco International, Parmalat, Satyam Computer Services, etc. Due to globalisation and complexity of modern corporations, such failures had even more detrimental impact for public confidence in securities markets. The reaction to these major corporate and accounting scandals in the United States was embodied in the Sarbanes–Oxley Act in 2002, with much stricter rules publically traded companies needed to comply with. This Act, as well as the other related American legislation, also influenced the European Union actions concerning this matter (Naciri, 2008). The European Commission's Action Plan: “Modernising Company Law and Enhancing Corporate Governance in the European Union – A Plan to Move Forward” from 2003, is the key document on corporate governance in the European Union, while a number of directives, recommendations, regulations and studies to promote good corporate governance have been supplemented. Besides, a great number of national governance codes adhere to Principles of Corporate Governance issued by Organisation for Economic Co-operation and Development (OECD). This document was delineated by OECD Ministers in 1999 and has become an international benchmark for policy makers, investors, corporations and other stakeholders around the world. Since then, there were couple of reviews which have been continuously upgrading main issues of corporate governance, thus representing distinguishable directive for institutional, legislative and regulatory initiatives in both OECD and non-OECD countries.

Both countries comprised by this thesis, the Czech Republic and Croatia, have been obviously influenced by the European Union legislation, and in addition they also adhere to OECD guidelines. In this research the subject of interest is comparison of good corporate governance practices implementation on a firm-level. These practices are mainly extracted from OECD recommendations, but also other sources are taken into consideration. Moreover, the idea of this thesis is to tell a story on development of corporate governance in both countries, which will help to set the context for further firm-level examination. Both countries have had similar experiences since they underwent major political and economic changes that left tremendous impact on corporate governance setting. Nevertheless, it seems that the Czech Republic is few years ahead of Croatia in terms of development of governance mechanisms - an essential

concept of the hypothesis tested is that the encompassed Czech companies should have higher level of governance practices implementation than the Croatian ones. Solely the most liquid companies in each country are analysed, since they are market makers and not only in trading, but might also be in terms of corporate governance.

In order to measure a level of good governance practices implementation and to verify whether Czech companies perform better with regard to that, a composite indicator is made. In fact, the main contribution of this thesis is construction of the comprehensive Corporate Governance Index. Unlike other measures of corporate governance commonly used in different research papers, this index captures all major aspects of corporate governance: board structure and functioning, conflict of interest, shareholders' rights, and disclosure and transparency (which then represent separate sub-indices in the overall index). The most liquid companies, which take part in the PX Index of the Prague Stock Exchange and the CROBEX10 Index of the Zagreb Stock Exchange, are analysed in terms of the attributes related to corporate governance. The main instrument of data gathering is the Corporate Governance Questionnaire filled in directly by the companies, whereas independent evaluation of the resulting answers is conducted by the author, using information from various publicly available sources such as company websites, disclosure reports and stock exchange databases. The index is a weighted average of the scores given to the four sub-indices; the values range from zero to one hundred where higher scores indicate better governance practices implementation. Moreover, four various versions of the index are constructed, based on different weighting and aggregation techniques; the selection is then made by testing correlation of each index type to the alternative measure of corporate governance - the directors' independence.

The thesis proceeds as follows. Chapter 2 begins with description of definitions and importance of corporate governance for today's economies. Then the detailed development of corporate governance is shown both for the Czech Republic and for Croatia, in order to get the broader understanding of the topic analysed. Also, other governance indices used in the literature are presented. Chapter 3 describes the main research interests of the author. Chapter 4 systematically delineates methodology used – description of the samples and the process of the Corporate Governance Index construction. Chapter 5 provides with the summary statistics and the empirical results. Chapter 6 outlines the added value of the thesis and gives some ideas for further research. Finally, Chapter 7 presents the conclusions and addresses some potential limitations.

Chapter 2

Literature Review

2.1. Definitions, Models and Importance of Corporate Governance

2.1.1. Definitions of Corporate Governance

The understanding of corporate governance is usually prone to diverse variations. Sir Adrian Cadbury in the Report on the Committee on Financial Aspects of Corporate Governance says that corporate governance is the system by which companies are directed and controlled (Cadbury, 1992). Moreover, corporate governance is often identified as a pure concept of control. In that sense, it deals with the ways in which suppliers of finance to corporations assure themselves of getting a return on their investment (Shleifer, Vishny, 1997). This definition can be extended to specify corporate governance as being concerned with the resolution of collective action problems among dispersed investors and the reconciliation of conflicts of interest between various corporate claimholders (Claessens, 2003). Such comprehension is classified in the domain of straightforward principal – agent problem, which is sometimes also referred to the division of ownership and control. Indeed, separation of ownership and control is where it all started from. The first studies on the system of corporate governance appeared in the 1930's, based on the research on the value creating separation between shareholders and management undertaken by Berle and Means (1932). This scientific concern occurred during the decline of traditional family businesses, whose owners and managers were the same persons, being subsequently replaced by companies with dispersed capital ownership, in which there was a clear separation between ownership and control (Brezeanu, Stănculescu; 2008). Even Adam Smith criticised this corporate form of business: "...The directors of such (joint-stock) companies, however, being the managers rather of other people's money than of their own, it cannot well be expected, that they should watch over it with the same anxious vigilance with which the partners in a private co-partnery frequently watch over their own... Negligence and profusion, therefore, must always prevail, more or less, in the management of the affairs of such a company." (Smith, 1776). So separation of ownership and control created substantial space for potential conflicts among various claimants. In order to clearly identify such corporate governance issues, it is necessary to understand different corporate governance models; one

should keep in mind that, according to the different model, different conflicts may arise and they are hindered primarily through external or internal mechanisms of control.

2.1.2. Models of Corporate Governance

In essence, there are two conceptually different models of corporate governance: the shareholder and the stakeholder model.

The shareholder model is more common for Anglo-Saxon countries, with well developed capital markets, which are the main source of firms' financing, and broadly dispersed ownership. The core conflict in such widely held system is between controlling managers and „outside“, widely dispersed shareholders, hence this model is also sometimes called „outsider model“ (Mejstrik, 2005). Consequently, the role of corporate governance is to limit/eliminate opportunistic managerial behaviour, which often contributes to adoption of non-beneficial strategies for shareholders. This goal is set due to the fact that small shareholders are endangered since often they cannot sufficiently monitor management's actions because of coordination problems – the principal - agent problem. Although they express power through the election of the board of directors as their representative, another important mechanism is external monitoring in a sense of an active market for corporate control, the term first time brought by Henry Manne in 1965. It is known to be an effective corporate governance mechanism (Jensen, 1993; Shleifer and Vishny, 1997; Scharfstein, 1988; Bebchuk, 2003). Thus, managers are strongly motivated to improve the performance because otherwise they will be sanctioned by hostile takeovers and loss of their positions. Moreover, an important element in shareholder protection is reliance on liquid and well functioning stock market, because it allows them to exit the firm cheaply.

The stakeholder model is typical for the continental European countries such as Germany, The Netherlands, Austria, Belgium, etc. Ownership is concentrated among major investors. The median largest voting block values in the listed companies in the above mentioned countries exceed 50 percent, i.e. more than half of the companies are controlled by a majority owner (Barca, Becht; 2001). The owners of firms tend to have an enduring interest in a company and often they directly influence management; on top of that, they often hold positions on the board of directors or other senior managerial positions. Being powerful in the decision making process, major shareholders' interests are well protected due to existence of internal mechanism that mitigates conflicts of interest between management and shareholders, and it is represented through intense motives of major investors (shareholders) to monitor and/or eliminate poorly performing management (Franks, Mayer, Renneboog; 2001). Moreover, internal governance

system concerns the interaction between or among firm insiders, specifically, management, directors and employees (Baber, Liang; 2008). Also, other groups (stakeholders) may exert substantial influence on some decisions of the company, such as employees, trade unions, firm-specific buyers, public, etc. The advantage of monitoring by blockholders is that it is occurring on a continuous basis, unlike external monitoring which is more typical for crisis situations (Bolton, Von Thadden; 1998). Still many problems may occur, and namely existence of blockholders can be associated with opportunistic behaviour in relation to minority shareholders – the conflict between „inside“ controlling blockholders and „outside“ minority shareholders. Also, there is a possibility for a standard agency problem between managers and shareholders as described in the shareholder model.

Table 1: Models of Corporate Governance

	Shareholder Model	Stakeholder Model
Benefits	<ul style="list-style-type: none"> - diversification possibility - increased liquidity and lower costs of equity 	<ul style="list-style-type: none"> - bigger power to efficiently monitor management
Shortcomings	<ul style="list-style-type: none"> - unaccountable boards exposed to CEO who may have “visionary projects” such as massive acquisition undertakings - lack of monitoring at the shareholder and the board level - free riding 	<ul style="list-style-type: none"> - unaccountable boards exposed to influence of blockholders, minority shareholders can be damaged - lower liquidity and higher costs of equity
Guidelines	<ul style="list-style-type: none"> - increase autonomy of the board by engaging independent directors - improve voting system: proxy voting, voting by mail/electronic voting - separation of CEO and chairman of the board - increase management liability - market for corporate control 	<ul style="list-style-type: none"> - minority shareholder protection: cumulative voting, limits on the voting power of blockholders, etc.

Source: Becht (2003), Mejsstrik (2005); adjusted by author

There are some prominent papers, such as Lane (2003) or Hansmann and Kraakman (2001), stressing that global trend of convergence of the corporate governance systems towards Anglo-American model has been occurring. One good example of above mentioned trend, according to some authors, may be document called Principles of Corporate Governance published by OECD,

designed to assist countries in creating their own corporate governance codes, thus becoming a benchmark to countries on their way of reaching more developed level of corporate governance. For instance, Tricker (2010) claims that OECD guidelines actually reflect what was considered as a best practice in the United Kingdom and the United States, and as an illustration of that the author mentions a requirement demanding listed companies to have unitary boards, independent outside directors, and board committee, while the focus is on enhancing shareholder value. Tricker further claims that an Anglo-American approach to corporate governance became the basis for governance codes around the world. Still, this should be taken very cautiously. On the other hand, the worldwide convergence is not necessarily a straightforward exercise in practice due to the persistent differences in the world's corporate ownership structures and other specific reasons, even though some nations have recently embarked on a process of change in their corporate laws in the direction of the Anglo-Saxon American shareholder-oriented model, with a view of integrating better into international financial and product markets (Palmer, 2011). Moreover, there are signs that the commitment to social democracy will survive this experience in countries with a stakeholder-oriented business climate for a considerable period of time (if not for good) (Palmer, 2011). Still, unlike these two, some more compromising predictions exist. Assuming it is not imminent (if not impossible) that the consensus and worldwide convergence will emerge in the proximate future does not mean that corporate governance systems must be ever-conservative about learning from one another (Luo, 2007). Indeed, each system must transfer some efficient and compatible elements for use to another system, without destroying the equilibrium of the system itself (Luo, 2007). Thus, referring back to OECD guidelines, one should also notice that this document dedicates a whole chapter to stakeholders, meaning it is not fully based on the shareholder model.

2.1.3. Importance of Corporate Governance and Extended Definitions

When it comes to the importance of corporate governance, especially in present circumstances of proliferation of numerous scandals and crisis, and, up to certain extent, failures of the whole corporate governance systems, much larger recognition, a wider extent and a bigger framework have to be attributed to corporate governance (Cornell, Shapiro; 1987; OECD, 1999). With globalisation vastly increasing the scale of trade and the size and complexity of corporations and the bureaucracies constructed to attempt to control it, the importance of corporate governance has been even more amplified (Applied Corporate Governance website, 2009).

In order to capture the role of corporate governance in modern economies, its purpose should be clearly defined. In brief it comprises the following:

- to facilitate and stimulate the performance of corporations by creating and maintaining incentives that motivate corporate insiders to maximize firms' operational efficiency, return on assets and long-term productivity growth;
- to limit insiders' abuse of power over corporate resources – whether such abuse takes the form of insiders' asset stripping or otherwise siphoning off corporate resources for their private use, and/or their causing significant wastage of corporate-controlled resources (the so-called agency problems) – which are otherwise likely to result from insiders' self serving behaviour;
- to provide means to monitor managers' behaviour to ensure corporate accountability and provide for reasonably cost-effective protection of investors' and society's interests vis-à-vis corporate insiders (Oman, Fries, Buiters; 2003).

On the other hand, one should be aware that corporate governance is only part of the larger economic context in which firms operate, that includes, for example, macroeconomic policies and the degree of competition in the markets. Its framework also depends on the legal, regulatory and institutional climate. In addition, factors such as business ethics and corporate awareness of the environmental and societal interests of the communities in which a company operates can also have an impact on its reputation and its long-term success (OECD, 2004). Contemporary studies do not allow the concept of corporate governance to exist in the absence of an explicit reference to ethics and the stakeholder theory – the objective of a solid corporate governance framework should be maximisation of firms' contribution to the overall economy, including all the stakeholders. In that sense, corporate governance implies the relationship between shareholders, creditors, and corporations; between financial markets, institutions, and corporations; and between employees and corporations. Modern theory goes beyond this and embraces additional stakeholders such as government, community, trade associations, etc. Also, a more generous concept of corporate responsibility and citizenship has come to encompass corporate governance and its constituencies, including such aspects as the dealings of the firm with respect to culture and the environment (Dragomir, Ungureanu; 2009).

2.2. Corporate Governance in the Czech Republic

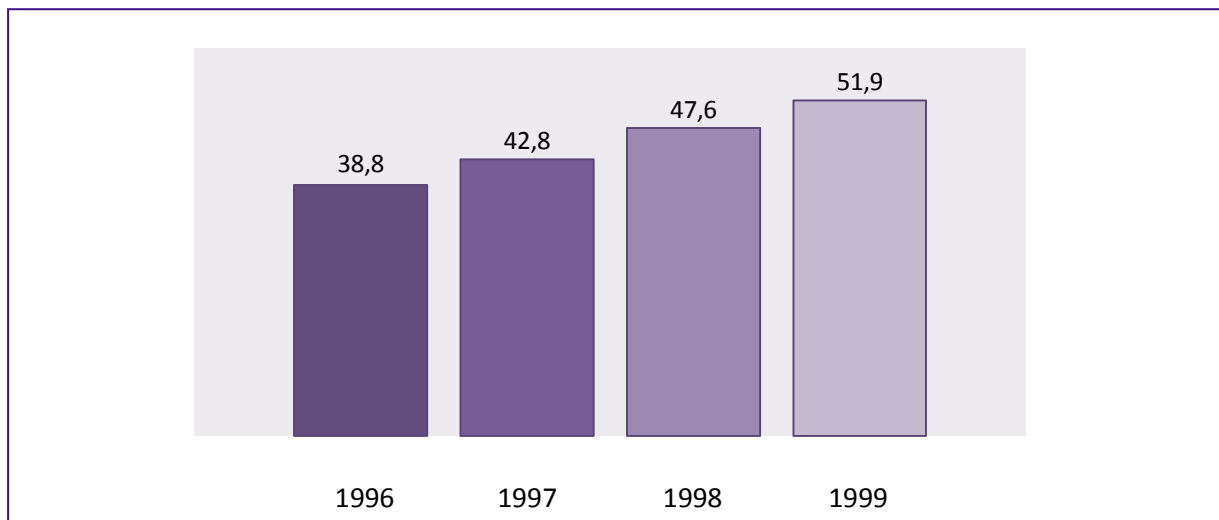
The Czech Republic underwent major political and economic changes in the recent history, on its way from communist to the capitalist regime. The restructuring of the whole system began with the "Velvet Revolution" in 1989, which represented a step towards huge transformation that was about to come. The shock therapy, popularly called "Big Bang" by IMF, started in January 1991 and it included sudden release of prices and currency controls, imposition of financial disposition, withdrawal of state subsidies and trade liberalisation, accompanied with the restructuring of property rights i.e. privatisation. Especially for the purposes of this thesis, privatisation is by far the most important; as the former Czech Minister of Privatisation once said: "Privatisation is not just one of the many items on the economic programme. It is the transformation itself" (cited in Nellis, 2002). Still, all the other substantial improvements attributed to the (trans)formation of corporate governance structures as well.

2.2.1. Privatisation Process and Its Impact on Corporate Governance

In 1989 the former Czechoslovakia had one of the smallest private sectors among the communist countries, employing about 1.2 percent of the labour force and producing only less than 1 percent of GDP (Hanousek, Kočenda; 2003). However, the Czech privatisation programme that came off resulted in almost 75 percent of productive capacity being transferred to the private sector by the beginning of 1995. There were three major programmes of privatisation: property restitutions (returning assets to initial owners from whom it was nationalised by the communist regime after 1948), small-scale privatisation (subjects were small economic business units such as restaurants, shops and enterprises, sold at public auctions) and large-scale privatisation. The first two types started in 1990 and were in the focus during early years of the transition. The large scale privatisation was crucial for the corporate governance changes. It started in 1991 and it consisted of two waves. The most important method used was voucher privatisation. It was appointed at vast number of citizens, who bought voucher points that allowed them to take part in bidding for shares, and later to keep them or trade on the secondary market. There were expectations that voucher privatisation would create "an active capital market as in the United States", while it was obvious that "individual citizens would have neither the capacity nor the incentive to provide any meaningful governance" (Fitzsimmons, 2002). Therefore, due to a concern of excessively dispersed and passive ownership, investment privatisation funds (IPFs) were introduced (World Bank, IMF, 2002). Each voucher holder had an option of assigning all or part of his points to one or more IPFs. As a result of considerable marketing campaigns by IPFs,

many individuals offered them all or most of their points. Moreover, IPFs formulated fund groups and in such manner managed to gain significant market share, strengthening their market power. Of the shares offered through the voucher scheme, two-thirds ended up with IPFs and one-third with private individuals (Claessens, Djankov, Pohl; 1997). Thus, the Czech voucher scheme led to highly concentrated ownership.

Figure 1: The Average Size (%) of the Largest Shareholder in the Czech Republic (1996 - 1999)¹



Source: Grosfeld, Hashi (2003)

Although new corporate governance structure led to an increased profitability and market valuation of privatised companies (Claessens, Djankov; Pohl; 1997), too much proprietary involvement of IPFs had a bad influence on companies because profits were extracted from the them rather than being used for investment and eventual restructuring (Hanousek, Kočenda; 2003). Besides, funds often created alliances and dominated the other fragmented owners – massive abuse of minority shareholders' rights was quite common, despite couple of restrictions on IPFs' maximum holdings. Another obstacle was that conflicts of interest were a very plausible possibility, because many funds were sponsored by commercial banks, and these banks were main creditors of the firms in which the funds invested (Coffee, 1996). Thus, banks practically had the biggest control. In addition, two secondary markets (the Prague Stock Exchange and alternative market called the RM-System) that were expected to work did not fulfil the predictions and roughly 80 percent of all shares were traded in large blocks "off-the-market" (Hanousek, Kočenda; 2003). Moreover, old problems, such as the fact that corporate sector was seriously distorted by the communist regime (weak microeconomic foundations of companies, administrative monopolies, soft budget constraints, market isolation from many other

¹ In terms of firms privatised through the voucher scheme.

economies, non-transparent book keeping, etc.) could not suddenly disappear (Kouba, 2004). Although the aggressive rhetoric used by the government hid a lack of institutional development (Grabbe, 2003), the mentioned problems (among which primarily concentration of share ownership and resulting growth of informal networks of insider ownership) led to market failures and contributed to the economic recession which hit the Czech Republic in 1997 (Vliegenthart, Horn; 2005). Despite increased profitability of privatised firms, corporate governance mechanisms did not work. Thus, the qualitative privatisation could only be achieved by coming to grips with the corporate governance issues (Andreff; 1996). It became clear to policy-makers that it would be necessary to “reform the reform” (Dragneva, Simons; 2001).

2.2.2. The pre-European Union Integration Period

Further step is to observe how decision on integration into the European Union influenced corporate governance of the Czech Republic. Privatisation was accompanied by many problems, in the first place exploitation of minority shareholders rights, frauds, asset stripping, corruption, management entrenchment, etc. Corporate governance regulation had thus become an important issue in restructuring of the Czech economy in the context of the EU accession. The EU had a pivotal influence on corporate governance structures, by stimulating its institutional development, most importantly within Accession Treaties and the *Acquis communautaire* (accumulated legislation constituting the body of EU law) conditionality. In such manner the EU has shaped “the entire range of public policies” (Schimmelfennig, Sedelmeier; 2004) that needed to be followed in order to successfully become a member of the EU. Europeanization in the context of Central Eastern European corporate governance is as a process by which the EU exports models of market regulation, and it affects the relations between firms, the state, and trade unions (Grabbe, 2003).

Knowing the biggest weaknesses of the system, numerous changes were introduced, and some of those are stated below.

The Investment Fund Act (1998) caused transformation of closed-end funds into open-ended funds, and this process was intended to be completed by 2003. The Act also reduced the maximum holding of IPF in a single company from 20 to 11 percent (OECD, 1998).

The amendment to the Banking Act (1998) prohibited banks from holding controlling stakes in companies other than banks, financial institutions and banking support companies (OECD, 1998). Generally, the Czech banking sector was quite a concern of the EU. There are some evidences that it had been left „intentionally non-privatised“ (Havrda, 2003). The Economist

even called it „parochial and politicized“ (The Economist, 1997). The EU identified the financial sector as a „key weakness in the Czech Republic's accession efforts“ (The European Commission, 1999).

The Phare programme (1990-2000) had a role of improving the functioning of Czech capital markets (strengthening and liberalisation) and it provided advice, training and equipment to help institutions to more effectively fulfil their new role in the market economy. It also contributed with **the Twinning programmes**, where bureaucrats, accustomed to their own countries' methods of working and assumptions about policies and policy-making processes, were advising on implementation within CEE governmental structures (Grabbe, 2003).

The Czech Securities Commission (1998) is by far the most important institution with regard to corporate governance, as well as its central advocate. It was founded as an independent and professional authority, which would supervise the capital market in cooperation with the Ministry of Finance and the Czech National Bank. It significantly contributed to restoring investor confidence in financial markets.

The most excessive Amendments to the Commercial Code (2001) are part of the process of harmonising Czech law with the European Union legislation. Several other acts were brought, such as **the Stock Exchange Act, the Bankruptcy and Composition Act and Listing Rules of the Prague Stock Exchange**.

The Corporate Governance Code (2001), issued by the Czech Securities Commission, is based on OECD Principles from 1999. It is a result of a working group engagement which consisted of members from the Prague Stock Exchange, the RM-System, the Associations of Banks, Insurers, Internal Audit and Pensions Funds, the Union of Accountants, the Czech Rating Agency, the Czech Institute of Directors, etc., and support from the British Know How Fund. The main objectives were to achieve the best practice on transparency and accountability for companies in the Czech Republic in order to encourage investor confidence (OECD, 2004).

All of these actions and measures have largely changed corporate governance system in the Czech Republic. Although the direction chosen was convergence to OECD standards and thus adherence to Anglo – American model up to a certain extent, according to the situation in 2003 the Czech corporate governance was characterised as an insider system, with a small number of individual investors and usually many companies owned by banks through their funds or subsidiaries. The situation in the Czech Republic was similar to that in Germany where commercial banks, through proxy votes, effectively control large equity stakes in firms and thus have a large influence on them. Capital-linked owners (companies, banks, insurers, government

institutions) were usually of a longer-term nature and were also distinguished by their interest in eliminating foreign investors, especially in strategic enterprises (Roubiřkova, 2005).

2.2.3. The European Union Integration Period and Developments Afterwards

In 2004 a revised Code of Corporate Governance was published, reflecting upon revisions in OECD Principles from 2004. This new Code does not differ a lot from the one published in 2001, but it is designed to illustrate a very dynamic development both in the area of creation and implementation of the corporate governance rules and in the actual operation of companies (Czech Securities Commission, 2004). The structure is generally the same, except it also contains elements proposed by the European Commission in its document “Modernising Company Law and Enhancing Corporate Governance in the European Union - A Plan to Move Forward“ from 2004. In addition, an even bigger difference is the fact that the new Code is not so biased towards Anglo-Saxon approach to corporate governance (Mejstrik, 2005). This is also confirmed by the Securities Commission: „In the sense of recommendation of the European Commission to leave European companies with a choice between a one- or two-level model of corporate governance, the working group ceased to prefer the Anglo-Saxon model, which was followed in the original Code of 2001, and, in the 2004, it left upon the companies, whether they will choose a German or Anglo-Saxon model.“ (Czech Securities Commission; 2004). OECD and the Commission documents were the principal but not the only sources from which the working group derived elements for the 2004 Code; the document of the European Federation of Accountants (FEE) from 2003 played an important role in conceiving the rules providing for the role of audit and auditors. The materials of the Governance Forum, which was active in the framework of the European Union, also gave considerable incentives. The adoption of the Code by companies was set to be voluntary, but already in 2002 the Securities Commission asked the listed companies for the application of the Code and for the compliance declaration.

The 2004 the Code is still the primary source of corporate governance in the Czech Republic. Generally there are no new documents in this field made after 2004 that would supplement to this Code, despite the obvious lack of adequate rules. Moreover, there is also lack of literature and research. It seems to be the case that, after fulfilment of the EU requirements and achievement of the certain standard, corporate governance is not very actual topic, neither in academic circles nor in practice.

2.3. Corporate Governance in the Republic of Croatia

Corporate governance in Croatia was massively characterised by the numerous political and social changes in the last period of more than two decades. Until 1991 Croatia was one of the six republics in the former Socialist Federal Republic of Yugoslavia (SFRY). However, due to the rise of ethnic tensions and overwhelming desire for independence, especially strengthened after the parliamentary elections in 1990, Croatia announced a referendum where the vast majority of voting population supported independence. One month later it declared independence and this caused a conflict resulting in four-year war that ended in 1995. The break-up of Yugoslavia and Croatia's independence created also a major economic change besides the political one, in a sense of the transformation from socialist towards capitalist system (which in fact commenced during the last years of Yugoslavia). The influence on corporate governance was tremendous due to change of companies' ownership and new practices applied through the free market economy.

2.3.1. The Privatisation Period and Its Impact on Corporate Governance

Privatisation process created the basis for establishing the modern corporate governance principles. In order to understand the outcome of this process, it is necessary to describe it.

There are numerous factors that influenced privatisation, and the most significant ones are: an ongoing war with detrimental effects for the population and for the economy; dominance of the political party called Croatian Democratic Union which was able to manage the process according to its own criteria with the main goal of preserving the economic and political power (Bendeković, 2000); the legacy inherited from the previous socialist system, which was somewhat different in comparison to the other post-soviet and Eastern European communist countries, in such manner that companies were collectively managed by the employees themselves – legacy of the system of self-management and social ownership (Franičević, 1999); the insufficiently developed capital markets and lack of legal and institutional background to support the privatisation process, etc. According to Gregurek (2001), the process of privatisation can be divided into four stages. In the first stage (1991-1994), ***the decision on privatisation was autonomous***, and companies were in charge of setting the means of their privatisation, but until July 1992. Due to the legacy from the socialist system, the main target group in this stage were employees who got benefits when buying shares. The second stage (1994-1998) included those companies that did not autonomously complete privatisation in the first round. They

directly became under surveillance of *the Croatian Privatisation Fund – CPF* (2/3) and national pension funds (1/3). Funds owning companies to be privatised used various methods to sell their stakes, usually direct selling or public auctions on the Zagreb Stock Exchange. In the third stage (1998-2000), the determinant was free of charge distribution (*the voucher privatisation*). It was designed for the specified categories of population – the war victims. Roughly 240,000 persons were given vouchers that they could exchange directly for shares of the companies at CPF's list or for shares of *the investment privatisation funds - IPFs* that were created by different business groups (Gregurek, 2001). The lack of knowledge and experience stimulated the owners of vouchers to hand them over to IPFs in exchange for shares of these funds, so further trading with these points was done by IPFs – more than 70 percent of the privatisation points from these potential shareholders went to the funds. The fourth stage started in 2000 and although the privatisation is considered to be over, there are still a number of companies to be privatised. At the beginning of this period Ministry of Finance took all the holdings and responsibilities from CPF, putting the government in the epicentre of the privatisation even more than earlier. This phase was reserved for *strategically important companies*. Many of them are privatised nowadays, such as Croatian Telecom, partially Industrija nafte - INA (the oil company), but still there are some in state's hands.

The process of privatisation in Croatia is considered to be not nearly as efficient as it should have been, namely due to an overwhelming engagement of the state which did not only monitor the process and enforce the rules, but put itself in the centre and made favourable climate for negative appearances such as clientelism, nepotism, favourism, corruption, informal dealings, etc. (Franičević, 1999), which created serious distortions for proper functioning of corporate governance mechanisms. Due to privatisation, great number of citizens became shareholders: it is estimated that almost half million of citizens emerged out of privatisation as shareholders. However, most of them were without developed investment culture and knowledge or understanding of the fundamental issues related to shareholding or securities in general (Galogaža for OECD, 2006); that is why many of them experienced various frauds and failed expectations. These are generally minority shareholders and they are considered as a very vulnerable group in Croatian corporate governance system, especially if one knows that privatisation process has led to highly concentrated ownership structure. One should also bear in mind that the legal and institutional framework, as a necessary precondition, was not complete, consistent and operational (Franičević, 1999). Moreover, as opposed to OECD countries, development of the stock market in Croatia did not match the magnitude of privatisation (Galogaža for OECD, 2006). These are all factors that worsened the implementation of good corporate governance practices in the privatised companies.

2.3.2. Changes towards Modern Corporate Governance Practices Adoption

When Croatia started to perceive corporate governance as a priority issue, it was firstly the institutional background it needed to improve. A significant effort on side of government, legislative body and various regulatory bodies was needed.

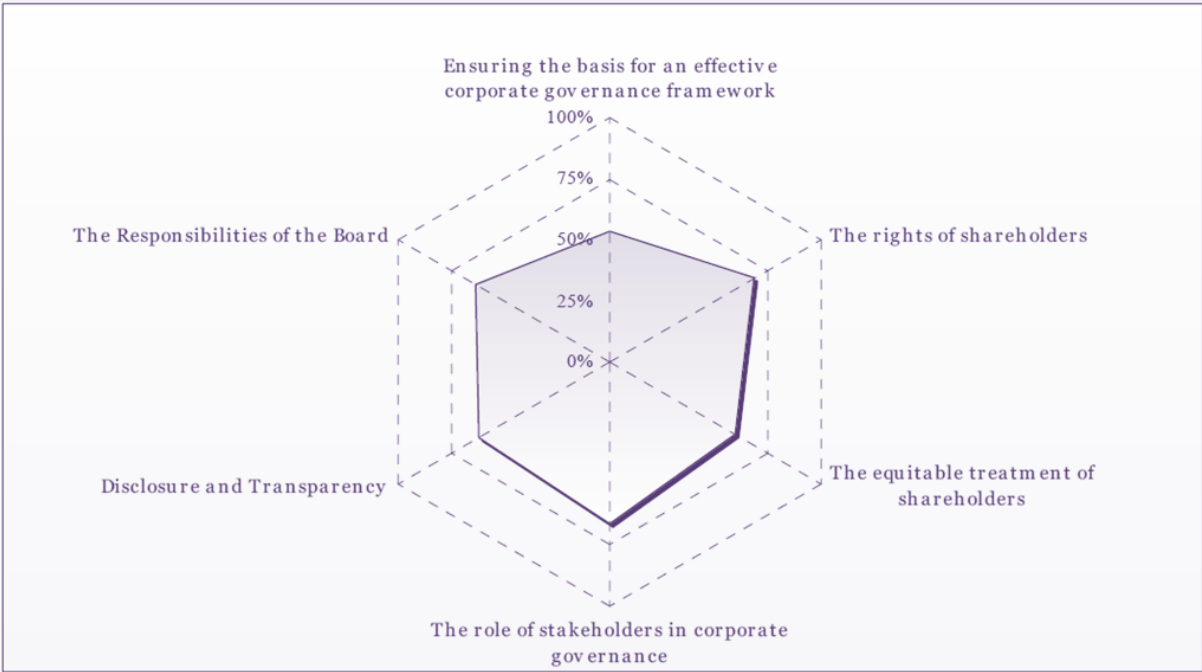
Croatia is a civil law country strongly influenced by the German and Austrian legal traditions. More recently it has been adapting its legislation to the norms of the European Union (World Bank, 2008). Key legislation with regard to corporate governance includes ***Companies Act*** and ***Securities Market Act***. Companies Act provides rules for establishment and operation of its principal bodies: general meeting of shareholders, supervisory board and management board (two-tier board system); this act is based on German and Austrian legislation. Securities Market Act, which is more linked to Anglo-American legacy (Raspudić, 2011) regulates issues related to the supervisory and regulatory body, brokerages, issuing and listing of securities, operations of exchanges, and procedures for trading of securities (Galogaža for OECD, 2006). These are foundations of the corporate governance framework, and in order to adjust them to the existing circumstances they were extensively amended (Companies Act was amended in 2003 and again in 2007, Securities Market Act in 2006). Besides these, new ***acts on Accounting, Auditing, and Bankruptcy*** were introduced; also ***Act on Takeovers***. Moreover, in 2006 ***Croatian Agency for Supervision of Financial Services*** was created as by merging Croatian Securities Commission, Croatian Agency for Supervision of Insurance Companies and Croatian Agency for Supervision of Pension Funds and Insurance (Galogaža for OECD, 2006). This institution is the main regulator of the non-banking sector, while ***the Croatian National Bank*** controls banks. Besides, in 2007 Varaždin Stock Exchange and ***Zagreb Stock Exchange*** merged, retaining the name of the latter, and this change represented a creation of single and much more efficient capital market. These were all rapid and substantial changes through creation of new institutions and legislation, and improvement of existing ones, so consequently roles of private ownership and market forces have expanded. This pace of reform has continued to meet the various requirements for membership in the European Union (World Bank, 2008). From corporate governance perspective, the most straightforward one is ***the Code of Corporate Governance***, issued jointly by the Croatian Agency for Supervision of Financial Services and the Zagreb Stock Exchange in 2007. The Code focuses on disclosure, the general meeting of shareholders, the management board and the supervisory board, and covers many aspects of good corporate governance consistent with OECD Principles. It is based on the “comply or explain” approach. Moreover, ***the new Capital Market Act*** became effective in 2009 and it harmonises Croatia’s laws on capital market activities with the relevant EU legislation.

When looking back for decade or two, the usual conclusion on corporate governance development brought by international institutions such as World Bank and OECD is that lot of effort has been put and many goals are successfully achieved, but on the other, there is still a number of areas worth attention. The concentrated structure of ownership obviously creates specific corporate governance problems. In general, ownership is concentrated and free float limited - the top 10 shareholders owned 80 percent or more of the shares in most companies in 2008 (World Bank, 2008), and nowadays the situation is similar. Usually the largest shareholder has 40 to 50 percent share. Also, level of state ownership is quite high, especially if we take into consideration fact that all public companies went through the process of privatisation: the state was directly or indirectly the largest single shareholder in 31 percent of public companies (Galogaža for OECD, 2006). Therefore, the main conflicts arise between majority or dominant shareholder and other (minority) shareholders. Moreover, the government owned companies often distort the functioning of the market (for example, they are usually privileged in obtaining government contracts) and therefore significantly slow down development of free market economy founded on fair and competition between players (Galogaža for OECD, 2006). Based upon Report on the Observance of Standards and Codes which benchmarks Croatia's situation relative to OECD Principles of Corporate Governance and the institutional capacity needed to make them effective, the main recommendations are related to the following areas:

- disclosure of ownership and control structures;
- role and effectiveness of the shareholders' meeting;
- business practices for supervisory boards;
- independent role of auditors.

In its "Strategy for Croatia 2010-2013", European Bank for Reconstruction and Development (EBRD) recommends that key reform priorities should include improving legislation on conflicts of interest, enhancing disclosure practices in respect of related party transactions and beneficial ownership, and strengthening the capacity of the Croatian Financial Services Supervisory Agency. Also, EBRD states that key reform challenge is to privatise majority state-owned companies, in particular the shipyards, and minority stakes held by the state in commercial companies. Corporate governance in the state-owned companies which will not be privatised should be improved by replacing political appointees on supervisory boards with experienced managers from the business community and representatives of civil society (EBRD, 2010).

Figure 2: Quality of Corporate Governance Legislation in Croatia



Source: EBRD Corporate Governance Sector Assessment, 2007 assessment²

This picture’s findings are confirmed by the World Bank’s 2008 Report on the Observance of Systems and Codes. The situation nowadays is not substantially different in a sense that the critical areas for improvement are still the same.

² Note: The extremity of each axis represents an ideal score, i.e., corresponding to OECD Principles of Corporate Governance. The fuller the ‘web’, the more closely the corporate governance laws of the country approximate these principles.

2.4. Comparison of the Czech and Croatian Experience

Both Czech Republic and Croatia went through major political and social changes in last two decades that made remarkable influence on corporate governance developments.

The Czech Republic being in the communist regime and Croatia being in socialism, both faced similar difficulties upon decision to introduce the free market economy. The process of privatisation is seen as the determining point that conditioned implementation of modern corporate governance practices. Privatisation itself was quite similar in both cases, especially the voucher method, which created a large number of minority shareholders whose rights were abused by the large IPFs, mainly due to absence of investment knowledge and missing legislation - both economies ended up with very concentrated corporate ownership. Furthermore, in both countries the state had a dominant role and it was not solely monitoring, but actively interfering within the process. Both processes would have been implemented much better, but the legal and institutional framework, as a necessary precondition, was not functional. On the other hand, the privatisation in the Czech Republic lasted for a shorter period of time and therefore occurrence of many more manipulations and obscure activities were partially prevented. However, in Croatia this process was quite long, worsened by the war and massively distorted by adverse political influences. In that sense, Czech model is considered to be more efficient.

After the end of privatisation, both countries were largely influenced by the European Union requirements, and they formed/adjusted their legislation in accordance to those. Moreover, they adhered to OECD corporate governance guidelines.

Nowadays, it seems that Croatia is few years behind the Czech Republic in terms of development of corporate governance mechanisms, but these differences are expected to be diminished over time, especially after Croatia's entering the EU in 2013 and consequent opening to the higher amounts of external capital.

2.5. The Corporate Governance Indices³

Different indices have been developed by numerous corporations and researchers, such as Khanna et al. (2001), Klapper and Love (2002), Gompers, Ishii and Metrick (2003), Black, Jang and Kim (2003), the FTSE-ISS Corporate Governance index (2005), Ananchotikul (2008), etc. Most of these indices represent a part of authors' effort to prove certain relationship between corporate governance and diverse economic appearances, such as globalisation, foreign direct investment, trends in market valuation of companies and so on. In this part of literature review, the focus will be solely on construction of corporate governance indices, because that is in the domain of the research subject.

2.5.1. Credit Lyonnais Securities Asia Corporate Governance Index

Credit Lyonnais Securities Asia (CLSA) Corporate Governance Index is often used in literature as a solid indicator of the level of corporate governance. In 2001, CLSA released a large study of corporate governance entitled "Saints and Sinners: Who's got religion," which reviewed corporate governance at the firm level in 25 emerging markets (Gill, 2001). The construction of this index was based on seven sections: Fiscal Discipline, Accounting Transparency/Disclosure, Board Independence, Board Accountability, Responsibility, Equitable Treatment of Shareholders and Social Awareness. The survey consisted of 57 questions, with 70 percent relying on the facts from annual reports, stock exchange data and other highly reliable sources, and 30 percent was answered considering analysts' findings. Questions were answered in so called "yes/no" form, while in case of unavailable information authors automatically assigned the answer "no" indicating that lack of certain information means poor corporate governance in terms of disclosure. Khanna, Kogan and Palepu (2001) used this index in their paper searching for evidence that globalisation is correlated with convergence of corporate governance. Moreover, Klapper and Love (2002) provide a study of firm-level corporate governance practices across emerging markets while trying to establish relation between corporate governance, and firm performance and market valuation. They constructed a Corporate Governance Index based on the CLSA questionnaire data and Worldscope data. Their index consists of six components: Management Discipline, Transparency, Independence, Accountability, Responsibility and Fairness, which are not classified as sub-indices due to overlapping.

³ See Appendix A for more details.

2.5.2. Governance Index by Gompers, Ishii and Metrick

Gompers, Ishii and Metrick (2003) constructed a Governance Index in order to proxy for the level of shareholder rights at about 1500 large firms in the U.S. during the 1990s. Authors used the index in relation to equity prices of these companies on the market, finding that firms with stronger shareholder rights had higher firm value, higher profits, higher sales growth, lower capital expenditures, and made fewer corporate acquisitions. Authors identified five groups of practices that restrict shareholders' rights, and accordingly constructed sub-indices for each of these five categories: Delay, Protection, Voting, Other, and State. There are 28 provisions in total, out of which 24 are unique and the others overlap. For each type of restriction, authors created a dummy variable. If the value of the dummy variable is one, the firm has a "bad" governance practice. Thus, the Governance Index is just the sum of one point for the existence (or absence) of each provision in these five sub-indices. The main data source is the Investor Responsibility Research Centre (IRRC), which publishes detailed listings of corporate governance provisions for individual firms in the *Corporate Takeover Defences* publications (Rosenbaum 1990, 1993, 1995, and 1998), while these data are derived from a variety of public sources including corporate bylaws and charters, proxy statements, annual reports, some documents from the Securities and Exchange Commission (SEC), and are supplemented by data on state takeover legislation coded from Pinnell (2000). Thus it is possible to track index development over time.

2.5.3. Korean Corporate Governance Index by Black, Jang and Kim

Black, Jang and Kim (2003) tried to prove relation between corporate governance and firms' market value in their working paper for the European Corporate Governance Institute (ECGI). They claim that the overall corporate governance index is an important and likely causal factor in explaining the market value i.e. higher share prices of Korean public companies. They constructed a Korean Corporate Governance Index for 515 Korean companies based on the 2001 Korea Stock Exchange survey. The index is made of five sub-indices: Shareholder Rights, Board Structure, Board Procedure, Disclosure and Ownership Parity. Each sub-index carries a maximum of 20 points, while the total value of the overall is 100 points at most. Unlike CLSA index which assigns zero value to non-answered question, here authors do not consider it as a part of the value.

2.5.4. Corporate Governance Index Series by Financial Times Stock Exchange (FTSE) and Institutional Shareholder Services (ISS)

The index company FTSE in cooperation with ISS created Corporate Governance Index Series in 2005. The index is a result of an extensive feedback obtained during an industry-wide consultation exercise conducted by FTSE and ISS in 2004. Over 2,200 companies rated across 24 countries from FTSE Developed and FTSE All-Share indices were included, meaning this index is appointed at developed markets. The ratings data based on more than 60 corporate governance criteria is broken down into five global themes of corporate governance: Compensation Systems for Executive and Non-executive Directors, Structure Independence of the Board, Independence and Integrity of the Audit Process, Equity Structure and Anti-takeover Provisions, Executive and Non-executive Stock Ownership. Companies are rated between one (the lowest) and five (the highest) on each theme and overall. As stated by creators of this index, engagement with companies represented a key part of the FTSE/ISS initiative, and companies have access to their profile and can request changes on a continuous basis. Unlike previously mentioned indices which measure the overall state of corporate governance, this index collects companies with satisfactory behaviour and therefore comprises only companies with good corporate governance practice.

2.5.5. Corporate Governance Index by Ananchotikul

Ananchotikul (2008) constructed a Corporate Governance Index based on firm-level data on 365 Thai non-financial firms listed in 2004, in order to enlighten the relation between foreign direct investment (FDI) and its influence on corporate governance. The index captures all major aspects of corporate governance giving them appropriate weight: Board Structure (20 percent), Board Responsibility (20 percent), Conflict of Interest (25 percent), Shareholder Rights (10 percent), and Disclosure and Transparency (25 percent), and each of these items represents sub-index. The companies are evaluated using information from various publicly available sources such as company disclosure reports, annual reports, company websites, and Stock Exchange of Thailand (SET) databases. The overall index is a weighted average of the scores given to five components; higher scores indicate better governance practices. The index is constructed in such manner that it is positively correlated with alternative measures of corporate governance such as board of directors' independence, the number of board meetings and the existence of an employee stock option programme.

Chapter 3

The Research Subject

The purpose of this research is firstly to describe the corporate governance environment and its development in the recent decades, both in the Czech Republic and in Croatia. Furthermore, the essential part of the thesis is to identify the level of good corporate governance practices implementation in the companies listed on the Prague Stock Exchange (PSE) and on the Zagreb Stock Exchange (ZSE), whose stocks take part in the PX Index and the CROBEX10 Index. Having done that, deeper analysis will be performed in order to outline the crucial governance practices which should be subject to necessary improvements.

Having in mind all the changes described in Chapter 2 regarding the transformation of the Czech and Croatian economy, corporate governance on the overall level obviously made substantial progress in both countries in last couple of decades. Moreover, it seems that both countries were developing in the same direction in terms of corporate governance, while the Czech Republic is few years ahead in relation to Croatia. Therefore, the main focus of this research is to explore the firm-level corporate governance implemented in Czech and Croatian companies nowadays, whereas the initial assumption is that Czech companies should generally have better overall level of corporate governance. Besides the fact that the Czech Republic already entered European Union and thus complies with many legislative standards that are not (fully) applied in Croatia, an important notion is also that most of the companies in Czech sample are predominantly in foreign ownership. These owners are mainly domiciled in Austria, the Netherlands, the U.S., Luxembourg etc., being the countries with typically strong governance mechanisms (GovernanceMetrics International, 2010). It is therefore reasonable to assume that such companies would bring good practices to the country where they operate up to a certain extent (i.e. spill-over effect), although the required level is solely compliance with the local laws and governance codes.

The Corporate Governance Index consists of the four sub-indices: Board, Conflict of Interest, Shareholders' Rights, and Transparency and Disclosure. This study will reveal which are the main strengths and weaknesses of both samples in terms of the mentioned domains covered by the sub-indices. It will be also possible to draw comparisons between two samples with regard to those governance domains and explore the reasoning behind. Then the recommendations will be addressed in order to diminish or eliminate the problematic areas.

Chapter 4

Methodology

4.1. Sample Description

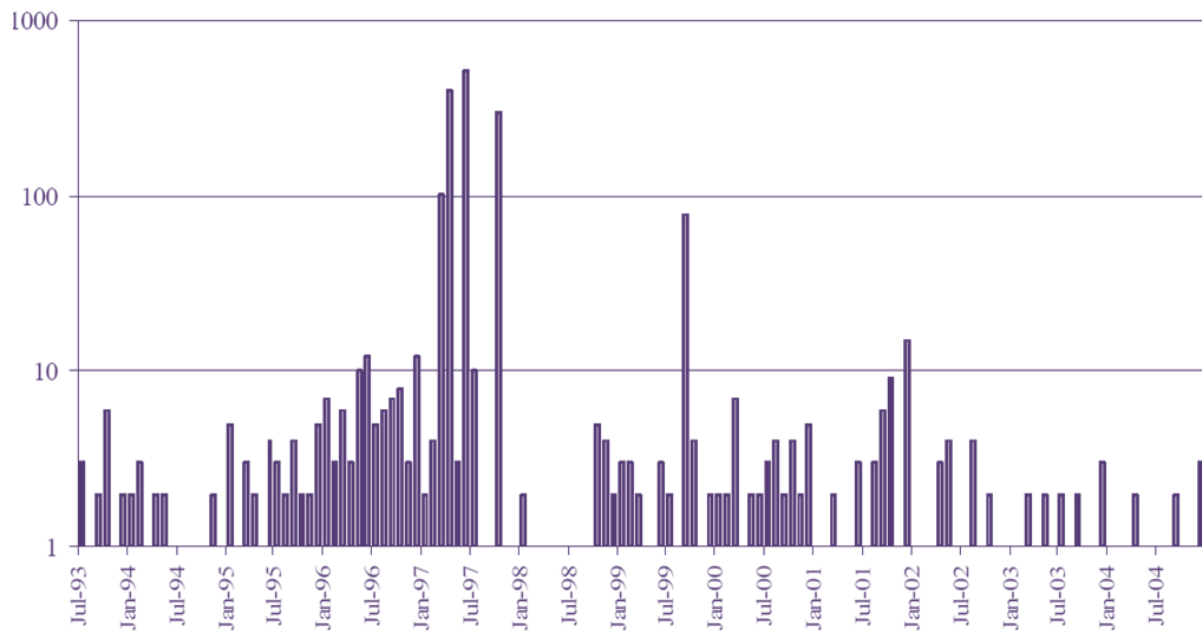
This study uses firm-level data for 14 companies listed on the Prague Stock Exchange and for 10 companies listed on the Zagreb Stock Exchange. Only publically traded companies are taken into consideration due to absence of governance information for non-listed companies. Moreover, only the most liquid companies on both markets are analysed, since they are market makers not only in trading but might also be in terms of corporate governance.

4.1.1. The Prague Stock Exchange Sample Description

The sample of Czech companies consists of those which take part in blue chip issues price index, the PX Index. It is an index of major stocks traded on the Prague Stock Exchange. Earlier the PX Index contained much higher number of stocks, but, as time passed, this number significantly dropped because companies with non-liquid stocks were gradually delisted.

A slight digression is necessary here in order to explain this anomaly of massive delisting, since it also tells a lot on Czech companies covered by this research. For a standard stock market development it is typical that market capitalisation grows as well as the number of securities listed. Still, delisting is to a certain extent common occurrence also in developed economies; however, the number of delisted companies there is rather insignificant when taking into account the market size, whereas in 1997 (year of the biggest delisting) 75 percent of companies were delisted from the Prague Stock Exchange (Fungačova, 2005). There are numerous reasons for such developments, and in brief the main one is considered to be the voucher privatisation, thanks to which shares of privatised companies simply “flooded” the market, which was not able to provide the necessary infrastructure for the secondary trading. Huge amounts of shares, accompanied with missing legislation and supervisory institutions generated only an illiquid and non-transparent market with a low turnover (Fungačova, 2005). Therefore, the initial delisting began due to bankruptcy and limited transferability of securities, but after that, from 1997 onwards, it was mainly due to the Prague Stock Exchange authorities’ decision based on the fulfilment of certain criteria regarding traded value, market capitalisation, etc.

Figure 3: Securities Delisted from the PSE (1993 – 2004)



Source: Fungačova (2005)

This theme field on process of delisting from the Prague Stock Exchange goes far beyond purposes of this research, and at this point there are enough evidences to understand the background of today's Czech stock market and very low number of companies included in its main price index.

Table 2: List of Companies in the PX Index, Prague Stock Exchange

Company	Index Weight (%)
Erste Group Bank AG	21,48
ČEZ, a.s.	18,95
Komerční banka, a.s.	17,30
Telefonica Czech Republic, a.s.	15,31
Vienna Insurance Group AG	13,41
New World Resources Plc.	4,42
Unipetrol a.s.	3,84
Philip Morris ČR a.s.	2,72
Central European Media Enterprises Ltd.	0,95
Fortuna Entertainment Group N.V.	0,63
Pegas Nonwovens S.A.	0,50
Orco Property Group S.A.	0,21
AAA Auto Group N.V.	0,16
KIT Digital, Inc.	0,13
Total	100,00

Source: the Prague Stock Exchange, as of 16.3.2012

4.1.2. The Zagreb Stock Exchange Sample Description

Unlike Czech capital market, the Zagreb Stock Exchange did not have any issues with massive securities' delisting. When it comes to the Croatian companies taking part in this research, the same criteria were used as with the Czech companies, i.e. only the most liquid companies were taken into consideration. The Zagreb Stock Exchange created its main share price index CROBEX, which consists of 25 companies' shares. However, for the purposes of this research companies constructing another index - CROBEX10 Index, will be used. It is a reduced form of the CROBEX Index that takes its ten top blue chip securities in terms of free-float market capitalisation and liquidity.

Table 3: List of Companies in the CROBEX10 Index, Zagreb Stock Exchange

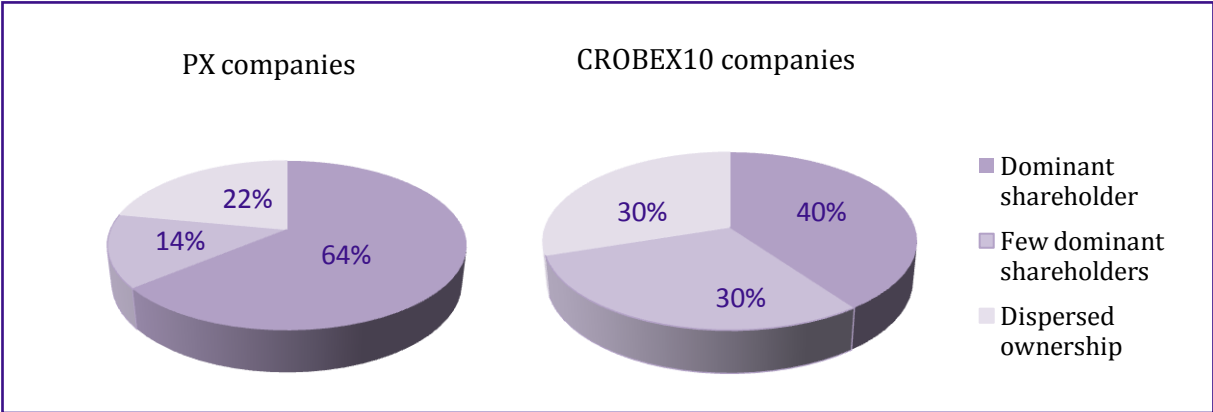
Company	Index Weight (%)
Adris grupa d.d.	21,30
HT d.d.	17,90
Ericsson Nikola Tesla d.d.	12,80
Podravka d.d.	11,10
Končar – elektroindustrija d.d.	8,30
Atlantska plovidba d.d.	8,10
AD Plastik d.d.	6,60
Dalekovod d.d.	6,30
Atlantic grupa d.d.	5,70
Ingra d.d.	1,90
Total	100,00

Source: the Zagreb Stock Exchange, as of 16.3.2012

4.1.3. Essential Similarities and Differences of Two Samples

As systematically pointed out in Chapter 2, there are numerous similarities between development of corporate governance in Czech and Croatian cases. Here it is necessary to stress once more that privatisation process, which initially created dispersed ownership, eventually resulted in predominantly concentrated ownership in both countries. Consequently, 78 percent of the PX companies have either one or few dominant shareholders, and in the CROBEX10 companies that figure is 70 percent. The following chart presents these numbers graphically.

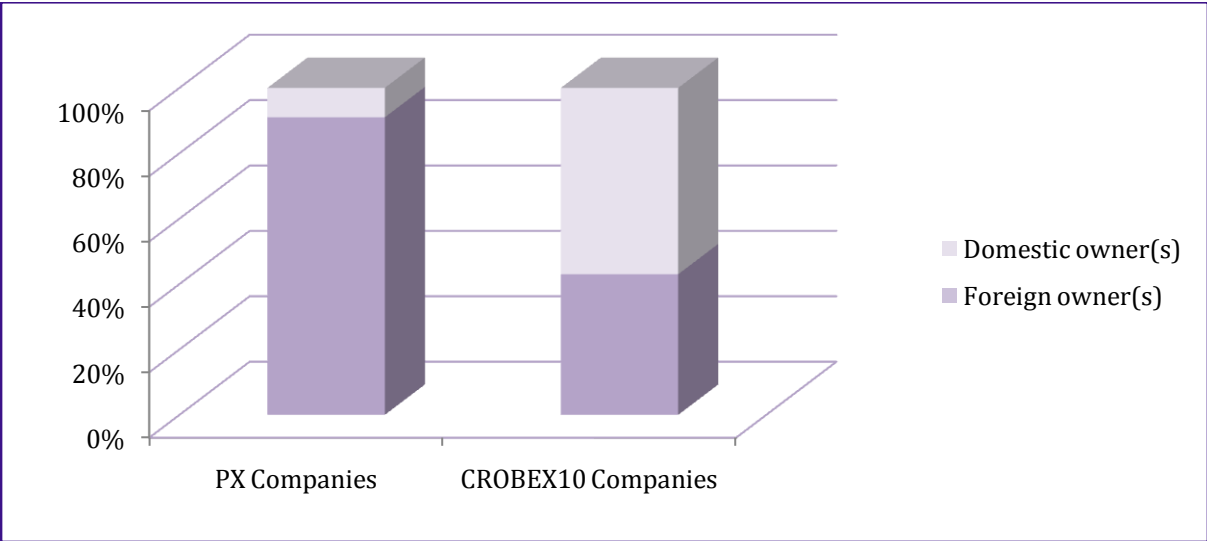
Figure 4: Comparison of the Ownership Concentration: the PX and the CROBEX10 Companies



Source: author's calculations

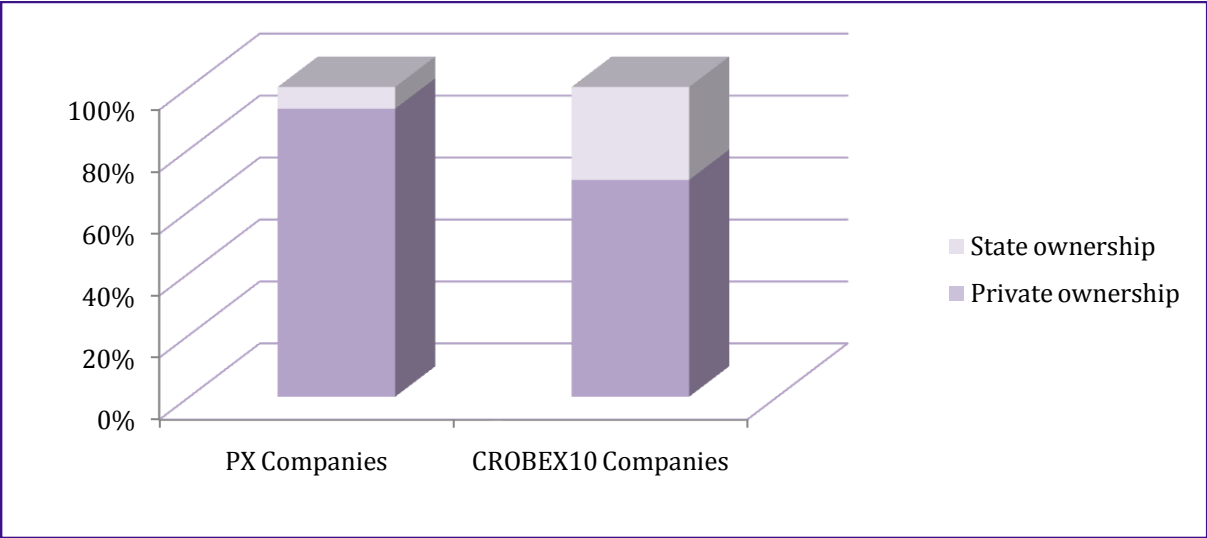
However, the huge differences exist in terms of these companies' ownership; while owners in Croatia are mainly domestic entities, in the Czech Republic it is not the case. The picture shows solely those companies with concentrated ownership (both one and few dominant shareholders) and the proportions where that owner is either domestic or foreign entity. 91 percent of the PX companies with concentrated ownership have one or more dominant shareholders that are foreigners; in the CROBEX10 companies, this number is equal to 43 percent. Nevertheless this should not present an issue for the research since companies in foreign ownership also comply with the local governance rules and customs, and therefore it is reliable to track behaviour of such companies as an indicator of firm-level corporate governance in the country in question, regardless of their owners in this context.

Figure 5: Comparison of the Foreign Ownership: the PX and the CROBEX10 Companies



Source: author's calculations

Figure 6: Comparison of the State Ownership: the PX and the CROBEX10 Companies



Source: author's calculations

It is also important to see the percentage of the companies in which the state holds a stake, as shown in the upper column chart. It presents the percentage of companies where the state has a significant portion in the ownership structure. Among the PX companies, there is only one that is controlled by state, where the state possesses nearly 70 percent of its shares. There are three CROBEX10 companies with the state largely participating in ownership, and its average share in these companies is around 25 percent.

Another important point of departure between samples is the fact that lots of companies of the PX Index have almost negligible weight in that index, meaning their free float market capitalisation is relatively low, and that they are not largely traded on the stock exchange. On the other hand, the CROBEX10 companies have somewhat more balanced weights in that index.

4.2. Source of Data

The basic information on companies selected, especially with regard to the ownership structure and similar relations, is gathered mainly through the *Thomson One* database made by Thomson Reuters, which is considered to be the premier comprehensive database of information suitable for analyst research. Although such information is usually available directly from the companies' corporate materials, this database provides easier access to all the facts at one place.

Furthermore, the Corporate Governance Questionnaire designed for the purposes of this thesis is used as the main instrument of data gathering⁴. It consists of four sections that correspond to the sub-indices of the Corporate Governance Index: Board of Directors, Conflict of Interest, Shareholders' Rights, and Transparency and Disclosure. It contains 40 questions, and answers to those are transformed⁵ so as to represent the variables. The CG Questionnaire is in the first place appointed at the high-ranking officials of a company, who may be able to respond properly to the listed questions due to their engagement in the business and level of expertise (members of the board, top managers, the company secretary, Investor Relations department officials, Corporate Governance department officials, or more officials jointly). Information asked in the CG Questionnaire that is also publically accessible (through annual reports, articles of association, other documents published by the company or some other trustworthy institutions), is verified by the author in order to avoid misreporting.

⁴ See Appendix B for detailed structure of the Corporate Governance Questionnaire, as well as Appendix C for benchmarks of governance practices.

⁵ Answers are coded so that good practice is given a value of one, and bad practices is given a value of zero.

4.3. The Best Practices Approach and the Governance Domains Covered

The Corporate Governance Index has foundations in the work of Ananchotikul (2008) and Black, Jang and Kim (2003), precisely described in Chapter 2. However, the approach used in this assessment of corporate governance quality on a firm level is more detailed, as majority of questions require „a level beyond“ corporate governance in a sense that they reflect the most recent best practices recommended by OECD, the EU and national regulators. This automatically creates space for distinction between companies that simply follow regulatory requirements, and those that truly strive to catch up with modern corporate governance trends and adopt most up-to-date recommendations. Nevertheless, it is important to stress that blind following of best practices does not necessarily lead to an effective system. The simple reason is that, despite the best efforts of regulatory, commercial, and academic experts, no one has yet identified standards that are consistently associated with improved corporate outcomes – this also includes recommendations of blue-ribbon panels, corporate governance indices and ratings (Larcker, Tayan; 2011). Therefore, the careful interpretation of the resulting CG Index is needed, since obviously there is no magic recipe, nor “one size fits all” approach can be used - individual firms success is dependant also on their setting, the interactions of their constituents, and the processes by which the corporate strategy is planned and executed (Larcker, Tayan; 2011).

In terms of the governance domains covered, the approach followed is generally taken from Ananchotikul (2008), except for the fact that practices under Board Structure and Board Responsibilities are here encompassed by one domain simply called Board. Besides Board, there are three more domains: Conflict of Interest, Shareholders' Rights and Transparency and Disclosure. Each of them practically represents a separate sub-index in the overall Corporate Governance Index.

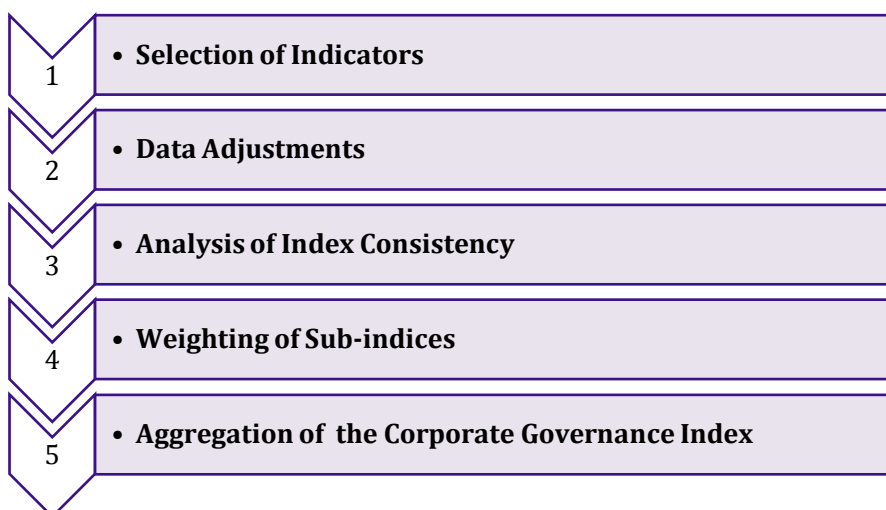
4.4. The Corporate Governance Index

4.4.1. The Process of the Corporate Governance Index Construction

Composite indicator development involves stages where subjective judgements have to be made: the selection of individual indicators, the treatment of missing values, the choice of normalisation techniques, the weights of the indicators and aggregation methods, etc. All these subjective decisions are the “bones” of the composite indicator and, together with the information provided by the numbers themselves, shape the message communicated by the composite indicator (Nardo et al. for OECD and the EC, 2008). The absence of an objective way to determine methods does not necessarily lead to rejection of the validity of composite indicators, as long as the entire process is transparent (Nardo et al. for OECD and the EC, 2008). Therefore, for each of the mentioned methodological issues there are certain standardised approaches, but the choice of those depends on author's goals and on the suitability determined by different means. In the following lines the main methodological phases and methods will be presented.

The process of the index construction is mainly based on OECD recommendations, and it is divided into phases. For the last two phases, different methods are used in parallel, resulting in four index types. Finally, the choice of an ultimate indicator is given by determining each index type's correlation to the proxy of good corporate governance – director's independence.⁶

Figure 7: The Process of the Corporate Governance Index Construction



Source: author's demonstration

⁶ See section 4.4.2. Explanatory Power of Different Index Types, where the correlation to the proxy measure defines the most suitable methods of index calculation and the choice of the best index type.

1. Selection of Indicators

Variables are selected in such way that allows covering four main domains of corporate governance on the firm level, as mentioned in the upper text. Many of these variables appear in the work of Ananchotikul (2008), but the majority is selected by following the most recent best practice recommendations. In total there are 40 variables (corresponding to 40 questions from the CG Questionnaire), and the values assigned are dummies: one if the company follows a good practice, zero if it does not. These 40 variables are then aggregated into four main indicators representing sub-indices: Board, Conflict of Interest, Shareholders' Rights, and Transparency and Disclosure. Therefore, governance of 14 Czech and 10 Croatian companies is examined in terms of four principal indicators.

2. Data Adjustments

In order to make the variables ready for usage, firstly they should be normalised. In this case it is fairly straightforward and therefore there is no need for further explanations. One other important aspect is dealing with missing data, which is solved by replacing those data with the lowest score, as suggested in numerous research papers dealing with an index construction⁷. Since a lack of corporate governance information should be correlated with poor corporate governance, this practice should not lead to large errors (Ananchotikul, 2008).

3. Analysis of Index Consistency

Consistency analysis should demonstrate that the raw data and the ready-made indices are consistent for the final step - their aggregation (Groh, Wich; 2009). It is especially important when derivative variables are intended to be used for subsequent predictive analyses. If the analysis indicates poor consistency and reliability, then individual items must be re-examined and modified or completely changed as needed (Santos, 1999). As recommended by numerous authors (Raykov, 1998; Cortina, 1993; Feldt et al., 1987; Green et al., 1977), there are certain tests to be performed in order to identify consistency, such as Cronbach's Coefficient Alpha, Kaiser-Meyer-Olkin Measure of Sampling Adequacy and Bartlett's Test of Sphericity. The last two measures are also used as a precondition for the factor analysis.

The Cronbach's Coefficient Alpha (Cronbach, 1951) is a coefficient of reliability suitable for an estimate of the internal consistency of items in a model or a survey. It assesses how well a set of

⁷ See Chapter 2: 2.5. The Corporate Governance Indices.

individual indicators (here sub-indices) measures a single uni-dimensional object (Nardo et al. for OECD and the EC, 2008). One could also say that it measures the portion of total variability of the sample of individual indicators due to correlation of indicators. Definition is as follows:

$$\alpha = \frac{n\bar{R}}{1+(n-1)\bar{R}},$$

where n is a number of the index components, and \bar{R} is mean correlation of the items.

Cronbach's Alpha increases with the number of individual indicators and with the covariance of each pair. This coefficient ranges in value from zero to one. It is zero if there is no correlation among sub-indices. On the other hand, if they are perfectly correlated, it is equal to one. High Cronbach's Alpha (or equivalently a high reliability) is an indication that the underlying individual indicators proxy the desired variable well (Groh, Wich; 2009). A question is how large the Cronbach's Alpha should be. Nunnally (1978) argues that value of 0.7 is an acceptable reliability threshold. Yet some authors use 0.75 or 0.80 as a cut-off value, while others are as lenient as to go to 0.6 (Nardo et al. for OECD and the EC, 2008).

Table 4: Cronbach's Alpha Coefficient

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardised Items	Number of Items
.704	.736	4

Source: author's calculations using SPSS software

The left-hand side column of the table is used instead of the standardised column since the variances of individual indicators showed a limited spread. This is also advisable since the scale in the CG Questionnaire is dichotomous (when there is a mixture of scales in the survey, relatively heterogeneous variances would appear in which case the use of standardised variables would have been more appropriate) (Santos, 1999). As it is shown in the table, the output has a Cronbach's Alpha of 0.704, which is good considering 0.70 as the cut-off value.

It is also useful to determine how the Cronbach's Alpha varies with the deletion of each individual indicator at a time, as shown in the upper table. This helps to reveal the existence of redundant indicators. If the reliability coefficient increases after deleting an individual indicator from the scale, one can assume that the individual indicator is not correlated highly with other individual indicators, and is not measuring the same construct as the rest of the indicators in the scale. Obviously this is not the case here, and all the indicators can be kept.

Table 5: Cronbach's Alpha Coefficient if an Item Deleted

	Corrected Item -Total Correlation	Cronbach's Alpha if Item Deleted
Board	.536	.627
Conflict	.588	.604
Rights	.431	.703
Transparency	.563	.600

Source: author's calculations using SPSS software

The other two measures besides Cronbach's Alpha demonstrate that the data are consistent for their aggregation; besides, they also represent a precondition for the factor analysis.

The Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy is based on the partial correlation among the input variables, and it varies between zero and one. A value of zero indicates that there is a diffusion in the pattern of correlations (factor analysis is not appropriate). A value close to one means that the patterns of correlations are relatively compact (factor analysis should give meaningful results). Kaiser (1974) indicates that values higher than 0.5 are acceptable: values from 0.5 to 0.7 are mediocre, values from 0.7 to 0.8 are good, values from 0.8 to 0.9 are very good and those above 0.9 are superb. Therefore, data in this analysis fulfil this criterion meaning patterns of correlation are solid and subsequently factor analysis can be performed.

Bartlett's Test of Sphericity indicates whether the correlation matrix is not an identity matrix, and therefore, can be factorised (Groh, Wich; 2009). The value of the test statistic should be below the 0.05 significance level. The data do not satisfy this measure. However, though 5 percent is a conventional significance level, one can test the data at 10 percent significance level as well, and in that case the data would satisfy the criterion.

Table 6: Kaiser-Meyer-Olkin and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.758
Bartlett's Test of Sphericity	Approx. Chi-Square	17.270
	Degrees of Freedom	6
	Significance	.008

Source: author's calculations using SPSS software

4. Weighting of Sub-indices

Equal Weighting is a common scheme and, according to Nardo et al. (2005), most composite indicators rely on it. Since all variables are given the same weight, this essentially implies that all variables are “worth” the same in the composite. Still, this can also disguise the absence of a statistical or an empirical basis, e.g. when there is insufficient knowledge of causal relationships or a lack of consensus on the alternative (Nardo et al. for OECD and the EC, 2008).

Factor analysis is a statistical procedure that linearly transforms a large set of variables into a smaller number of uncorrelated variables that retain most of the information contained in the original set of variables (Dunteman, 1989; Filmer, Pritchett, 2001). According to factor analysis, each component is given a weight based on its contribution to the total variance in the data. This ensures that the resulting summary of indicators account for a large part of the cross-country variance of the underlying items (Groh, Wich; 2009). Nicoletti et al. (2000) stress that properties of factor analysis are particularly desirable for cross-country comparisons. Besides, Nardo et al. (2005) state that the basic idea behind factor analysis is that it may be possible to present a set of Q variables in terms of a smaller number of m factors – the general form of the factor analysis is given as follows:

$$X_1 = \alpha_{11}F_1 + \alpha_{12}F_2 + \dots + \alpha_{1m}F_m + e_1$$

$$X_2 = \alpha_{21}F_1 + \alpha_{22}F_2 + \dots + \alpha_{2m}F_m + e_2$$

$$\dots$$

$$X_Q = \alpha_{Q1}F_1 + \alpha_{Q2}F_2 + \dots + \alpha_{Qm}F_m + e_Q$$

Variables x_i have zero mean and unit variance; $a_{i1}, a_{i2}, \dots, a_{im}$ are the factor loadings related to variable X_i ; F_1, F_2, \dots, F_m are m uncorrelated common factors with zero mean and unit variance; e_i are the Q specific factors supposed independently and identically distributed with zero mean (Groh, Wich; 2009).

Nardo et al. (2005) stress that, in order to deal with that model, the most often used method in development of composite indicators is principal component analysis. It extracts the first m principal components considering them as factors, while neglecting the remaining. Factor analysis is primarily attractive because it is able to mathematically determine the weights that will maximise the variation in the linear composite (Dunteman, 1989). As stated in OECD Handbook on Constructing Composite Indicators (2008), according to the factor analysis, weighting intervenes only to correct for overlapping information between two or more correlated indicators and it is not a measure of the theoretical importance of the associated indicator (Nardo et al. for OECD and the EC, 2008).

There are several steps in performing factor analysis. The first step is to check the correlation structure of the data, because if no correlation between indicators is found, then weights cannot be estimated by this method.

Table 7: Correlation among Sub-indices as a Precondition for Factor Analysis

Correlation Matrix ^a					
		Board	Conflict	Rights	Transparency
Correlation	Board	1.000	.466	.340	.443
	Conflict	.466	1.000	.353	.509
	Rights	.340	.353	1.000	.355
	Transparency	.443	.509	.355	1.000
Sig. (1-tailed)	Board		.011	.052	.015
	Conflict	.011		.046	.005
	Rights	.052	.046		.045
	Transparency	.015	.005	.045	

a. Determinant = ,437

Source: author's calculations using SPSS software

The correlation matrix explains the relationships' pattern among indicators. The top half of the table contains the Pearson correlation coefficients between sub-indices, and the bottom half represents the one-tailed significance of the coefficients. The coefficients should not be too correlated (higher than 0.9), nor very weakly correlated (lower than 0.3 approximately) or even uncorrelated. The significance values should not be greater than 0.05 (value of 0.052 can be rounded at 0.05 so that it can still be accepted). The determinant should be at least 0.00001. If all conditions are satisfied, as it is the case here, multicollinearity should not appear as an obstacle, and factor analysis can be performed.

The second step is the extraction of a certain number of latent factors representing the data. Each factor depends on a set of coefficients called loadings, and each coefficient measures the correlation between the individual indicator and the latent factor (Nardo et al. for OECD and the EC, 2008). Then only a subset of principal factors is retained - those that account for the largest amount of the variance. Criteria for choosing factors are standardised as those that:

- have eigenvalues larger than one;
- contribute individually to explanation of the overall variance by more than 10 percent;
- contribute cumulatively to explanation of the overall variance by more than 60 percent.

At this point an issue arises in terms of selection of the factors, since not all of three mentioned criteria are satisfied at the same time. However, a cumulative variance that is slightly below required benchmark of 60 percent is believed to represent a smaller discrepancy than inclusion of the factor that has dramatically lower eigenvalue, especially in comparison to the first one chosen. Therefore, only one factor will be selected, and further analysis will be performed respectively.

Table 8: Factor Analysis Performed by the Principal Components Analysis

Total Variance Explained						
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.241	56.016	56.016	2.241	56.016	56.016
2	.706	17.643	73.658			
3	.566	14.139	87.798			
4	.488	12.202	100.000			

Extraction Method: Principal Component Analysis.

Source: author's calculations using SPSS software

Extraction of only one factor that explains a large part of the data variance means that the key drivers are adequate joint proxies for a single latent factor. They are uni-dimensional, and express one characteristic. The interpretation of this result is that choice of key drivers is appropriate for the purposes of assessing corporate governance for two samples of companies; corporate governance on a firm level is very well measured by using four criteria.

The third step deals with the calculation of the weights for four drivers. The square of a factor loading represents the proportion of the variance of the indicator explained by the factors. The component weight of a sub-index is received by multiplying value of the component for each indicator with adequate number representing squared factor loading (elements scaled to unity sum). The table below presents the factor loadings and the resulting weights for the individual key drivers. Conflict of Interest Sub-index has the highest weight, while the lowest one is attributed to the Shareholders' Rights Sub-index.

Table 9: Weighting Obtained Using Factor Analysis

Component Matrix ^a				
	Component	Squared factor loading	Squared factor loadings scaled to unity sum	Weights
	1			
Board	.756	.57	.34	.26
Conflict	.792	.63	.35	.28
Rights	.656	.43	.29	.19
Transparency	.783	.61	.35	.27
Extraction Method: Principal Component Analysis.		$\Sigma = 2.24$		
a. 1 components extracted.				

Source: author's calculations using SPSS software

5. Aggregation of the Corporate Governance Index

Arrow's impossibility theorem (Arrow, 1963) clearly shows that no perfect aggregation convention can exist. Nevertheless, there are couple of most common techniques used for composite indicators aggregation, among which two will be used for the purposes of this work - linear and geometric aggregation.

Nardo et al. (2005) argue that linear aggregation assigns base indicators proportionally to the weights. Ebert and Welsch (2004) stress the importance of linear aggregation when all sub-indicators have the same measurement unit. Linear aggregation can be expressed as follows:

$$\bar{x} = \sum_i w_i x_i, \text{ where } 0 \leq w_i \leq 1, \text{ and } \sum_i w_i = 1$$

Nardo et al. (2005) also define the geometric aggregation as an appropriate technique often used in construction of composite indicators. It can be expressed as follows:

$$\bar{x} = \prod_i x_i^{w_i}, \text{ where } 0 \leq w_i \leq 1, \text{ and } \sum_i w_i = 1$$

In this work there is no preference regarding the aggregation methods, so both will be calculated.

4.4.2. Explanatory Power of Different Index Types

At this stage, based on different weighting schemes (equal weights, factor analysis provided weights) and aggregation methods (linear, geometric), it is possible to produce four different types of index by combining mentioned techniques. It is expected that the minor discrepancies would appear in terms of various index types, and they may be even more emphasized because of the small sample issue. In order to determine the most suitable version of the Corporate Governance Index, the methodology developed by Groh and Wich (2009) is being applied. Therefore, a correlation of all index types to some proxy of good corporate governance is examined, and index type that has the highest correlation to this proxy is selected as the best indicator of corporate governance quality.

Practice of more than 50 percent of members of the board of directors (unitary or one-tier board system) or supervisory board (two-tier board system) being independent is taken as a proxy of good firm-level corporate governance. Many authors claim that there is the pervasive use of the board independence as an indicator of the efficacy of the governance system (Baber, Liang; 2008). A comparative study of the corporate governance codes used in the European Union defines independence as lack of close family ties or business relations with the management of the company, with the controlling shareholder or with a group of controlling shareholders (Weil, Gotshal, Manges; 2002). This practice is highly recommended in OECD Principles of Corporate Governance (2004). Moreover, it is unquestionably considered to be the best international practice and very few issues in related academic work generate as much consensus as this one (Shivdasani, Zenner; 2002). Independent board members generally give value to decision-making process, for instance by bringing an objective view to the evaluation of the performance of the board and management, by playing an important role in areas where the interests of management, the company and its shareholders may diverge such as executive remuneration, succession planning, changes of corporate control, take-over defences, large acquisitions and the audit function (OECD, 2004). There are plenty empirical evidences regarding situations requiring a specific board decision, stating that the outcome is more likely to be beneficial to shareholders when the board consists of a majority of independent outside directors (Shivdasani, Zenner; 2002).

Levels of correlation among various index types and the variable Directors' Independence are presented in the right-hand side column of the table below. It seems that the additional effort to perform factor analysis caused slightly worse results. The Corporate Governance Index based on the equal weighting and aggregated by the linear method has the highest correlation coefficient, and is therefore picked as the most reliable indicator of firm-level corporate governance for the

two samples. However, it is important to stress that no matter which type of the Corporate Governance Index is used, it is not a failure because usage of all methods is theoretically justified.

Table 10: Correlation of Different Index Versions to Directors' Independence

CGI_FA_Lin	CGI_EW_Lin	CGI_FA_Geo	CGI_EW_Geo	Dir_Ind	
1,0000	0,9980*	0,9963*	0,9934*	0,6511*	CGI_FA_Lin
	1,0000	0,9953*	0,9966*	0,6615*	CGI_EW_Lin
		1,0000	0,9979*	0,6526*	CGI_FA_Geo
			1,0000	0,6601*	CGI_EW_Geo
				1,0000	Dir_Ind

Source: author's calculations using Gretl software⁸

⁸ * - significance level at 1 percent.

Chapter 5

Empirical Results

In this chapter the results obtained by previously described methodology will be presented. The core outcomes are revealed in differences and similarities of the two samples, according to their performance in terms of corporate governance quality measured by the Corporate Governance Index. Although the samples considered are relatively small, the results should be taken as relevant, especially because the conclusions to be brought will be interpreted solely at the level of the mentioned companies, not crossing beyond and drawing inferences on the general state of corporate governance in the selected countries.

5.1. How Well are Sub-indices Correlated among Each Other and to the Corporate Governance Index?

It is important to outline whether the correlation coefficients of all sub-indices, measuring their mutual correlation and correlation to the Corporate Governance Index, are significant, as well as to verify that they do not have contradictory signs that do not match theoretical explanation. According to the table below, all the sub-indices have significant correlation coefficients, as well as positive signs just as expected. Among all sub-indices, Transparency and Disclosure Sub-index has the highest correlation to the Corporate Governance Index, whereas the lowest one is achieved by the Shareholders' Rights Sub-index. In general, the lowest coefficient is the one explaining correlation between the Board and Shareholders' Rights Sub-indices. The potential theoretical justification might lie in the level of directors' influence on set of variables examined by the Shareholders' Rights Sub-index. Some of the variables, namely the voting mechanism using modern communication technology, as well as practice of shareholders right of cumulative voting in electing directors, often depend on the overall governance environment (including legislation) rather than on board's decisions.

Table 11: Correlation Coefficients of the Index and Sub-indices

Board	Conflict	Rights	T_D	CGI	
1,0000	0,4220**	0,2923***	0,4181**	0,6783*	Board
	1,0000	0,3524***	0,5096**	0,8066*	Conflict
		1,0000	0,3544***	0,6199*	Rights
			1,0000	0,8235*	Transparency
				1,0000	CGI

Source: author's calculations using Gretl software⁹

5.2. Descriptive Statistics of Corporate Governance Index Scores

In this section the performance of the two samples in terms of the Corporate Governance Index will be compared more into detail. The following two tables represent statistical differences of the PX companies and the CROBEX10 companies. One can notice that major differences exist in terms of all statistic indicators.

Table 12: Summary Statistics of the PX Companies CGI Score

Mean	Median	Minimum	Maximum
0,762364	0,808450	0,561200	0,901800
Std. Dev.	C.V.	Skewness	Ex. kurtosis
0,0987880	0,129581	-0,710929	-0,673463

Source: author's calculations using Gretl software

Table 13: Summary Statistics of the CROBEX10 Companies CGI Score

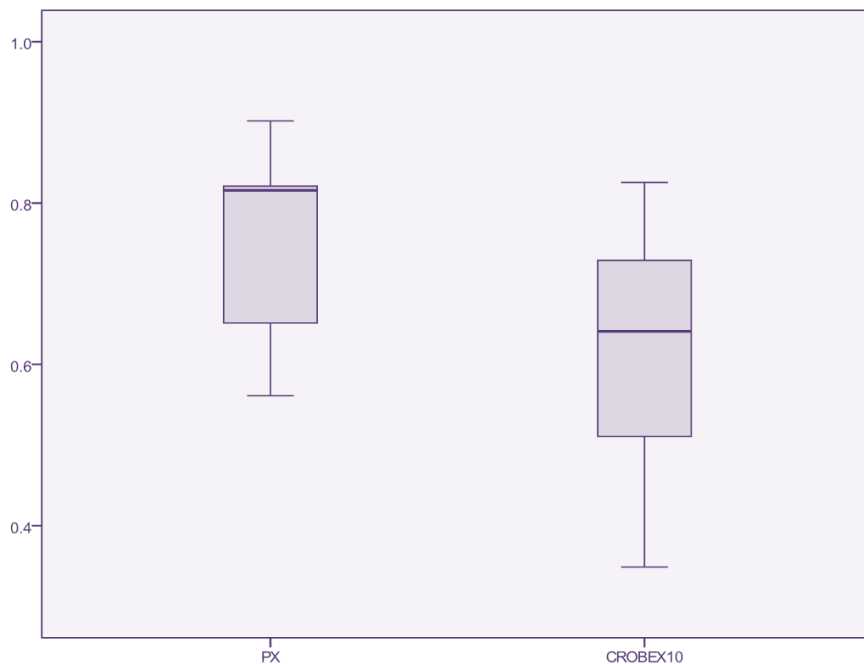
Mean	Median	Minimum	Maximum
0,630890	0,640850	0,348700	0,825400
Std. Dev.	C.V.	Skewness	Ex. kurtosis
0,149415	0,236831	-0,421514	-0,607154

Source: author's calculations using Gretl software

⁹ *, ** and *** - significance levels at 1, 5 and 10 percent respectively.

The box plot below depicts both samples by displaying five descriptive statistics: the median, the upper and lower quartiles, and the minimum and maximum values. It is a graphical method that presents the information from the upper two tables. Box plot is a powerful instrument for analysis because it gives some idea on the shape of the sample, particularly when several samples are lined up alongside one another as it is the case here. The box length gives an indication of the sample variability - the box itself represents the middle half of the sample (interequartile range of the sample), with an end at each quartile. The CROBEX10 sample has somewhat higher variability (degree of dispersion) than the PX sample; this will be analysed further by using histograms. The line across the box (median) shows where the sample is centred: the PX companies have highly oblique median towards the upper quartile, and this is also related to the symmetry of the sample - box plot is therefore a useful indicator of symmetry or skewness. Both PX and CROBEX10 sample are skewed to the left, whereas the latter has much lower skewness. Moreover, identifying outliers also explains symmetry of the sample, and they exist if one tail (the vertical line from the end of the box until minimum/maximum value - whisker) is longer than the other. In the CROBEX10 sample, the lower vertical line is much longer, implying that the sample is being tailed to the left. Still the existence of an outlier cannot be defined here in accordance to the box plot interpretation (values which are between one and a half and three box lengths from either end of the box obtain a status of outliers).

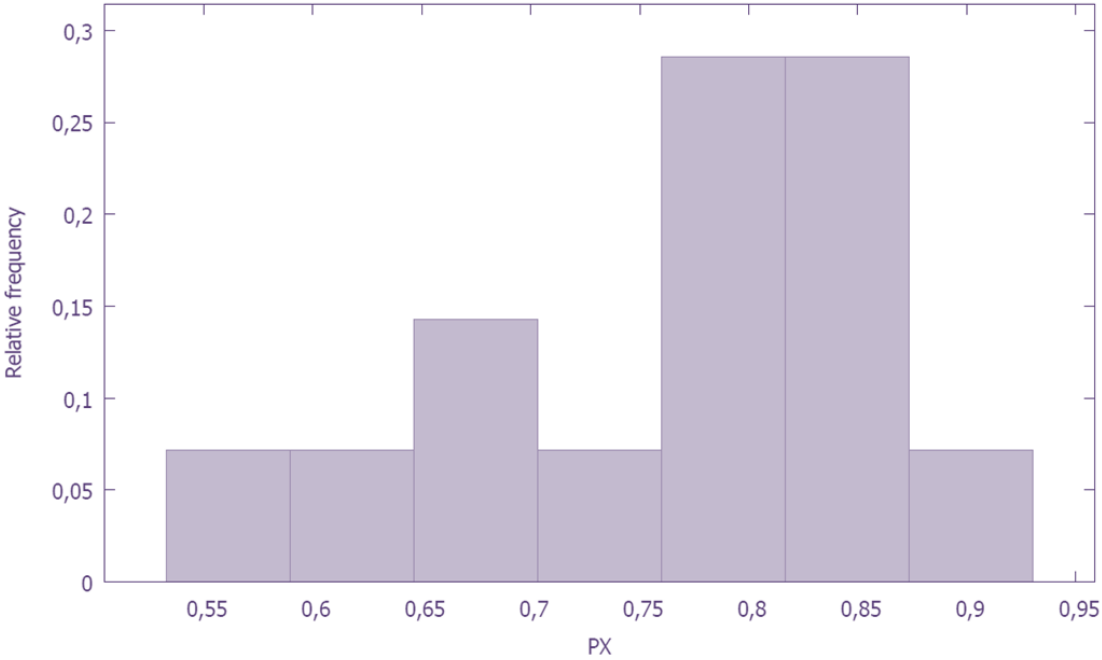
Figure 8: Descriptive Statistics of the CGI Results (Box Plot Chart)



Source: author's calculations using SPSS software

Histograms also serve as a useful tool to describe the sample distribution since they depict frequencies of sample values. The idea is to get some notion of the location, spread and the overall shape of data, and to possibly highlight any salient features. The normality assumption is not assumed in neither of samples since they are too small, and therefore histogram charts will serve only to categorise companies with regard to their performance in terms of the overall Corporate Governance Index. In the first sample, the PX companies, distribution is not normal; it is rather skewed to the left as it is also previously confirmed by the descriptive statistic data and the box plot chart. The histogram shows that most of the companies are grouped into the category of results between 75 to 82 percent (four companies) and 82 to 89 percent (four companies) according to the performance in terms of the Corporate Governance Index. This fact also explains the median that is very close to the upper quartile value, as shown in the box plot. There are no outliers.

Figure 9: The PX Companies CGI Score Distribution (Histogram)

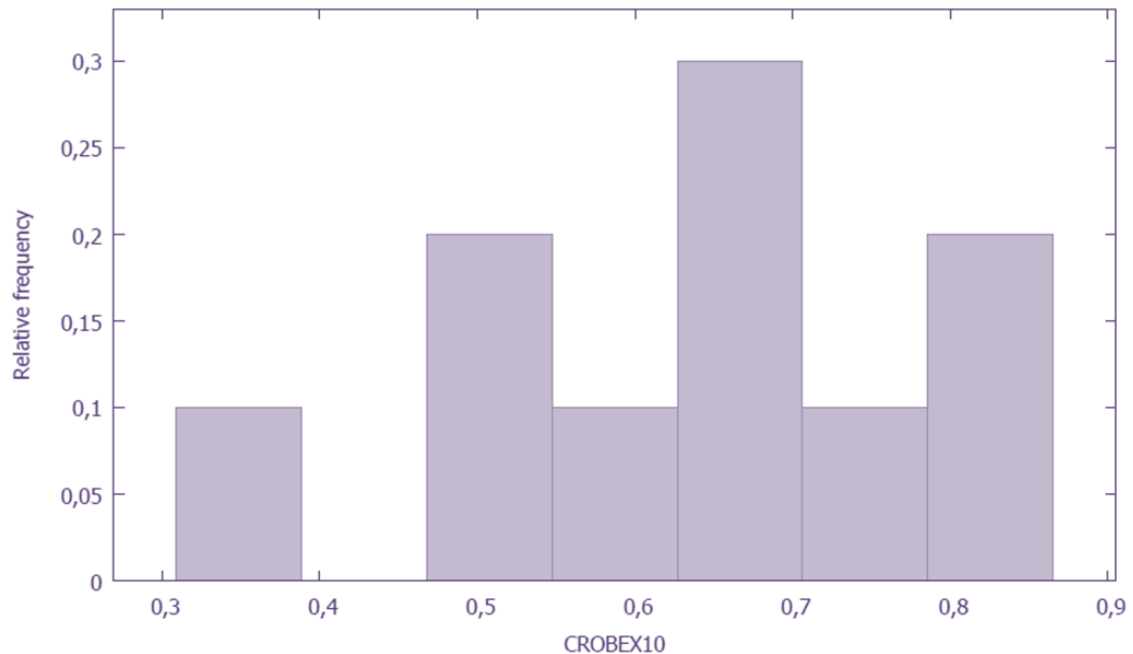


Source: author's calculations using Gretl software

In the second sample, the CROBEX10 companies, it is obvious that distribution is not normal and it is skewed to the left, although substantially less in comparison to the first sample. The histogram shows that most of the companies are grouped into the category of results between 63 to 70 percent (three companies), 47 to 54 percent (two companies) and 77 to 84 percent (two companies) according to the performance in terms of the Corporate Governance Index. Moreover, there is a company that could be classified as an outlier, however according to the box

plot interpretation it should still be kept. One important difference is that Croatian companies' results have higher variability than the Czech ones.

Figure 10: The CROBEX10 Companies CGI Score Distribution (Histogram)



Source: author's calculations using Gretl software

5.3. Comparison of Two Samples' Performance in Terms of Governance Domains

After analysing main statistic differences between two samples, it is necessary to see a systematic depiction of the results which are the main conclusion of this research: the performance of the Czech and Croatian companies in terms of the overall Corporate Governance Index, as well as in terms of individual sub-indices.

The table below shows that the PX Index companies have much better performance concerning the overall Corporate Governance Index, equalling 76 percent. On the other hand, the CROBEX10 companies have a worse overall performance, totalling 63 percent. Therefore, the research assumption stating that the PX companies should have better overall corporate governance is approved.

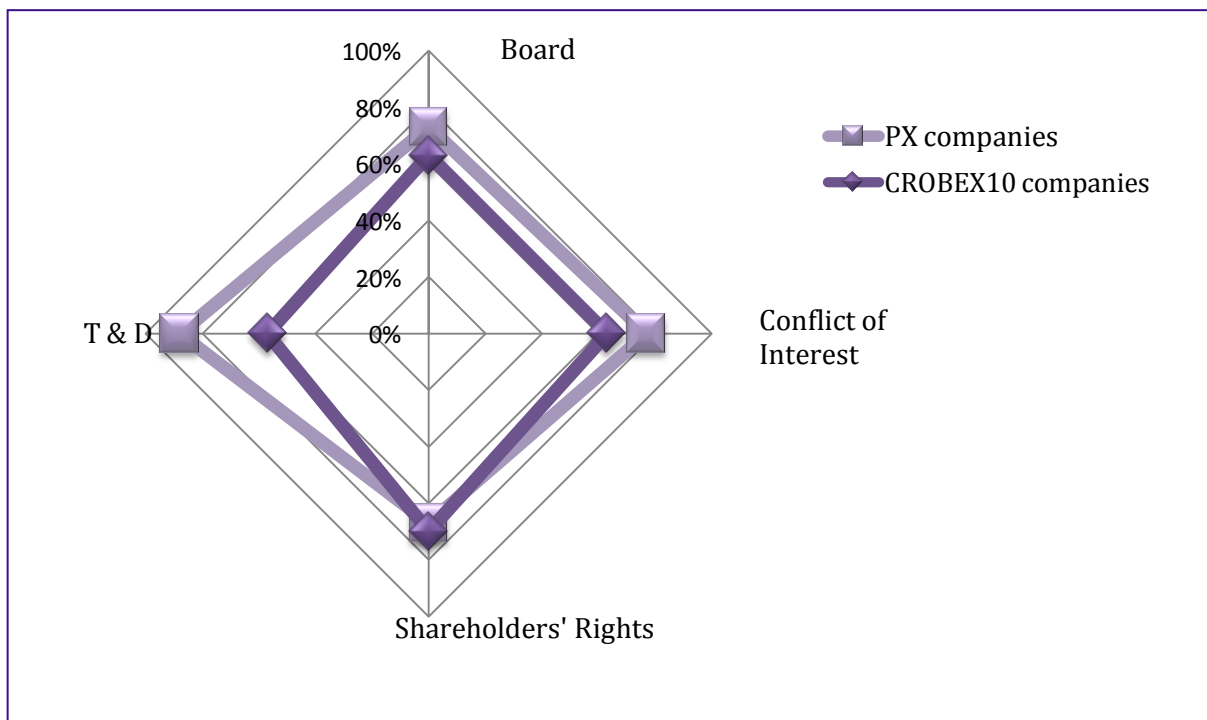
Table 14: Two Samples' Performance – the Corporate Governance Index and Sub-indices ¹⁰

	PX Companies	CROBEX10 Companies
Board Sub-index	18.31	15.63
Conflict of Interest Sub-index	19.13	15.71
Shareholders' Rights Sub-index	16.84	17.50
Transparency and Disclosure Sub-index	21.96	14.25
Corporate Governance Index	76.24	63.09

Source: author's calculations

In order to interpret individual sub-indices results, radar charts are often used. One can notice that the PX companies are dominant in three sub-indices performance: Board, Conflict of Interest, and Transparency and Disclosure, while the latter is the main driver boosting the overall result. The CROBEX10 companies have slightly better result (less than 1 percentage point difference) solely in the Shareholders' Rights Sub-index.

Figure 11: Two Samples' Performance in terms of Sub-indices



Source: author's calculations

¹⁰ Numbers denoted in percentages.

Starting with the Board Sub-index, the Czech companies have a significant advantage in comparison to the Croatian companies. The principal differences in favour of the Czech over Croatian companies exist with regard to the following governance practices:

- requirement for majority of supervisory board members/board of directors' non-executive members to be independent;
- requirement for the remuneration received by the members of the supervisory board/non-executive members of the board of directors to be partially determined according to their contribution to the company's business performance (variable part);
- requirement for directors to have initial and regular trainings related to their engagement in the company;
- requirement for self-evaluation of the engagement in the preceding period (including evaluation of the contribution and competence of individual members, as well as of joint activities of the board and committees) by the supervisory board/non-executive members of the board of directors.

In terms of the Conflict of Interest Sub-index, Czech companies again have a better score. Sources of this advantage are better performance considering existence of board committees and internal audit department/function. Much higher percentage of the PX companies has these governance bodies in comparison to the CROBEX10 companies.

Shareholders' Rights Sub-index reveals the only governance domain where Croatian companies achieved better results, although this advantage is negligible. Therefore, according to this assessment, shareholders rights protection is similar in both countries. It seems that such result is compatible with the theoretical description of the main corporate governance issues in both Czech Republic and Croatia contained in Chapter 2 (in that section, it is deduced that one of the problems in both countries is lack of shareholders rights protection - especially minority shareholders' rights, and that this appearance should be on a fairly similar level).

Transparency and Disclosure Sub-index is the domain where the PX companies have the highest advantage. The main differences in favour of Czech companies exist with regard to public disclosure of the following information:

- detailed records on remuneration of board members;
- statement on compliance with the code of corporate governance and explanation of potential departures;
- detailed information on each board member (biography, positions held in other companies, etc.);
- analysts' coverage of share information.

The fact that Czech companies performed better than Croatian ones in terms of the mentioned practices does not mean that they fully adhere to these practices, yet there is still lot of space for improvements in these fields on both sides.

5.4. Common Weaknesses of Both Samples as Subject to Potential Improvement

Besides the points of departure between two samples, one could extract the common weaknesses because they are meaningful for both groups of companies as they could be subject to improvement.

When analysing the Board Sub-index variables, it seems that the issue of long term succession planning is being neglected – only 64 percent of Czech companies and 60 percent of Croatian companies comply with this widely recommended best practice.

With the Conflict of Interest Sub-index, most of the attention should be devoted to implementation of board committees as governing bodies which ensure more professional and transparent decision making, namely remuneration and nomination committee. In terms of remuneration committee, 78 percent of Czech and 40 percent of Croatian companies – obviously Czech companies do have solid score but still it can be improved. Nomination committee is present in 57 percent of the PX companies and in 30 percent of the CROBEX10 companies.

Shareholders' Rights Sub-index issues are, as already mentioned, influenced by the environment (for instance shareholder voting using modern technologies), however better voting schemes should be assured in order to prevent abuse of (namely minority) shareholders' rights, such as cumulative voting system in electing directors which is marginalised in both samples. Moreover, practice of external auditors being present at annual general meeting of shareholders should be prioritised in both PX and CROBEX10 companies.

Domain covered by the Transparency and Disclosure Sub-index is the one where Czech companies have exceptional score regarding most of the selected variables. The lowest score achieved though is with regard to disclosure of explanations of departures from the corporate governance code, being also one of the most problematic practices in the CROBEX10 companies (while the PX companies still have dramatically better score).

Chapter 6

The Added Value and Suggestions for Further Research

Although this thesis systematically presents development of corporate governance both in the Czech Republic and in Croatia in recent period, its major value is creation of the Corporate Governance Index. This index is a composite indicator of firm-level corporate governance based on OECD methodology recommendations, and represents a first such trial to measure governance mechanisms implemented in the Czech and Croatian companies to the author's best knowledge. The main advantage this index offers, as compared to using a group of single indicators available, is that it is composed of different but related indicators that are able to comprise various domains of a multifaceted phenomenon such as corporate governance. The domains taken into consideration cover the most significant governance practices on a firm-level with regard to board structure and functioning, conflict of interest, shareholders' rights, and transparency and disclosure. Interpretation of the Corporate Governance Index results shows the main strengths and weaknesses of both PX and CROBEX10 companies, so this is powerful, "eye-catching" tool for advocacy. By its nature, an index is conducive to a quick overview and has an overwhelming advantage in relation to complementary indicators; it also facilitates the use of statistics by the public and policymakers (Wiesmann, 2006). In international rankings such as in this case, an index can foster a sense of competition among countries and thus help to promote good practices and policies to encourage them (Streeten 1994; Ryten 2000).

Although the Corporate Governance Index developed in this thesis covers two relatively small samples of companies, it is still a very useful and accurate indicator of corporate governance implemented there. The small sample issue arose due to the fact that the approach followed was based on taking into consideration only the most liquid companies on both markets, since these blue chip issuers represent the core of the market and it is worth to observe the corporate governance in "living" companies, not in those that are barely traded. Besides, the unlisted companies were not scrutinised since they are largely non-transparent and necessary information would be hard to gather. However, further research may be based on inclusion of companies listed in other, conditionally speaking, similar markets, such as the Warsaw Stock Exchange, the Budapest Stock Exchange, the Sarajevo Stock Exchange, the Ljubljana Stock Exchange, etc., and possibly to extend the research subject to all the other listed companies, not

just blue chip issuers. Moreover, even higher number of markets could be included in the analysis, and then the comparison of the final results could be made based on different criteria – economic development (developed/developing economies), legal origin classifications by La Porta et al. (1997) – English, German, French and Scandinavian origin which determines the predominant corporate governance system (one-tier/two-tier system), etc. Moreover, there are numerous studies that correlate ownership structure to the corporate governance quality; in this thesis companies taken into account generally have concentrated ownership, and therefore such comparison among samples cannot be performed. However, if one would take into consideration many more other markets, it would be also possible to draw comparison among markets that are characterised by predominantly concentrated ownership and those with dispersed ownership. Eventually the final goal of this extended research would be to construct an index measuring corporate governance on a firm-level worldwide, just as many other indices related to different topics, such as the Technology Achievement Index developed by the United Nations for the Human Development Report covering 72 countries (United Nations, 2001; Fukuda-Parr, 2003), the Index of Economic Freedom published by the Heritage Foundation with support of the Wall Street Journal including 184 countries, the Index of a Host Country's Attractiveness for Foreign Direct Investment covering 127 countries, developed by Groh and Wich, etc.

Chapter 7

Conclusions

The thesis reveals a lot about corporate governance development in both Czech and Croatian markets in the last two decades, which is a precondition for understanding the main research subject - firm-level corporate governance of the most liquid companies: Prague Stock Exchange companies whose stocks take part in the PX Index and Zagreb Stock Exchange companies included in the CROBEX10 Index.

The principal mean of the analysis is a unique Corporate Governance Index, representing a contribution to the field of corporate governance studies. Being a composite indicator of firm-level corporate governance, it is a first trial of measuring governance mechanisms implemented in the Czech and Croatian companies to the author's best knowledge. The index concentrates solely on the best practices, and thus creates distinction between companies that simply follow regulatory requirements, and those that truly strive to catch up with modern corporate governance trends and adopt most up-to-date recommendations. Methodology used for its construction is based on OECD standards, and the index is tested for consistency in a very detailed manner. Its structure is developed by a mathematical aggregation of four sub-indicators based on 40 variables and condensed into manageable information sets, which are then further condensed into an index. These sub-indicators (sub-indices) reflect the quality of governance in the four main domains: board structure and functioning, conflict of interest, shareholders' rights, and transparency and disclosure. Therefore, one of the key advantages of this index is that it is composed of different but related sub-indicators, and it enables to comprise various aspects of a multifaceted phenomenon such as corporate governance.

Interpretation of the Corporate Governance Index results gives quick overview of the state of implemented governance practices in both PX and CROBEX10 companies, so this is powerful, "eye-catching" tool for advocacy. The main assumption of this work is that Czech companies should have better overall level of corporate governance than the Croatian ones. Indeed, it has been demonstrated that the Czech companies have better governance mechanisms at the overall level, as well as in the most of the individual domains covered – board, conflict of interest, and transparency and disclosure practices. On the other hand, Croatian companies have negligible advantage solely in terms of the shareholders' rights practices.

Besides the remarkable results of the present study, there are potential limitations that have to be outlined. In the first place, that may be a small sample issue that arose due to the fact that the approach followed is based on taking into consideration only the most liquid companies on both markets, as these blue chip issuers represent the core of the market and it is worth to observe the corporate governance in “living” companies, not in those that are barely traded. Since both markets have relatively small number of liquid companies, this issue appeared. Nevertheless, the results should be taken as relevant, especially because they are interpreted only at the level of the mentioned companies. Another potential limitation might be the fact that majority of the Czech companies covered by this research are predominantly in foreign ownership and one may think that they in fact represent foreign governance practices. However, this is true only up to a certain extent since all of these companies also need to comply with the local corporate governance rules and customs. Thus, it should be reliable to track behaviour of such companies as an indicator of firm-level corporate governance in the country in question, regardless of their owners in this context.

Overall, the study provides strong results on various corporate governance practices implementation and additionally, it gives insights on the main drawbacks present both in the Czech and Croatian companies’ governance. It can therefore serve as an indicator for policy-oriented measures addressed in order to diminish or eliminate the problematic areas and make companies more competitive.

Chapter 8

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APPENDIX A: Corporate Governance Indices

Table 1: U.S. Governance Index by Gompers, Ishii and Metrick (2003)

Components of the Governance Index				
Delay	Protection	Voting	Other	State
Blank Check	Compensation Plans	Bylaws	Antigreenmail	Antigreenmail Law
Classified Board	Contracts	Charter	Directors' Duties	Business Combination Law
Special Meeting	Golden Parachutes	Cumulative Voting	Fair Price	Cash-Out Law
Written Consent	Indemnification	Secret Ballot	Pension Parachutes	Directors' Duties Law
	Liability	Supermajority	Poison Pills	Fair Price Law
	Severance	Unequal Voting	Silver Parachutes	Control Share Acquisition Law

Source: Gompers, Ishii and Metrick (2003), adjusted by author

Table 2: Korean Corporate Governance Index by Black, Jang and Kim (2003)

Korean Corporate Governance Index	
Shareholder Rights Sub-index	
A.1	Firm uses cumulative voting for election of directors
A.2	Firm permits voting by mail
A.3	Firm chooses shareholder meeting to not overlap with other firms in industry, or chooses location to encourage attendance
A.4	Firm discloses director candidates to shareholders in advance of shareholder meeting
A.5	Board approval is required for related party transactions
Board Structure Sub-index	
B.1	Firm has at least 50% outside directors
B.2	Firm has more than 50% outside directors.
B.3	Firm has outside director nominating committee.
B.4	Firm has audit committee.
Board Procedure Sub-index	
<i>Elements that apply to all firms</i>	
C.1	Directors attend at least 75% of meetings on average.
C.2	Directors' positions on board meeting agenda items are recorded in board minutes.
C.3	CEO and chairman are different people.
C.4	A system for evaluating directors exists.
C.5	A bylaw to govern meetings exists.

C.6	Firm holds four or more regular board meetings per year.
C.7	Firm has one or more foreign outside directors.
C.8	Outside directors do not receive retirement pay.
C.9	Outside directors can obtain advice from outside experts at the company's expense
C.10	Firm has or plans a system for evaluating outside directors.
C.11	Shareholders approve outside directors' aggregate pay (separate from shareholder approval of all directors' aggregate pay).
C.12	Outside directors attend at least 75% of meetings on average.
C.13	Firm has code of conduct for outside directors
C.14	Firm designates a contact person to support outside directors.
C.15	Board meeting solely for outside directors exists.
C.16	Firm has not lent outside directors funds to purchase unsubscribed shares from the company.
D.2	Bylaws governing audit committee (or internal auditor) exist.
D.4	Audit committee (or internal auditor) recommends the external auditor at the annual shareholder meeting.
D.5	Audit committee (or internal auditor) approves the appointment of the internal audit head.
D.7	Report on audit committee's (or internal auditor's) activities at the annual shareholder meeting.
D.9	Audit committee (or internal auditor) meets with external auditor to review financial statements.
<i>Elements that apply to firms with audit committee</i>	
D.1	Outside directors comprise more than 2/3 of audit committee.
D.3	Audit committee includes someone with expertise in accounting.
D.6	Written minutes for audit committee meetings.
D.8	Audit committee members attend at least 75% of meetings.
D.10	Audit committee meets two or more times per year.
Disclosure Sub-index	
E.1	Firm conducted investor relation activity in 2000.
E.2	Firm website includes resumes of board members
E.3	English disclosure exists
Ownership Parity Sub-index	

Source: Black et al (2003a, 2003b), adjusted by author

Table 3: Thailand Corporate Governance Index by Ananchotikul (2008)

Thailand Stock Exchange Corporate Governance Index				
Code	Questions	Scoring Rule	M.Score	Weight
A	BOARD STRUCTURE		6.00	
a1	What is the size of the board of directors?	1 if $5 \leq a1 \leq 12$; 0 otherwise	1.00	20%
a2	What is the size of executive board?	1 if $a2 \leq 12$; 0 otherwise	1.00	
a3	How many directors are also managers?	1 if $a3/a1 < 1/3$; 0 otherwise	1.00	
a4	How many directors are "independent"?	1 if $a4/a1 > 1/3$; 0 otherwise	1.00	
a5	Does the firm state the definition of "independence" in the disclosure report?	1 if $a5 = 1$; 0 otherwise	1.00	
a6	How many directors have attended	1 if $a6/a1 > 1/2$; 0 otherwise	1.00	

	director training programs by the Thai Institution of Directors Association?			
B	CONFLICT OF INTEREST		8.00	
b1	Is the Chairman the same person as the CEO?	1 if b1 = 0; 0 otherwise	1.00	25%
b2	Is the Chairman "independent"?	1 if b2 = 1; 0 otherwise	1.00	
b3	How many public companies does the Chairman concurrently serve as a director or a manager?	1 if b3 <= 3; 0 otherwise	1.00	
b4	Does an audit committee exist?	1/2 if b4 = 1; 0 otherwise	0.50	
b5	- chaired by independent director?	1/6 if b5 = 1; 0 otherwise	0.17	
b6	- role and responsibilities clearly stated?	1/6 if b6 = 1; 0 otherwise	0.17	
b7	- performance or meeting attendance disclosed?	1/6 if b7 = 1; 0 otherwise	0.17	
b8	Does a nominating committee exist?	1/2 if b8 = 1; 0 otherwise	0.50	
b9	- chaired by independent director?	1/6 if b9 = 1; 0 otherwise	0.17	
b10	- role and responsibilities clearly stated?	1/6 if b10 = 1; 0 otherwise	0.17	
b11	- performance or meeting attendance disclosed?	1/6 if b11 = 1; 0 otherwise	0.17	
b12	Does a remuneration committee exist?	1/2 if b12 = 1; 0 otherwise	0.50	
b13	- chaired by independent director?	1/6 if b13 = 1; 0 otherwise	0.17	
b14	- role and responsibilities clearly stated?	1/6 if b14 = 1; 0 otherwise	0.17	
b15	- performance or meeting attendance disclosed?	1/6 if b15 = 1; 0 otherwise	0.17	
b16	Does a corporate governance committee exist?	1/2 if b16 = 1; 0 otherwise	0.50	
b17	- chaired by independent director?	1/6 if b17 = 1; 0 otherwise	0.17	
b18	- role and responsibilities clearly stated?	1/6 if b18 = 1; 0 otherwise	0.17	
b19	- performance or meeting attendance disclosed?	1/6 if b19 = 1; 0 otherwise	0.17	
b20*	Does the firm have a policy that specifies a minimum number of independent directors? Does the firm discuss the following internal-control issues in the disclosure report?	1/3 if b20 = 1; 0 otherwise	0.33	
b21	1) Organizational and control environment	2/15 if b21 = 1; 0 otherwise	0.13	
b22	2) Risk management	2/15 if b22 = 1; 0 otherwise	0.13	
b23	3) Management control activities	2/15 if b23 = 1; 0 otherwise	0.13	
b24	4) Information and communication	2/15 if b24 = 1; 0 otherwise	0.13	
b25	5) Monitoring and evaluation	2/15 if b25 = 1; 0 otherwise	0.13	
C	BOARD RESPONSIBILITIES		13.00	
c1*	Number of board meetings per year	1 if c1 > 4; 0 otherwise	1.00	
c2*	Average director's meeting attendance	c2/c1	1.00	
c3*	Average independent director's meeting attendance	c3/c1	1.00	
c4*	Is there a board meeting solely for independent directors?	1 if c4 = 1; 0 otherwise	1.00	
c5*	Number of audit committee meetings per year	1 if c5 >= 4; 0 otherwise	1.00	
c6*	Average audit committee meeting attendance	c6/c5	1.00	

c7	Is there at least one accounting expert on the audit committee?	1 if c7 = 1; 0 otherwise	1.00	20%
c8	How many public companies does the chairman of audit committee serve as a director or manager?	1 if c8 ≤ 3; 0 otherwise	1.00	
c9	Does the firm clearly distinguish the role and responsibilities of the board and management?	1/3 if c9 = 1; 0 otherwise	0.33	
c10*	Does the firm disclose that directors evaluation system exists?	1/3 if c10 = 1; 0 otherwise	0.33	
c11	Does the firm have an option scheme which incentivizes management?	1/3 if c11 = 1; 0 otherwise	0.33	
c12	Has there been any legal dispute where the firm was claimed to be at fault during the past year?	1 if c12 = 0; 0 otherwise	1.00	
c13	Has there been any sanction to the board, management, or other insider(s) for violations of Securities and/or Corporations laws in the last two years? 3	3*(1-c13)	3.00	
D	SHAREHOLDER RIGHTS		8.00	10%
d1*	Does the firm hold an annual general shareholder meeting?	1 if d1 = 1; 0 otherwise	1.00	
d2*	Does the firm employ one-share-one-vote rule?	1 if d2 = 1; 0 otherwise	1.00	
d3*	Is cumulative voting allowed in electing directors?	1 if d3 = 1; 0 otherwise	1.00	
d4*	Is voting by mail allowed?	1 if d4 = 1; 0 otherwise	1.00	
d5*	How many days in advance does the firm send out a notice of general meetings to shareholders?	d5/14	1.00	
d6*	Is proxy voting allowed?	1 if d6 = 1; 0 otherwise	1.00	
d7	Does the firm disclose a dividend policy?	1/3 if d7 = 1; 0 otherwise	0.33	
d8	What is the minimum dividend (as percentage of net profit) according to the dividend policy?	1/3 * d8/100	0.33	
d9	Does the firm provide an explanation/rationale for setting dividend at the specified level?	1/3 if 1	0.33	
E	DISCLOSURE & TRANSPARENCY		17	
	Does the firm disclose the following information in the disclosure report?			
e1	1) Board meeting attendance of individual directors	1 if e1 = 1; 0 otherwise	1.00	
e2	2) Board compensation and/or benefits of individual directors	1 if e2 = 1; 0 otherwise	1.00	
e3	3) Director shareholdings	1 if e3 = 1; 0 otherwise	1.00	
e4	4) Management shareholdings	1 if e4 = 1; 0 otherwise	1.00	
e5	5) Related party transactions in details 4	1 if e5 = 1; 0 otherwise	1.00	
e6	6) Corporate group structure	1 if e6 = 1; 0 otherwise	1.00	
e7	7) Groupings of major shareholders who belong to the same family/economic unit	1 if e7 = 1; 0 otherwise	1.00	
e8*	Does an investor relations unit exist?	1 if e8 = 1; 0 otherwise	1.00	

e9*	Does the firm mention its investor relations activity carried out during the past year?	1 if e9 = 1; 0 otherwise	1.00	25%
e10*	Does company website exist? Does company website contain the following information?	1 if e10 = 1; 0 otherwise	0.20	
e11*	1) Bio of directors	1/5 if e11 = 1; 0 otherwise	0.20	
e12*	2) Business operation	1/5 if e12 = 1; 0 otherwise	0.20	
e13*	3) Financial statements	1/5 if e13 = 1; 0 otherwise	0.20	
e14*	4) Press release	1/5 if e14 = 1; 0 otherwise	0.20	
e15*	5) Shareholding structure	1/5 if e15 = 1; 0 otherwise	0.20	
e16*	6) Organization structure	1/5 if e16 = 1; 0 otherwise	0.20	
e17*	7) Corporate group structure	1/5 if e17 = 1; 0 otherwise	0.20	
e18*	8) Annual Report downloadable	1/5 if e18 = 1; 0 otherwise	0.20	
e19*	9) Up-to-date information	1/5 if e19 = 1; 0 otherwise	0.20	
e20*	10) English version	1/5 if e20 = 1; 0 otherwise	1.00	
e21*	Does the firm publish Annual Report in English language (in addition to Thai language)?	1 if e21 = 1; 0 otherwise	1.00	
e22*	Does the firm's Annual Report include a section devoted to corporate governance principles and implementations?	1 if e22 = 1; 0 otherwise		
e23	How many times in the last two years has the firm been charged for failures to publish company reports within the specified period?	3-e23	3.00	

* Available only for the year 2004 and thus excluded from CGI 2000 calculations.

Source: Ananchotikul (2008)

APPENDIX B: The Corporate Governance Questionnaire

1. General Information on the Company and Respondent

1.	What is the company name?
2.	What is its field of activity/industry?
3.	What is the ownership structure? a) Very concentrated (controlling shareholder who has substantial voting rights and effectively controls the firm) b) Concentrated (more controlling shareholders) c) Dispersed (many small shareholders)
4.	If the answer to the question 3. is a) or b), is this controlling shareholder/any of controlling shareholders a foreign investor? a) yes b) no
5.	Is a certain portion of the company owned by the government? If yes, please state the percentage share.
6.	What is your position in the company? a) Investor Relations official b) Company's Secretary c) Member of the Boards d) Manager e) Other

2. Board Practices

	Size and structure
1.	How many members are there in the Supervisory Board?
2.	How many members are there in the Management Board?
3.	Are more than 50% of the Supervisory Board members independent?
4.	Does the company state the definition of director independence in the disclosure report?
5.	Is there a political decision included in the appointment of the members of the Supervisory Board?
6..	Is there a balanced (equable) proportion of women and men in terms of their positions as Boards directors and top managers?
	Functioning
7.	Did the company adopt Code of Conduct and Business Ethics?

8.	What is the number of regular meetings per year for the Supervisory Board and for the Management Board?
9.	What is an approximate average director's meeting attendance (in %) for the Supervisory Board members?
10.	What is an approximate average director's meeting attendance (in %) for the Management Board members?
11.	Do written meeting minutes exist and do they contain all adopted decisions, accompanied by data on voting results, along with information on votes of each individual member?
12.	Are there initial and regular trainings for directors?
13.	Do the Supervisory Board members have the ability to commission independent analysts or hire external consultants on company's expense, if they believe such outside help is necessary to enable it to perform its oversight function?
14.	Did the Supervisory Board formally evaluate their work in the preceding period, including evaluation of the contribution and competence of individual members, as well as of joint activities of the Boards and Committees established?
15.	Is the remuneration received by the members of the Supervisory Boards partially determined according to their contribution to the company's business performance (variable part)?
16.	Is there a long term succession plan in the company?

3. Conflict of Interest Practices

1.	Are there any cases with the potential for conflict of interest company is aware of?
2.	Is the Chairman of the Supervisory Board independent?
3.	Are there any members of the Supervisory Board that also have functions on boards of other companies which are suppliers or customers?
4.	Does an Internal Audit department/function exist?
5.	Does an Audit Committee exist?
6.	Does a Remuneration Committee exist?
7.	Does a Nomination committee exist?

4. Shareholders' Rights Practices

1.	Does the firm employ "one share – one vote" rule? If no, have relevant disclosures been announced to the public timely?
2.	Is proxy voting allowed?
3.	Have shareholders been given the opportunity to participate and to vote at the Annual

	General Meeting by using modern communication technology?
4.	Is cumulative voting allowed in electing directors?
5.	Does the firm disclose a dividend policy, and is there an explanation/rationale for setting dividend at the specified level?
6.	Are the Annual General Meetings attended by members of the Management Board who can answer the questions submitted?
7.	Are the Annual General Meetings attended by the external auditors who can answer the questions submitted?

5. Transparency and Disclosure Practices

	Is the following disclosure made in the Annual Report:
1.	a) Information on each member of Boards and Committees member, including biography and important positions held in other companies
2.	b) Detailed records on all remunerations and other earnings received from the company or from other persons related to the company, including the structure of such remuneration
3.	c) Statement on the compliance with the Code of Corporate Governance
4.	d) Explanations of departures from the Code of Corporate Governance
5.	Is there an English version of the Annual Report?
	Is the following information published on the Website:
6.	a) Investors' Relations section including corporate governance subsection/information
7.	b) Analyst Coverage section
8.	c) Media Relations section
9.	d) Calendar of corporate events
10.	e) General meetings section/subsection with up-to-date information

APPENDIX C: Benchmarking Criteria for Evaluating Practices Promoted by the Corporate Governance Index

This section will provide with benchmarking criteria that were used in the assessment of the corporate governance practices applied in the companies covered by this research. Best practices from various sources were used, as the idea is to create a unique set of widely applied best practice recommendations.

The reasoning for choosing certain benchmarks will be elaborated solely where that is considered as necessary, since there are lot of practices generally advisable to implement without any doubt. Moreover, it is important to stress that in terms of certain practices (for instance those related to the board size and structure), there is no „one size fits all“ approach, since it is considered to be more effective to allow firms to choose those characteristics that are most appropriate for their own needs without weakening underlying economic determinants (Guest, 2008). Nevertheless, certain guidelines do exist.

Benchmarks for Board Practices

Board size: Many authors consider that a smaller board is related to better firm performance (Yermack, 1996; Denis & Sarin, 1999) and although there are also some papers proving the opposite, much of the public debate has centred on pressure for smaller board size. As a benchmark in this assessment, the optimal size of the board in the one-tier structure will be 9 members and below, as suggested by Guest (2009), who made a research on sample of the U.K. companies. When it comes to the two-tier structure, supervisory board should have at maximum 10 members, as suggested in the Austrian Working Group for Corporate Governance recommendations (2005). Since both Czech Republic and Croatia have similar governance systems to Austria, this benchmark can be applied. Management board size benchmark is set at maximum 7 members, having foundations in Theisen's (1998) research on average size of the German management board, which did not truly change in the recent period.

Directors' independence: Among numerous other sources, it is proposed in OECD Principles of Corporate Governance that a majority of board of directors' members (one-tier governance system) or supervisory board members (two-tier system) should be independent. Chairman of the board of directors/supervisory board should be independent. It is also proposed that the definition of directors' independence should be disclosed.

Balanced proportion of men and women in management and supervisory functions: Many corporate governance codes, such as Austrian and Dutch, contain such provisions. In its document under the title „Strategy for equality between women and men 2010-2015“, the European Commission particularly promotes equality of genders in decision-making processes. Moreover, research shows that gender diversity pays off and that there is a positive correlation between women in leadership positions and business performance (EU Commission, 2010).

Board annual meeting frequency: Due to lack of benchmark in literature, the evidence from practice was used. For one-tier board, FTSE 100 companies served as a benchmark (the U.K. is main jurisdiction in Europe when it comes to one-tier governance system), having 8.7 meetings on average per year (Grant Thornton, 2011). Therefore, the benchmark on number of one-tier board meetings used in this work will be 8 meetings per year. Two-tier board benchmarks are taken from the Czech Code of Corporate Governance (2004): supervisory board should meet at least four times per year while management board should meet at least once a month.

The composition of the remuneration to the supervisory board members /non-executive members of the board of directors: Remuneration shall consist of a fixed part, which does not depend on operating results (unless operating results show that the payment of fixed remuneration would be undeserved and in great disproportion with operating results), and of a variable part, which depends on operating results during a certain past or future period (Croatian Corporate Governance Code, 2007). This is widely promoted practice, being present in the majority of national codes adhering to OECD guidelines, such as Czech, Dutch, Austrian, etc.

The supervisory board/board of directors shall ensure that there is a long-term succession plan: This enables a prudent and timely appointment of a successor to any of the members of the company's management (Croatian Corporate Governance Code, 2007).

Benchmarks for Conflict of Interest Practices

Board committees: These are governing bodies usually performing audit, nomination and remuneration functions, but there are also other functions they can cover. The methodological issue of putting board committee practices under Conflict of Interest Sub-index is taken from Ananchotikul (2008). This is fairly straightforward since delegating certain functions to the board member groups contributes to providing more dispersed decision making process regarding various issues. Besides, responsibilities delegated to committees are then held by smaller group of directors who can specialise and continuously focus on certain domains to provide better judgement, while board is still the main authority and keeps its integrity.

Benchmarks for Shareholders' Rights Practices

"One share - one vote" principle: The voting right shall cover all the shareholders of the company so as to make the number of the votes belonging to them in the general assembly equal to the number of the shares they hold, regardless of the class of shares (Croatian Code of Corporate Governance, 2007). In the case where the company issues non-voting shares or shares with limitations on voting rights, it shall publish in a timely manner all relevant data on the content of all rights resulting from such shares in order to enable investors to make the right decision related to the purchase of these financial instruments (Croatian Code of Corporate Governance, 2007).

Proxy Voting: In general, no procedures may be adopted that would practically prevent or limit the exercise of the shareholders' rights. Shareholders must be able to vote in person or in absentia, and equal effect should be given to both types of votes. Therefore, prohibitions of proxy voting and the requirement of personal attendance at general shareholder meetings to vote should not be permitted (Czech Code of Corporate Governance, OECD).

Voting using modern technologies: The European Union Shareholders' Rights Directive (2007) requires that members of publicly traded companies have the possibility to participate in general meetings and exercise their voting rights electronically. Therefore, these companies should provide the required electronic mechanisms for such voting practices and establish real time transmission of the meeting.

Cumulative voting in electing directors: It is often seen as one of the major mechanisms that can help equalise shareholder rights. This question appears also in most literature with the same research subject, and some of the authors that refer to it are Gompers, Ishii and Metrick (2003), Black, Jang and Kim (2003a, 2003b) and Ananchotikul (2008).

Benchmarks for Transparency and Disclosure Practices

Some of the questions are best practice guidelines from OECD codes, such as annual report contents: information on boards members, records on their remunerations, statement on the compliance and departure from the corporate governance code, etc.; and web page contents: Investor Relations section including corporate governance subsection/information, General meetings section/subsection with up-to-date information, etc. The other supplementary contents are taken from practice, i.e. some of the most transparent companies' annual reports and web pages were examined and the recommendations were drawn respectively.