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„The current debate on Governance Indices“

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Dan Rosenblatt

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**Abstract**

Corporate governance and its effects have attracted much attention over the last years. Yet it remains challenging to measure the quality of an implemented corporate governance system. Several researchers and commercial providers have created governance indices which close that gap. These indices aim to express how many governance provisions available to the company are actually in place. The underlying ratio is clear; the more provisions in place, the better the corporate governance and thus the company's performance. A good deal of studies has examined the effects of corporate governance by analyzing the correlation between governance indices and company performances. This paper provides an extensive presentation of this debate by discussing the relevant studies of both the advocating and the opposing side. Furthermore, towards the end of the paper, three short excursions give some insights into corporate social responsibility, corporate governance and emerging markets and eventually corporate governance research.

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**Abbreviations**

BBR	Bhagat, Bolton, and Romano (2007)
BC	Brown and Caylor (2006)
BCF	Bebchuk, Cohen, and Ferrell (2005)
Capex	Capital expenditure
CGR	Core, Guay, and Rusticus (2005)
CN	Cremers and Nair (2005)
CSR	Corporate social responsibility
GIM	Gompers, Ishii, and Metrick (2003)
LPZ	Lehn, Patro, and Zaho (2007)
MTBR	Market-to-book ratio
ROA	Return on assets

# 1. Introduction

## 1.1 Scope

This thesis constitutes the last milestone of my master's degree. The thematic frame was given by one of the two core subjects, Corporate finance and controlling, of which my master's degree consisted. Choosing corporate finance, with its subtopic corporate governance, as the thematic frame was driven by the topic's actuality, manifoldness, and the existing scientific basis.

Typically, a student's ambition is to write a thesis that is not yet a matter of many theses, which is, however, difficult given the high number of graduates. It seems, nevertheless, that the topic of governance indices has not yet been frequently researched by students. This ambition is twofold: On the one hand, it fosters the student's pressure to perform; on the other hand, a well thesis deepens the satisfaction of the time invested.

## 1.2 Governance Indices

Corporate governance has been a subject of rising interest over the last few years. Not only due to the scandals that took place in the beginning of the last decade, but also because of the recent turmoil in the financial world.<sup>1</sup> It became clear that an effective governance system is essential for a company's prosperity. However, it is difficult to assess the quality and hence the effectiveness of an implemented governance. Particularly investors, such as fund managers, might be interested in the quality-grade of a certain governance system.

A manner to measure how well companies are governed is to construct a governance index that tries to express how many of the governance provisions available to the company are indeed in place. The underlying ratio is clear: The more provisions are in place, the higher the governance index and hence the higher the company's value. Even though this opinion is well established in literature, it is obviously not undisputed. Several papers and authors oppose the opinion that good governance leads to higher valuation. This thesis deals with this very conflict.

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<sup>1</sup> While in 2000 the New York Times published only 69 stories containing the word "Corporate Governance," this figure rose to 426 only two years later.

### **1.3 Goals and Structure**

This thesis aims to achieve two goals. After establishing the different opinions on governance indices, I will attempt to explain what they agree or disagree on. The presentation of the existing opinions and the respective argumentation forms the crucial part of this thesis and the first goal. The overall aim is a thorough yet clear illustration of the existing literature on this topic. The second, however shorter part, presents three excursions. The goal is to give the reader an introduction to corporate social responsibility, an overview of corporate governance and emerging markets, and eventually some insights into corporate governance research companies.

The thesis is organized as follows: In section two, the thesis's method and conceptual frame is explained. Sections three and four deal with the different opinions and the respective argumentations. The fifth section presents some short excursions on corporate social responsibility, corporate governance and emerging markets and eventually on corporate governance research. Section six provides final remarks and conclusions.

### **1.4 Personal Remarks**

The significance of choosing an appealing topic has again become apparent. One can successfully pass a course although the course subject does not entirely match a student's preference. Yet, this is not possible with a Master's thesis. The countless hours necessary for working on a Master's thesis have to be spent on a topic the student finds interesting and worthwhile. A Master's thesis means science, professionalism, and creativity. The reconciliation of these different worlds might be challenging. Over and over again, goal conflicts may arise. Is this creative idea defensible in terms of professionalism? Can I find support in form of scientific or academic sources? Is this source too trivial? However, as a Master's student, one must successfully cope with such questions.

Moreover I want to express my gratitude to Mr. Professor Dr. Burçin Yurtoğlu for his valuable input and general support.



## 2. Theoretical Basics

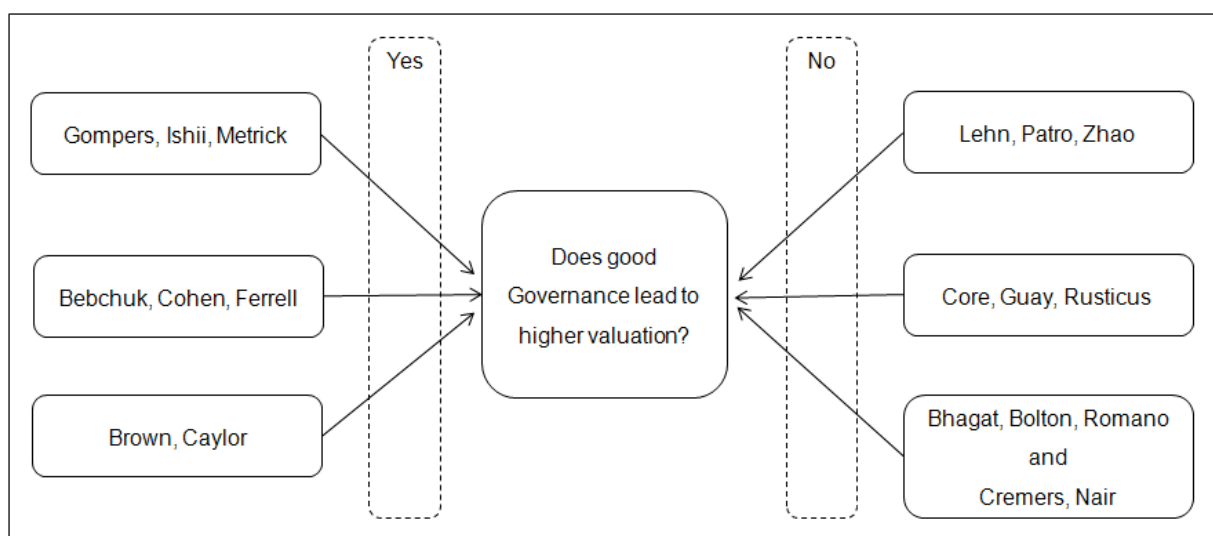
### 2.1 Method and Procedure

As opposed to many other papers, this thesis will not collect any original data. The underlying idea of this thesis is to summarize existing literature and to provide a thorough overview of the topic by merging and interpreting available studies and papers. For this purpose, the method of desk research seems to be adequate. The thesis's research design will hence be of descriptive nature.

### 2.2 Conceptual Frame

Given the importance of section three and four, it seems adequate to build a model according to which the different opinions and their respective argumentation on governance indices are discussed. Moreover, by presenting the content according to a specific model, the requirements of scientific work can be met.

Figure 1: Conceptual frame



Source: Author's own illustration

As briefly mentioned in the introduction, the central question is whether good governance, measured by a governance index, leads to higher valuation. Figure 1 illustrates both the frame of the thesis and, in a bigger picture, the literature on this topic at a glance. Authors on the left side, such as Gompers, Ishii, and Metrick (2003) or Bebchuck, Cohen, and Ferrell (2005), strongly affirm this question whereas authors on the right side, such as Lehn, Patro, and Zaho (2007) or Core, Guay, and Rusticus (2005), oppose it.

Each source's principal points will be discussed, hence meeting the main goal of this thesis. However, it is crucial to note that the extent to which these sources are discussed varies and that not only the above-mentioned literature but also further sources will be subject of comments.

### 3. Advocates

In this part, the main advocates of the hypothesis that effective governance leads to high company value are presented. The following three groups of researchers belong to the main advocates: Gompers, Ishii, and Metrick (2003); Bebchuck, Cohen, and Ferrell (2005); and Brown and Caylor (2006). Due to their article's relevance to this thesis's topic, it seems to be adequate to commence the debate with Gompers, Ishii, and Metrick.

#### 3.1 Gompers, Ishii, and Metrick

In their very influential paper,<sup>2</sup> the three authors document that companies with stronger shareholder rights have higher return and firm value (Gompers, Ishii, & Metrick, 2003). To represent the level of shareholder rights, they use the incidence of 24 governance rules at about 1,500 large firms.

##### 3.1.1 Data

In order to build their governance index, Gompers, Ishii, and Metrick (GIM) use the Investor Responsibility Research Center (IRRC) as data source. This company publishes detailed listings of corporate governance provisions for individual firms (Gompers, Ishii, & Metrick, 2003, p. 110) which they derive from several sources, such as bylaws and charters, annual reports, and SEC-documents. The IRRC covers the S&P 500 companies as well as large corporations drawn from annual lists published by Fortune, Forbes, and Businessweek. In total, GIM assessed 1,357 companies in 1990, 1,343 in 1993, 1,373 in 1995, and 1,708 in 1998.

The IRRC keeps track of 24 (22 charter provisions plus 6 state laws minus duplication) different provisions, which GIM divides into five categories as shown in Table 1. Appendix 1 discusses each provision in detail.

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<sup>2</sup> The article had been cited in 50 papers within the first three years since its publication in 2003 and even in 104 papers only 16 months later (Bhagat, Bolton, & Romano, 2007, p. 34). According to the Social Science Research Database, the article ranks 17 today, has been cited 952 times and downloaded 12,988 times (Social Science Research Network, 2011).

Table 1: GIM's categories

Category	Number of provisions	Details
Delay	4	Provisions in order to slow down a hostile bidder
Protection	6	Provisions to insure officers and directors against job-related liability or to compensate them following termination
Voting	6	Provisions related to shareholders' rights elections or charter and bylaw amendments
Other	6	Some remaining provisions
State	6	Provisions given by the state law

Source: Author's own table based on Gompers, Ishii, and Metrick, 2003, p. 111

To build the data set, GIM identify for the individual company the presence of the provisions. There are no strength distinctions even though a provision can be made weaker or stronger. The code is either "present" or "not present." GIM acknowledge that this methodology "sacrifices precision for the simplicity necessary to build the index" (Gompers, Ishii, & Metrick, 2003, p. 113). Results of some selected provisions (one from each category) are given in Table 2.

Table 2: Five selected GIM provisions

Provision	Percentage of firms with governance provision in place			
	1990	1993	1995	1998
Special meetings	24.5	29.9	31.9	34.5
Compensation plans	44.7	65.8	72.5	62.4
Secret ballot	2.9	9.5	12.2	9.4
Anti-greenmail	6.1	6.9	6.4	5.6
Fair price law	35.7	36.9	35.9	31.6

Source: Author's own table based on Gompers, Ishii, and Metrick, 2003, p. 112

The five provisions are not of particular significance and only aim to give the impression of certain provisions' presence. However, some developments are remarkable. Compensation plans were in 1990 in 44.7% of the companies present and only five years later in over 70%. Secret ballots were in 1995 even four times more present than in 1990. As to the reasons of these movements, GIM do not provide any explanation.

### 3.1.2 Governance Index

As mentioned above, GIM strive for simplicity when it comes to the construction of the index. The underlying method is that for every provision that restricts shareholder rights and hence increases managerial power one point is added (Gompers, Ishii, & Metrick, 2003, p. 114).

The method ignores, however, the efficacy or wealth effects of any of these provisions. The only yardstick is thus the provision's impact on the balance of power.

The classified board provision that is part of the delay category serves as a good example. This tool staggers the terms and elections of directors and leads to a slowdown of a potential hostile takeover. Depending on the magnitude of the manager's use of this tool, it could both increase and decrease the shareholder wealth. In either case, it is clear that the classified board provision strengthens the power of managers and weakens the control rights of large shareholders.

Overall, the governance index "G" is nothing but the sum of the existence of provisions in the individual company. The higher G is the more powerful, the company's management the more negative for the company's value. Table 3 displays an excerpt of the summary statistics for G. Furthermore, the table shows some selected G-values.

Table 3: GIM's governance index

	1990	1993	1995	1998
Governance index				
Minimum	2	2	2	2
Mean	9.0	9.3	9.4	8.9
Maximum	17	17	17	18
Number of firms				
G ≤ 5 (Democracy Pf.)	158	139	120	215
G = 7	158	140	127	186
G = 10	175	170	178	221
G = 12	104	123	142	136
G ≥ 14 (Dictatorship Pf.)	85	93	87	83
Total	1,357	1,343	1,373	1,708

Source: Author's own table based on Gompers, Ishii, and Metrick, 2003, p. 116

The sample is divided into several portfolios, starting with  $G \leq 5$  and ending with  $G \geq 14$  with  $G = 6$  through  $G = 13$  in between (only  $G = 7, 10,$  and  $12$  shown in Table 3). It seems that the highest scores can be found around  $G = 10$ . However, special attention is paid to the two extreme portfolios. Due to their strong shareholder rights,  $G \leq 5$  are called “Democracy Portfolios” whereas  $G \geq 14$  are called “Dictatorship Portfolios” because of their weak shareholder rights (Gompers, Ishii, & Metrick, 2003, p. 116).

Among the largest companies in the Democracy Portfolio names such as IBM, Wal-Mart, and Du Pont appear. Taking 1990 as the base year, four of the ten largest companies dropped out of the Democracy Portfolio compared to 1998. Among the big caps in the Dictatorship Portfolio, Time Warner and Woolworth can be found. However, this group has a higher drop-out rate with only two companies left 1998 in the Dictatorship Portfolio compared to 1990. Over the entire set of companies, only 31% were still in the same portfolio in 1998 compared to eight years earlier. (Gompers, Ishii, & Metrick, 2003, p. 117)

### **3.1.3 Results**

GIM’s results can be divided into four groups: summary statistics, governance and returns, governance and firm value, and governance and operating performance. In the following, each result category will be presented.

#### **3.1.3.1 Summary Statistics**

To commence the analysis, GIM calculated some summary statistics and correlations for  $G$  with a set of characteristics as of 1990. The exact construction of each of these characteristics is subject of explanation in Appendix 2.

Table 4: GIM's summary statistics

	Correlation with G	Mean Demo. Pf.	Mean Dicta. Pf.
Book-to-market ratio	0.02	-0.66	-0.54
Market capitalization	0.15 **	12.86	13.46
Share price	0.16 **	2.74	3.14
Trading volume	0.19 **	16.34	17.29
Tobin's Q	-0.04	1.77	1.47
Dividend yield	0.03	4.20%	7.20%
S&P 500 inclusion	0.23 **	15%	49%
5-year stock return	-0.01	90.53%	85.41%
Sales growth	-0.08 **	62.74%	44.78%
Institutional ownership	0.14 **	25.89%	34.44%

\*\* = significant at 1% level

Source: Author's own table based on Gompers, Ishii, and Metrick, 2003, p. 120

The first column of Table 4 gives some correlations with G. The strongest positive relation can be established between G and the S&P inclusion with 0.23. Moreover, nearly 50% of the Dictatorship Portfolio companies are drawn from the S&P 500 compared with only 15% from the Democracy Portfolio. Given these facts, it does not surprise that G also correlates with market capitalization (0.15), share price (0.16), trading volume (0.19), and institutional ownership (0.14). The reason can be found in the fact that S&P 500 companies have a high level of exactly these characteristics (Gompers, Ishii, & Metrick, 2003, p. 120). However, due to the negative and significant correlation of G and sales growth, it further can be stated that high-G firms tend to have relatively lower sales growth.

The same (unreported) correlation analyses in the periods 1993, 1995, and 1998 lead to similar results. In general, it appears that firms with weak shareholder rights tend to be big caps from S&P 500 with relatively high share prices, institutional ownership, and trading volume, but relatively poor performance measured by both sales growth and stock market performance.

### 3.1.3.2 Governance and Returns

One of the main points GIM try to make is that the above analyses are not only of theoretical nature but also founded in the practical world and eventually even a source of gaining money. If the strength of shareholder rights really matter and the financial markets fully incorpo-

rate this relationship, then stock prices should be a mirror of a company's governance. Indeed, GIM document that a \$1 investment in the Dictatorship Portfolio as of September 1, 1990 would have grown to \$3.39 by December 31, 1999, whereas the equivalent investment in the Democracy Portfolio would even have risen to \$7.07. This makes an annualized performance of 14% and 23.3%, respectively, which is equivalent to a difference of 9.3% annualized performance (Gompers, Ishii, & Metrick, 2003, p. 121).

Searching for an explanation of this disparity, GIM suggest the possibility of the portfolio's different riskiness or style. A method to account for these style differences is Carhart's (1997) four-factor model:

Formula 1: Style difference

$$R_t = \alpha + \beta_1 * RMRF_t + \beta_2 * SMB_t + \beta_3 * HML_t + \beta_4 * Momentum_t + \varepsilon_t$$

Source: Gompers, Ishii, and Metrick, 2003, p. 122

where  $R_t$ <sup>3</sup> is interpreted as the abnormal excess return of a potential passive investment in the factors. If Formula 1 is now estimated, as displayed in Table 5, by setting the dependent variable  $R_t$  equal to the monthly return difference between the two portfolios, alpha  $\alpha$  becomes the abnormal return on a zero-investment strategy that buys the Democracy and sells short the Dictatorship Portfolio (Gompers, Ishii, & Metrick, 2003, p. 122)

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<sup>3</sup> "RMRF<sub>t</sub> is the month t value-weighted market return minus the risk-free rate, and the SMB<sub>t</sub> (small minus big), HML<sub>t</sub> (high minus low), and Momentum<sub>t</sub> are the month t returns on zero-investment factor mimicking portfolios designed to capture size, book-to-market and momentum effects" (Gompers, Ishii, & Metrick, 2003, p. 122).



Table 5: Performance attribution

	$\alpha$	RMRF	SMB	HML	Momentum
$G \leq 5$ (Democracy Pf.)	0.29*	0.98**	-0.24**	-0.21**	-0.05
$G = 6$	0.22	0.99**	-0.18**	0.05	-0.08
$G = 7$	0.24	1.05**	-0.10	-0.14	0.15**
$G = \dots$					
$G = 12$	-0.25	1.00**	-0.11*	0.16**	0.02
$G = 13$	-0.01	1.03**	-0.21**	0.14*	-0.08*
$G \geq 14$ (Dictatorship Pf.)	-0.42*	1.03**	-0.02	0.34**	-0.05
Democracy – Dictatorship	0.71*	-0.04**	-0.22**	-0.55**	-0.05

\* / \*\* = significant at 5%, resp. 1% level

Source: Author's own table based on Gompers, Ishii, and Metrick, 2003, p. 123

The rows of Table 5 summarize the results of estimating Formula 1 for all G-portfolios (not showing  $G = 8 - 11$ ).<sup>4</sup> For this specification, the zero-investment-strategy (long Democracy, short Dictatorship) earns an abnormal return of monthly 71 bp or 8.5% a year. This difference in performance is driven by both overperformance of the Democracy Portfolio (29 bp) on the one hand and by underperformance of the Dictatorship Portfolio (-42 bp) on the other hand. There is an inverted relation between alpha  $\alpha$  and G, suggesting that companies with weak shareholder rights earn lower alphas  $\alpha$ .

Additionally, GIM perform some variations of the regression of Formula 1 by changing some aspects of the portfolio construction or return construction. They carry out these tests by using not only a value-weighted but also an equal-weighted portfolio. The goal is to estimate the fraction of returns that can be attributed to changes in the industry composition or, for example, legal developments in the companies' state of incorporation. The results are that the value-weighted returns are economically large in all cases and, moreover, the equal-weighted returns amount usually to two thirds of the value-weighted returns.

This brings GIM to the conclusion that the Democracy Portfolio significantly outperformed the Dictatorship Portfolio in the 1990s (Gompers, Ishii, & Metrick, 2003, p. 125).

<sup>4</sup> GIM do not explain how exactly the single factors were constructed. They only refer to Fama and French, Common Risk Factors in the Returns (1993) and Carhart (1997), and thank a fellow researcher for their estimation.

### 3.1.3.3 Governance and Firm Value

After establishing a relation between changes in governance and returns, this section aims to answer whether variations in governance are associated also with firm value.

To measure firm value, GIM make use of Tobin's Q, which is defined as market value of assets divided by the book value of assets (where the market value of assets is: book value of assets plus market value of common stocks less the sum of the book value of common stocks and balance sheet deferred taxes) (Gompers, Ishii, & Metrick, 2003, p. 151). The Q is then being regressed as follows:

Formula 2: Tobin's Q regression

$$Q'_{it} = \alpha_t + b_t X_{it} + c_t W_{it} + e_{it}$$

Source: Gompers, Ishii, and Metrick, 2003, p. 126

where Q is industry adjusted, X is a vector of governance variables, and W is a vector of firm characteristics. With regard to the exact construction and estimation of the variables, GIM refer to other papers. Based on a method of Fama and MacBeth (1973), the annual cross sections of Formula 2 are then estimated as shown in Table 6.

Table 6: Tobin's Q regression

	G	Democracy Portfolio
1990	-0.022**	0.186
1991	-0.040**	0.302*
1992	-0.036**	0.340*
1993	-0.042**	0.485*
1994	-0.031**	0.335*
1995	-0.039**	0.435*
1996	-0.025*	0.299
1997	-0.016	0.210
1998	-0.065**	0.203
1999	-0.114**	0.564
Mean	-0.043**	0.336**

\* / \*\*= significant at 5% and 1% level, respectively

Source: Author's own table based on Gompers, Ishii, and Metrick, 2003, p. 127

We focus on the first column where G is the key regressor. Each year gives a negative and mainly significant coefficient peaking in 1999 at -0.114. This figure suggests that each provision that is being added to the governance system is associated with an 11.4% reduction in firm value. The second column makes an interesting point, too. The sample is here restricted to only the two extreme portfolios. Taking 1999 again as an example, the figure of 0.564 suggests that firms in the Democracy Portfolio have a 56.4% higher, *ceteris paribus*, Q than companies from the Dictatorship Portfolio do (Gompers, Ishii, & Metrick, 2003, p. 128). GIM mention that the distinctive changes of the coefficients across the years and the high standard errors towards the end of the sample period do not allow making any inferences about a certain pattern.

Overall, the results, again, "tell a consistent story" (Gompers, Ishii, & Metrick, 2003, p. 128), namely that weak shareholder rights companies significantly underperform compared to strong shareholder rights companies.

### 3.1.3.4 Governance and Operating Performance

GIM extend their research by a last test. They attempt to establish a relation between changes in governance and operational measures. For this purpose, GIM again carry out regression analyses for the three industry-adjusted measures net profit margin (income divided by sales), return on equity (income divided by book equity), and one-year sales growth on G. To prevent influence of large outliers, median regressions are being estimated.

Table 7: GIM's operating performance

	Net profit margin		Return on equity		Sales growth	
	G	Demo. Pf.	G	Demo. Pf.	G	Demo. Pf.
Mean	-0.64**	3.91	-0.26	1.59	-1.68**	5.10

\*\* = significant at 1% level (all coefficients are multiplied by 1000)

Source: Author's own table based on Gompers, Ishii, and Metrick, 2003, p. 130

For the sake of brevity, Table 7 only shows the mean value of the sample period 1990 – 99. For all three measures, the G value is clearly negative; however, not significant for the return of equity. Similar to Table 6, these values suggest that for each point increase in G the respective measure decreases, or, for an additional provision, the net profit margin would decrease by 0.064% on average. Moreover, GIM find also for the Democracy Portfolios positive but insignificant coefficients, which is in line with the basic idea. On average, the Democracy Portfolio has a net profit margin that is 0.391% higher than the Dictatorship Portfolio. GIM successfully establish an empirical relationship between governance and operating performance that is, however, not throughout significant. That is why the scholars say: “Thus, these results are consistent with the evidence for the full sample but not significant on their own” (Gompers, Ishii, & Metrick, 2003, p. 129).

### 3.1.4 Explanations

Bearing the previous paragraph in mind, GIM acknowledge that the evidence provided does not itself imply a causal role by governance provisions. Firms do not adopt provisions randomly. Therefore, the researchers now proceed with explaining their results. GIM present their set of explanation in the form of three hypotheses. However, a perfect test to distinguish among these cannot be found.

#### 3.1.4.1 Hypothesis I

“Governance provisions cause higher agency costs. These higher costs were underestimated by investors in 1990” (Gompers, Ishii, & Metrick, 2003, p. 130).

Increased agency costs at high-G firms have the potential to influence firm performance in several ways. The increased agency costs can consist of some combination of inefficient investment, reduced operational efficiency or self-dealing. If Hypothesis I is correct, then some “unexpected” differences in agency costs across firms should be observed (Gompers, Ishii, & Metrick, 2003, p. 132). And indeed, several articles<sup>5</sup> confirm the above-mentioned mechanism. However, they do not make use of the full variation embodied in the G index. Therefore, GIM extend this evidence by a test that examines the relation between G and two other possible sources of agency costs, namely capital expenditure (capex) and acquisition behavior.

Managers engage in inefficient projects in order to extract private benefits.<sup>6</sup> In fact, this behavior particularly becomes serious when managers are entrenched and can resist hostile

<sup>5</sup> GIM refer to Borokhovich, Brunarski, and Parrino (1997), Bertrand and Mullainathan (1999a), Bertrand and Mullainathan (1999b), and Bertrand and Mullainathan (2000).

<sup>6</sup> GIM mention fairly outdated literature such as Baumol (1959), Marris (1964), and Williamson (1964), which already confirmed this behavior.

takeovers.<sup>7</sup> It therefore seems adequate to examine an empirical relationship between capex and governance provisions. In unreported tests, GIM demonstrate a positive and significant average coefficient between capex and G (as the key regressor). In other words, high-G firms have higher capex than low-G firms do (Gompers, Ishii, & Metrick, 2003, p. 134). Acquisition behavior is considered as an outlet for capex and should therefore also be examined. Normally, acquisition behavior is measured by negative returns to acquire stocks after a bid is announced. Negative returns to acquire stock are a clear manifestation of prevailing agency costs.<sup>8</sup> To analyze this, GIM try to establish an empirical relationship between the SDC databases,<sup>9</sup> which is a proxy for negative announcement returns and G (as the key regressor). The unreported results show a positive coefficient in every year and even a positive and significant average coefficient. Consistent with the above test, it can be concluded that high-G firms engage in an unexpected large amount of inefficient investments during the sample period (Gompers, Ishii, & Metrick, 2003, p. 136). Overall, the positive results of both tests for capex and announcement returns serve as evidence and support for Hypothesis I.

#### 3.1.4.2 Hypothesis II

“Governance provisions do not cause higher agency costs, but rather were put in place by 1980s managers who forecasted poor performance for their firms in the 1990s” (Gompers, Ishii, & Metrick, 2003, p. 131).

Insider trading is said to be a good forecast of returns. Seyhun (1998) indeed demonstrates that firms whose shares intensively have been bought by insiders overperformed the benchmark, and vice versa. If some 1980s managers really forecasted bad performance, we might expect them to protect themselves from being fired by shareholders. Therefore, it could be said that weak shareholder rights, or high-G firms, might be a result of insider’s superior information. For Hypothesis II to be correct, insiders’ net purchases need to be negatively correlated with G.

As proxy for these net purchases, GIM take data based on the SEC insider-trading filings. Basically, they sum up all open-market transactions for all insiders each year, with purchases

<sup>7</sup> See Jensen and Ruback (1983) and Schleifer and Vishny (1989).

<sup>8</sup> A good deal of literature proves that negative announcement returns are correlated with other agency problems including low managerial ownership (Lewellen, Loderer, & Rosenfeld, 1985), high free cash-flow (Lang, Stulz, & Walkling, 1991), and diversifying transactions (Morck, Schleifer, & Vishny, 1990).

<sup>9</sup> “We use the SDC database to identify all transactions in which a sample firm acted as either the acquirer or the seller during the sample period. From January 1991 through December 1999, there are 12,694 acquisitions made by sample firms. SDC gives the acquisition price for just under half of these” (Gompers, Ishii, & Metrick, 2003, p. 135).

entering positively and sales entering negatively. To derive net purchases, this figure is then being normalized by shares outstanding at the beginning of the year.

Some unreported OLS regressions with G as the key regressor and regressions with a democracy dummy as the key regressor lead to the following results: No negative and significant coefficients can be found between insider trading and governance, and none of the average coefficient is significant, two are even positive. Therefore, no support for Hypothesis II can be found.

### **3.1.4.3 Hypothesis III**

“Governance provisions do not cause higher agency costs, but their presence is correlated with other characteristics that earned abnormal returns in the 1990s” (Gompers, Ishii, & Metrick, 2003, p. 131).

In the last attempt of finding an explanation for the difference between the Democracy and Dictatorship Portfolio returns, GIM suggest the following possibility: If the returns to stocks with the characteristics mentioned in Table 4 differed in the sample period in a way that is not captured by the model of Formula 1, then a bias coming from other variables drives the abnormal returns. After complex and thorough cross-sectional regressions, GIM acknowledge not having found any other characteristics that correlate significantly with the abnormal returns. Furthermore, they arrive, based on unreported tests, at the result that not one single provision drives the return difference. Although only to a low extent, the only factor that might explain the differences are certain industry classifications within the sample firms (Gompers, Ishii, & Metrick, 2003, p. 143).

In sum, GIM find support for Hypothesis I, but not for Hypothesis II. For Hypothesis III, they only find limited support. Thus, the performance difference is either directly caused by the provisions (Hypothesis I) or by some difficult-to-measure characteristics correlated with provisions (Hypothesis III). In any case, one of GIM’s last quotations is remarkable: “We consider several explanations for the results, but the data do not allow strong conclusion about causality” (Gompers, Ishii, & Metrick, 2003, p. 145).

## 3.2 Bebchuk, Cohen, and Ferrell

Bebchuk, Cohen, and Ferrell (BCF) belong, next to GIM, to the main advocate of the theory that corporate governance clearly influences a firm's return or value in a positive way. Like GIM's paper, their article is among the most cited sources when it comes to governance indices.

### 3.2.1 Data

BCF's analyses base on data from the Investor Responsibility Research Center (IRRC) in the period of September 1990 through February 2002. The data set covers between 1,400 and 1,800 firms. All S&P 500 firms are among the set and further companies that are considered as relevant by the IRRC. Overall, the sample represents more than 90% of the total U.S. stock market capitalization (Bebchuk, Cohen, & Ferrell, 2005, p. 15).

### 3.2.2 Governance Index

Already in the very beginning of their article, BCF pose the question which of the 24 IRRC provisions are the ones that are most responsible for managerial entrenchment. BCF identify six provisions based on the following pillars: Own analyses by the authors, discussions with six prominent M&A lawyers, existing papers studying some provisions' effects, and evidence for the provisions that are most opposed by institutional investors. As will be mentioned afterwards (Table 9), these six provisions build the basis for BCF's index.

The six provisions can be classified into two categories. Four of them involve constitutional limitations on shareholders' voting power and hence limit the shareholders' most effective manner of performing power. The two remaining can be regarded as "takeover readiness" (Bebchuk, Cohen, & Ferrell, 2005, p. 8) provisions put in place sometimes by the board. The six provisions shall briefly be explained.

#### *(I) Staggered (or classified) board*

If a company's board is staggered, then the directors are divided into several classes, normally two or three. However, only one class is subject of re-election. The shareholders have hence no possibility to replace a majority of the board in any given year even though the shareholders' majority favors such an intention. Staggered board is a powerful tool against a removal from the board.

#### *(II) Limits to amend bylaws*

Shareholders are empowered to amend the company's bylaw that contains several governance arrangements. It is common, however, that this power is constrained by the company charter or the bylaws themselves. In such a case, the vote is conditional upon some super-

majority requirements. It is therefore difficult to pass the amendment, since it is likely that not all non-management shareholders participate in the vote.

*(III) & (IV) Supermajority requirements for mergers and charter amendments*

This provision is similar to the above-discussed one. In addition to amend bylaws, shareholders are enabled to vote to approve charter amendments and mergers. But also this possibility is very often connected to certain requirements such as supermajority. The management might therefore be in the position to defeat charter amendments or mergers. The fact that shareholders and management could affiliate with each other in order to prevent change in control discourages outsiders from seeking to gain control.

*(V) Poison pill*

If these pills are issued by the company, a hostile bidder is not allowed to buy shares as long as the incumbents remain in office and refuse to redeem the pill. Thus, this tool is considered as very effective and powerful when it comes to replacement of incumbents. The board is enabled to issue poison pills with no need for shareholders to approve even following a hostile bid. Therefore, companies that do not have poison pills in place are regarded as having a "shadow pill" (Bebchuk, Cohen, & Ferrell, 2005, p. 10). It is understandable that institutional investors dislike poison pills.

*(VI) Golden parachute*

This widely used term means substantial monetary benefits for executives in the event of change in control. The golden parachute protects incumbents from economic costs they would bear in case of losing the control.

BCF reiterate the importance of these six provisions by underlying their comments with a good deal of published articles by other scholars. When it comes to the remaining 18 provisions, BCF cast doubt on their material effect on the level of managerial entrenchment (Bebchuk, Cohen, & Ferrell, 2005, p. 12). For this reason, they are not considered as relevant enough and therefore disregarded for the governance index as explained afterwards (see 3.2.3.1).



In order to build the governance index, each provision's incidence (in percentage) within the firm universe needs to be analyzed.

Table 8: The six provisions' incidence

	1990	1993	1995	1998	2000	2002
Staggered board	59.2	60.5	61.8	59.5	60.5	61.9
Limits to amend bylaw	14.5	16.2	16.1	18.2	20.0	23.2
Limits to amend charter	3.3	3.4	3.1	3.0	3.3	2.5
Supermajority	39.0	39.5	38.4	34.1	34.1	32.3
Golden parachute	53.3	55.7	55.2	56.9	76.4	70.2
Poison pill	54.4	57.6	56.6	55.4	59.9	59.0

Source: Bebchuk, Cohen, and Ferrell, 2005, p. 45

Table 8 shows that of the six provisions the most common are staggered board, golden parachute, and poison pill. Both the incidence of staggered board and poison pill has developed relatively stable within the 55% - 60% range. However, a relatively high number of companies have adopted the golden parachute over the years. At the end of the sample period, over 30% more companies have a golden parachute in place than at the record's start. Also the provision of limits to amend bylaw appears more often among the firms by 2002 compared to 1990. Only the limits to amend the charter and the supermajority provision become less common.

The above-provided table leads to the construction of the index itself. BCF assign each firm one point for each provision in place. Thus, each company has a score between zero and six. Table 9 provides the summary statistic for the incidence (in percentage) of index levels among the firms.

Table 9: BCF's E-index

Entrenchment index	1990	1993	1995	1998	2000	2002
0	13.0	11.0	11.0	10.7	7.9	7.3
1	18.2	17.3	17.6	19.0	18.0	15.4
2	24.3	25.0	25.4	25.9	24.0	26.8
3	25.4	25.7	25.3	25.1	27.6	27.2
4	14.7	16.3	16.7	15.9	18.2	18.3
5	3.7	4.3	3.8	2.8	3.8	4.6
6	0.7	0.4	0.2	0.6	0.5	0.4

Source: Bebchuk, Cohen, and Ferrell, 2005, p. 46

On the whole, the figures are fairly stable over the years. Roughly half of the companies have an E-index of two and less. Of this half, a substantial fraction has a level of two. Looking at the group with an E of three and more, most firms have an E of three. Only a small fraction of the companies are at the extremes of the index. Overall, there is a clear trend towards a level of two or three provisions in place.

Furthermore, BCF show in unreported analyses that there is no significant difference between companies in and out of the S&P 500. The mean E-levels are 2.58 and 2.46, respectively (Bebchuk, Cohen, & Ferrell, 2005, p. 47). Likewise, there is no difference between young and old firms. The only noteworthy trend is that only one of 13 firms beyond the 100 billion market cap limit has a higher E-level than three. Due to the size of the company, the management has no need for entrenching provisions.

### 3.2.3 Results

BCF divide their results into two categories. Both entrenchment and firm value and entrenchment and stock returns will be presented.

#### 3.2.3.1 Entrenchment and Firm Value

With regard to an adequate measure for firm value, BCF use Tobin's Q. BCF define Q exactly like GIM (see 3.1.3.3). To underline this idea, they refer to a good deal of articles dealing with a similar topic that also use Tobin's Q. In order to avoid any industry bias, an adjusted version of Q is being used, whereby the firm's Q is subtracted by the respective industry's median Q. This basis leads to the results in Table 10, using pooled OLS regressions from 1992 to 2002.

Table 10: E-index and firm value

	E-index	E = 1	E = 2	E = 3	E = 4	E = 5-6	Other
Firm value	-0.044***	-0.092***	-0.146***	-0.155***	-0.206**	-0.282***	0.010***

\*\* / \*\*\*= significant at 5% and 1% level, respectively

Source: Bebchuk, Cohen, and Ferrell, 2005, p. 49

As Table 10 indicates, the coefficient between firm value and the entrenchment index is with -0.044 negative and significant, implying the negative impact of the provisions on the firm value. Furthermore, the analysis shows for any index level a negative and significant coefficient. The magnitude of the coefficients is even monotonically increasing and hence strengthening the underlying idea. To top all this, the coefficient between the provisions not in the index and the firm value is positive. This suggests that the remaining 18 provisions do not have a negative impact on firm value. Final unreported robustness checks confirm these findings. Overall, BCF successfully establish a negative relationship between the entrenchment index and the firm value (Bebchuk, Cohen, & Ferrell, 2005, p. 21).

However, one problem is associated with the above test. There is the possibility that one or more provisions do not contribute to the negative effect on lower valuations. The above tests confirm a negative impact in an aggregate form of the provisions only. In order to avoid this doubt, a set of six regressions were run, namely one regression for each of the six provisions in the E-index in which the independent corporate governance variable was one of the six provisions.

Table 11: Single provisions coefficient

	Staggered board	Golden parachute	Amend bylaws	Amend charter	Super-majority	Poison pill
Coefficient	-0.035***	-0.024**	-0.079***	-0.048***	-0.079***	-0.061***

\*\* / \*\*\*= significant at 5% and 1% level, respectively

Source: Bebchuk, Cohen, and Ferrell, 2005, p. 51

The results in Table 11 display for each provision a negative and significant coefficient. Thus, the conclusion can be drawn that each provision of the E-index contributes to the negative correlation between firm value and the aggregate provision. Furthermore, several unreported robustness checks give evidence for the same conclusion (Bebchuk, Cohen, & Ferrell, 2005, p. 23).

We mentioned in Table 10 the positive coefficient between the remaining 18 provisions and the firm value. However, this does not mean that none of these provisions cause lower valua-

tions. The effect was maybe diluted or counteracted by one of the E-index provisions and therefore does not show up in the regression. To explore this issue, BCF ran unreported regression analyses, four types for each of the 18 provisions. The overwhelming majority of the provisions have no negative and significant coefficient in any of the four types. The only exception is the provision of pension parachutes<sup>10</sup> whose coefficients are negative and three of them even significant at the 10% and 5% level, respectively (Bebchuk, Cohen, & Ferrell, 2005, p. 52). However, it is noteworthy that pension parachutes were only in 5.3% of the sample firms present as of 1993 and even only in 1% as of 2002. BCF do not give any reasons for this negative relationship. Moreover, BCF acknowledge that these results only hold using the same method as exploring E-index coefficients. They do not rule out that another method may have led to different results.

### 3.2.3.2 Entrenchment and Returns

Not for the first time in their article BCF refer also in this paragraph to methods and results of GIM and successfully replicate their findings of Chapter 3.1.3.2 (Governance and Returns). However, of particular interest is BCF's longer sample period, as explained in 3.2.1. The analyses carried out by BCF capture three more years. Therefore, the question arises whether the long-short trading strategy would yield abnormal returns also over the 1990 – 2003 period.

In order to investigate this question, BCF make use of three different models. The first one is the Carhart (1997) or Baseline model, which is also used by GIM. The model's details are explained in 3.1.3.2 and are therefore not reiterated here. The second model is the industry-adjusted model. There is always the possibility that a company's governance is driven by its industry association. Companies from a badly performing industry have a stronger need for entrenchment than companies from a well-performing industry, and vice versa (Bebchuk, Cohen, & Ferrell, 2005, p. 32). To check for these effects, the firms are classified into one of the 48 Fama-French (1997) industries to calculate the median industry return. BCF then subtract from each company's return the respective median industry return. These steps lead eventually to industry-adjusted returns that are subsequently regressed on the four Carhart (1997) factors (Bebchuk, Cohen, & Ferrell, 2005, p. 32). The third model is the O-Bucket-adjusted model. The long-short portfolios were built by dividing all firms in the same entrenchment index category (0, 0-1, 0-1-2, 3-4-5-6, 4-5-6, and 5-6) into one of four buckets with other O-provisions. These buckets consisted of companies with O-scores of 0-5, 6, 7-8, and 9-13. A portfolio in a given E-index category is then constructed by calculating the return with the desired E-index score equally weighted across the four O-buckets. As previously, the returns are then regressed on the four Carhart (1997) factors. Table 12 gives an over-

<sup>10</sup> The pension parachute provision is explained in appendix 1

view of the results for both equal-weighted portfolios and value-weighted portfolios. Since the value-weighted portfolios naturally tend to be affected by only a few but large firms, the main attention should be paid to the equally-weighted portfolios (Bebchuk, Cohen, & Ferrell, 2005, p. 29).

Table 12: E-level trading strategies

Portfolio	Baseline model		Industry-adjusted		O-Bucket-adjusted	
	equal	value	equal	value	equal	value
Index 0 – Index 5-6	0.60***	0.84***	0.66***	0.94***	0.68***	0.81***
Index 0 – Index 4-5-6	0.39***	0.57***	0.48***	0.67***	0.50***	0.60***
Index 0-1 – Index 4-5-6	0.42***	0.52***	0.52***	0.53***	0.35***	0.58***
Index 0-1 – Index 3-4-5-6	0.37***	0.41***	0.43***	0.46***	0.34***	0.43***
Index 0-1-2 – Index 3-4-5-6	0.27***	0.37***	0.34***	0.39***	0.24***	0.38***

\*\*\* = significant at 1% level

Source: Bebchuk, Cohen, and Ferrell, 2005, p. 56

The figures in Table 12 tell a clear story. Each trading strategy, going long in low E-level and short in high E-level firm, yields a positive and significant return throughout the whole sample period. For example, going long in E-level index 0 and short in E-level Index 5-6 would have yielded 60 basis points monthly according to the baseline model. Using the industry-adjusted and O-Bucket-adjusted model, the portfolio would have yielded even a slightly higher return, 66 and 68, respectively, basis points monthly. Similarly, going long in firms with an E-index not higher than two and going short in firms with an E-level of three and more still yield a return of 27, 34, and 24 basis points monthly depending on the model. In fact, the more portfolios in the middle range of the E-index are added to the strategy, the more the returns decline but remain positive and significant. As to the difference between the equal- and value-weighted portfolios, it becomes clear that value-weighted portfolios earn a slightly higher return throughout (Bebchuk, Cohen, & Ferrell, 2005, p. 36). Overall, BCF successfully demonstrate that low E-index firms outperform high E-index even in the three years longer sample period.

Likewise, in their investigation of the relationship between entrenchment and firm value for the remaining 18 provisions, BCF come up with the possibility that these provisions may have explanatory power also for the above-mentioned abnormal returns. To explore this issue, BCF create some new long-short portfolios, albeit with the inclusion of O-index firms. The long portfolios consist of a bucket with O-index firms not higher than six, which is nothing but the maximum that firms can reach using the E-index. The short portfolios are firms with more than six provisions in place and therefore supposed to perform badly. According to the given procedure, the returns are then being regressed on the Carhart (1997) four-factor model.

Table 13: O-index trading strategies

Portfolio	Equal-weighted	Value-weighted
Index 0-5 – Index 9-13	0.07	0.05
Index 0-5 – Index 7-8	0.03	0.17
Index 0-5 – Index 6	-0.04	-0.05
Index 0-6 – Index 7-13	0.07	0.05

Source: Bebchuk, Cohen, and Ferrell, 2005, p. 57

As Table 13 indicates, the above-raised doubts cannot be confirmed. Even though six of the eight portfolios yield positive returns, none of them is statistically significant. Additionally to the lack of significance, the returns are of small magnitude throughout and twice even negative. Thus, the view that the remaining 18 provisions have explanatory power for the abnormal returns cannot be confirmed (Bebchuk, Cohen, & Ferrell, 2005, p. 37).

The results from above are quite striking, however; one could argue that although the strategy would have produced positive and significant returns during the full period of 1990 – 2003, it could have produced negative returns in certain sub-periods. Therefore, BCF investigate the long-short strategy in a variety of sub-periods. Specifically, they calculated returns based on the Carhart (1997) factors with going long in firms with an E-index of zero and shorting those with an E-index of five or six for sub-periods of two through thirteen years. Accordingly, BCF calculated 156 strategies, 78 equally- and 78 value-weighted ones. Out of these, only four were negative and of low magnitude ranging from six to 14 basis points monthly. Beyond that, none of them is of statistical significance. In contrast, of the other 152 positive returns, 131 were significant with at least a 10% significance. Moreover, the bulk of the results is of strong magnitude with returns ranging from 50 through 150 basis points a month. Altogether,

it can be said that the low E-Index firm's overperformance is not a product of some single sub-periods.

### 3.2.4 Explanations

BCF dedicate only a small fraction of their article to possible explanations. Similarly to GIM, they also acknowledge that the striking results with regard to the inverse correlation do not establish that a high E-level causes lower firm value. They raise two possible explanations and test them subsequently. It is possible that low E-level firms are more likely to be a hostile takeover target and therefore entrench themselves or, alternatively, bad managers will tend both to reduce firm value and to adopt new provisions. In order to conduct these tests correctly, the following needs to be recalled. A firm that has a high E-score as of the beginning of the sample period is likely to have a high one also at the end of the sample period (Bebchuk, Cohen, & Ferrell, 2005, p. 25).

To explore the first explanation, BCF try to establish whether the firms' E-score in 1990 is negatively correlated with the respective firm value in the period of 1998 – 2002. The ratio of this test is that if a firm's E-score in 1990 is correlated with that one during the 1998 – 2002 period, then the firm's 1990 E-score cannot itself be the result of low firm values during the 1998 – 2002 period. BCF run unreported tests where the dependent variable is an industry-adjusted Q and the independent variables the firms E-scores as of 1990. The results show that the firms' 1990 E-score is negatively and significantly correlating with lower firm values in the 1998 – 2002 period (Bebchuk, Cohen, & Ferrell, 2005, p. 26).

As to the second explanation, BCF suggest that bad managers prior to 1990 are responsible for a high number of provisions in place in 1990 and therefore also for low valuations after 1998. BCF use low firm valuation as a proxy for bad management. The results of the unreported tests are similar. The levels of provisions are negatively and significantly correlated with lower firm valuation (Bebchuk, Cohen, & Ferrell, 2005, p. 26).

Given these two tests, the conclusion comfortably can be drawn that higher E-levels bring about lower firm valuation. However, BCF clearly state that there is still a lot of room for further research and that the above-developed explanations do not definitely establish the direction of causation.

### 3.3 Brown and Caylor

Brown and Caylor's (BC) (2006) article is the third and last article discussed in this paper that attempts to establish a negative correlation between corporate governance provisions and firm valuation. While GIM and BCF are fairly similar in terms of data, methodology, and explanations, BC differ from this structure and turn the reader's attention to different points. As BC's article only appeared in 2006 and thus after GIM and BCF, the two authors had a basis to build on and, particularly, learn from the previous shortcomings.

#### 3.3.1 Data

As their basis, BC use a dataset of a provider to institutional investors, the Institutional Shareholder Services ISS. It consists of 1,868 firms and started its record on February 1, 2003. The authors deliberately use this date as it precedes the adoption of Sarbanes-Oxley and some acts by major U.S. stock exchanges. In total, the data keep track of 51 provisions classified into eight categories. The distinct difference to the previous sets of provisions is that this one not only includes external (exposure to the market of corporate control) but also internal (shareholder activism) governance factors, thus strengthening Cremer and Nair's (2005) findings (Brown & Caylor, 2006, p. 411; see Chapter 4.3.2 for a discussion of Cremer and Nair's paper). The 51 provisions are presented in Appendix 3. Regarding Tobin's Q, which will be used as the firm value proxy, BC rely on Compustat data.

#### 3.3.2 Governance Index and Firm Value

The construction of the index is fairly straightforward. BC code for each of the 51 provisions either 1 or 0 depending on ISS' decision whether the respective provision is in place (code 1) or not (code 0). However, a crucial point needs to be forestalled. The 51 provisions, as described in Appendix 3 are negatively stated. Thus, a provision in place, or as BC say "acceptable" (Brown & Caylor, 2006, p. 415), is according to the underlying idea of this paper a positive sign. Accordingly, BC's positive correlations are equivalent, at least in terms of the idea, to GIM's or BCF's negative correlations. The firms' binary variables are then summed up in order to create the firm-specific summary measure. Table 14 provides some summary statistics.

Table 14: BC's summary statistics

	Mean	Std. deviation	Minimum	Maximum
Gov-score	22.52	3.45	13	38
Tobin's Q	1.66	1.32	0.49	9.53

Source: Author's own table based on Brown and Caylor, 2006, p. 417



The firms have, on average, a Gov-score of 23 provisions, which is (relatively) roughly in line with the previous statistics. The Gov-score ranges from 13 to 38. Furthermore, Table 14 indicates that the average firm has a Tobin's Q of 1.66 and is thus overvalued. Overall, Tobin's Q ranges from 0.49 to 9.53 (Brown & Caylor, 2006, p. 417). Furthermore, BC run an unreported regression analysis of Tobin's Q on the Gov-score. The Gov-score is 0.031432 and thus positive. The fact that the coefficient is of statistical significance (at the 1% level) reveals that the firm value is positively related to the summary measure of corporate governance (Brown & Caylor, 2006, p. 418).

### 3.3.3 Key Drivers of the Gov-Score

One of BC's major objectives is to identify which of the 51 provisions mainly drive the summary measure. For this purpose, BC developed three approaches. Those provisions that succeed in at least two of the three approaches ALL, BCF, or STEP make it to the Gov7 measure.

The first approach called ALL regresses the industry-adjusted Tobin's Q on all 51 provisions and on three control variables. Brown and Caylor only document, for all three approaches, the results of the estimations but not how they exactly arrive at these. Table 15 shows the six provisions that are positive and significant using the ALL approach. The respective coefficients, which range from 0.180266 to 0.281377, are displayed in the ALL column. The first two provisions belong to the external governance category whereas the last four belong to the internal category (Brown & Caylor, 2006, p. 419).

With the second one, the BCF approach, Brown and Caylor actually intend to replicate the method carried out by BCF when they evaluated the six factors underlying the E-index. Brown and Caylor explain the approach as follows: "To assess each factor's importance, BCF regress Tobin's Q on the factor, G-Index minus the factor in question, and their control variables. We use a similar approach but rather than use the 24-factor G-Index minus the factor, we use the 51-factor Gov-Score index minus the factor (hereafter Gov-Rem50)" (Brown & Caylor, 2006, p. 420). The unreported estimations result in nine provisions that are positive and significant. Six of them, as displayed in Table 15, appeared already in the previous approach. The three new ones belong, according to ISS, to the category of internal governance (Brown & Caylor, 2006, p. 420).

Table 15: BC's key drivers

	ALL	BCF	STEP	Category	Gov-7
Board members are elected annually	0.168412**	0.026959***	0.15354***	external	x
Company has either no poison pill or a pill that was shareholder approved	0.186193***	0.029089***	0.16365***	external	x
Option re-pricing did not occur within last 3 years	0.250651**	0.029808***	0.27336**	internal	x
Directors are subject to stock guidelines	0.169731*	0.02832***		internal	x
All directors attended at least 75% of board meetings or had a valid excuse for non-attendance	0.180266**	0.186784**		internal	x
The average options granted in the past 3 years as a % of basic shares outstanding < 3%	0.281377***	0.026458***	0.24217***	internal	x
Board guidelines are in each proxy statement		0.025249***	0.35945***	internal	x
Option re-pricing is prohibited		0.111625***		internal	
Board has outside advisors		0.027867***		internal	
Nominating committee is comprised solely of independent outside directors			0.13480*	internal	

\* / \*\* / \*\*\*= significant at 10%, 5%, and 1% level, respectively

Source: Author's own table based on Brown and Caylor, 2006, pp. 419 - 422

The STEP approach constitutes the third and last approach for determining ISS factors that are linked to firm value. BC explain that this approach "is a variant of the forward-selection technique, where variables already in the model do not necessarily stay there. In order to stay in the model, a coefficient must be significant at the 10% two-tailed level" (Brown & Caylor, 2006, p. 420). Again, the authors do not report the coefficients' exact estimations. The STEP test brings about six provisions, as shown in Table 15, of which only one has not yet been identified by one of the other two tests.

As mentioned above, those provisions that appear in at least two of the three approaches build the Gov-7 index. For this reason, all provisions, except for the last three, make it into the Gov-7 index. Four of the seven provisions have a positive and significant coefficient in all the three tests, whereas the remaining three in only two. Five of the Gov-7 provisions belong to the internal and two to the external category of governance factors.

Altogether, these results suggest that an index based on only seven instead of all 51 ISS governance factors is sufficient to establish a link between corporate governance and firm value. However, one may raise the question whether these seven provisions really fully drive the correlation. In order to explore this, BC sum up the seven binary factors and run a regression analysis similar to the BCF approach discussed above. They regress Tobin's Q on the Gov-7 index and the remaining 44 factors. The test reveals a positive and significant (at the 1% level) correlation of Tobin's Q on the Gov-7 index of 0.175051 and positive but not significant correlation on the Gov-Rem44 index of 0.005984 (Brown & Caylor, 2006, p. 423). The results are therefore consistent with the notion that the seven provisions contained in the

Gov-7 index are linked to the firm value and fully drive the correlation. Due to the fact that the correlation of the 44 remaining provisions lacks statistical significance and, moreover, is of small magnitude strengthens this conclusion (Brown & Caylor, 2006, p. 423).

### 3.3.4 Additional Analyses

BC conduct two further analyses which shall be presented briefly. As mentioned in 3.3.1, BC's sample period includes only one year, namely 2002. Typically, one may claim that a one-year period is not long enough to establish robust correlations. Therefore, BC run regressions and try to replicate the 2002 results for the two surrounding years.

Table 16: Correlation of two surrounding years

	Gov-score	Gov-7	Gov-Rem-44
2001	0.042138***	0.163043***	0.020565
2003	0.037166***	0.172674***	0.012639

\*\*\*= significant at 1% level

Source: Author's own table based on Brown and Caylor, 2006, p. 425

Table 16 indicates that for both years the correlations between firm value (measured by Tobin's Q) and the summary measure of corporate governance are with 0.042138 and 0.037166, respectively, positive and significant. Even the parsimonious version of the measure, the Gov-7, is with 0.163043 and 0.172674, respectively, clearly positive and significant. To strengthen these results, BC also estimated the correlation of the firm value on the provisions not included in the index. And indeed, the 2001 and 2003 correlations are with 0.020565 and 0.012639 positive but lack economic significance. BC's results can therefore be considered as robust and are not an artifact of a single year (Brown & Caylor, 2006, p. 424).

The second of the two additional analyses deals with the direction of causality. One might raise the question whether better governance really enhances valuation or whether highly valued firms implement better governance systems. To explore this issue, BC include the lagged value of the industry mean-adjusted Tobin's Q into their regression model and regress Tobin's Q on the indices. The estimations still lead to positive and significant correlations for the lagged Tobin's Q variable (Brown & Caylor, 2006, p. 426). Given these results, the issue of reverse causality can be ruled out to a limited extent.

### 3.3.5 Explanations

BC are silent as to possible explanations of the relation between governance and firm value. The only matter they bring up in this respect is the above-mentioned reverse causality, which is subsequently rejected. It seems that the authors assume a direct effect of the governance provisions on firm value and that causality runs from governance to valuation.

## 3.4 Between the Advocate

A further aim of this thesis is not only to discuss single papers but also to put them in a general picture, as introductory mentioned. For this purpose, a discussion will follow that shall describe what the authors agree or disagree on. It seems to be adequate to divide this chapter, similar to the examined papers, into the four sub-topics data, indices, results, and explanations.

### 3.4.1 Data

In fact, only two data providers exist when it comes to corporate governance provisions. While GIM and BCF rely on the Investor Responsibility Research Center (IRRC), BC prefer data from the Institutional Shareholder Services (ISS). The reason for this difference stems from the different scopes the two providers take. IRRC covers 24 provisions which throughout belong to the external category of governance. In contrast, the ISS' data have with 51 provisions a much broader scope, also considering internal governance. Bearing this in mind, it becomes clear why BC rely on a different data set. BC clearly strive for a "creation of a much broader summary corporate governance index than is possible using IRRC data" (Brown & Caylor, 2006, p. 415). However, all this becomes mitigated by the fact that BC develop their broad index further into a parsimonious Gov-7 index which is, obviously, no longer that broad.

### 3.4.2 Indices

In general, all three papers take the same and fairly straightforward approach in constructing the index. For each provision that is in place, one point is added to the index. Thus, the higher the index is the worse the company's performance, or alternatively, negative correlations between provisions and performance are expected. However, this is only true for GIM and BCF. BC's index is constructed slightly differently. Since the ISS provisions are stated in a negative form (see 3.3.2), their being in place has a positive impact. Therefore, positive correlations are expected.

As discussed in 3.4.1, GIM and BCF access the same data and hence the same 24 provisions. Yet, there is still a difference as to how many of these provisions effectively serve as basis for the index. In GIM's G-score, a theoretical maximum of 24 points can be reached,

which is not the case with BCF's E-index. In fact, BCF minimize the basis to six provisions by short listing all 24 provisions according to certain criteria (see 3.2.2). Even though GIM and BCF originally make use of the same data set, they arrive ultimately at a slightly different basis. It seems that BC try to pursue a golden middle. They commence with a basis of 51 provisions that becomes, however, the Gov-7 index.

### 3.4.3 Results

Instead of reiterating the results from the respective chapters, a paragraph from Bhagat, Bolton, and Romano (BBR) (2007) (see 4.3.1) shall be cited. The paragraph deals with a comparative analysis of the results from the three different advocates. However, BBR do not rely on data and models from the respective authors, but rather create their own approach considering a sample of 1,500 U.S. firms over the period 1998 – 2002. Furthermore, BBR carry out their analysis based on accounting performance measures. Although it seems that BBR's analysis differs quite a bit from the previous ones, it shall serve as a final comparison.

Table 17: Indices comparison

Performance measure	GIM	BCF	BC
	G-index	E-index	Gov-score
$ROA_t$	-0.013	-0.034	-0.004
$ROA_{t+1}$	-0.011	-0.031	-0.005
$ROA_{t+1 \text{ to } t+2}$	-0.004	-0.015	-

Source: Author's own table based on Bhagat, Bolton, and Romano, 2007, p. 80

The results in Table 17 show negative correlations in the GIM column for all three performance measures, whereby the strongest and significant one with -0.013 is between GIM's index and the contemporaneous measure  $ROA_t$ . The second strongest (-0.011 and significant) correlation is between the index and next year's performance measure. Although still negative (-0.004), the third correlation is no longer significant. A very similar pattern can be found in BCF's index. The three correlations are of monotonically decreasing magnitude and significance throughout. It therefore might be said that GIM and BCF are comparable in terms of their results, which indeed mirrors the above results. However, the Gov-score shows a slightly different picture. Tomorrow's performance measure is with -0.005 somewhat higher than the contemporaneous' measure (-0.004). This is not consistent with the analyzed pattern. Moreover, BBR do not provide a correlation for the third performance measure. Ironically, exactly this not being within the pattern reflects the above results as well.

#### **3.4.4 Explanations**

The amount of text dedicated to possible explanations about the correlation between governance and performance decreases from advocate to advocate. While GIM broadly discuss several hypotheses, BC are silent as to possible explanations.

It is noteworthy that both GIM and BCF immediately acknowledge that the analyzed correlations do not establish causation from governance to performance. However, both of them head into different directions in search of explanations. GIM successfully prove that the provisions adapted by the management caused some agency costs, which in turn affected performance measures. A further explanation, for which the authors only find limited support, is that the performance measures correlate with some difficult-to-measure characteristics. BCF bring up the rather general explanation that bad management decisions prior to 1990 affected the firm value after 1998. They do not entirely accept causation from provisions to valuation, but state that higher entrenchment “brings about” (Bebchuk, Cohen, & Ferrell, 2005, p. 26) low valuation.

## 4. Opposers

In this chapter, the second category of papers, namely those that disagree with the hypothesis that governance affects firm value positively, will be presented. However, the discussions will not be as detailed as the discussions of the above three papers. Mainly two papers will be subject of discussion, and two others will be examined rather briefly. Lehn, Patro, and Zaho (2007) and Core, Guay, and Rusticus (2005) belong to the main opposers, whereas Bhagat, Bolton, and Romano (2007) and Cremers and Nair (2005) are considered as slightly less relevant. This approach is in line with the conceptual frame described in Chapter 2.2.

### 4.1 Lehn, Patro, and Zhao

In their 2007 article, Lehn, Patro, and Zhao (LPZ) attack GIM's and BCF's papers and attempt to explore the so far unanswered question of causation. LPZ commence their analysis by trying to replicate GIM's and BCF's results. Except for some minor adjustments, LPZ's data is the same as in GIM's and BCF's articles. Instead of Tobin's Q, the book-to-market ratio is used and the sample period is extended by one year at the beginning and end. The unreported (not even in LPZ's paper) estimations lead to the same results and hold for survival requirements of different lengths and different beginning years (Lehn, Patro, & Zhao, 2007, p. 7). LPZ conclude that the results establish a correlation between governance indices and market-to-book ratios, but shed no light on their causal relation.

To explore the causal relation, LPZ developed the following procedure. First, they examine the relation between MTBRs during the early 1980s and index values in the 1990s. Should this test reveal a significant relation, then it might be assumed that the negative correlations documented by GIM and BCF stem from governance indices being related to past performances contained in contemporaneous MTBRs (Lehn, Patro, & Zhao, 2007, p. 7). The second step consists of a test identifying whether the contemporaneous relation between MTBRs and governance indices in the 1990s also exists after checking for MTBRs during 1980 – 85. Should this relation not hold, then the conclusion might be drawn that valuation (expressed by MTBRs) affect governance indices, but not vice versa.

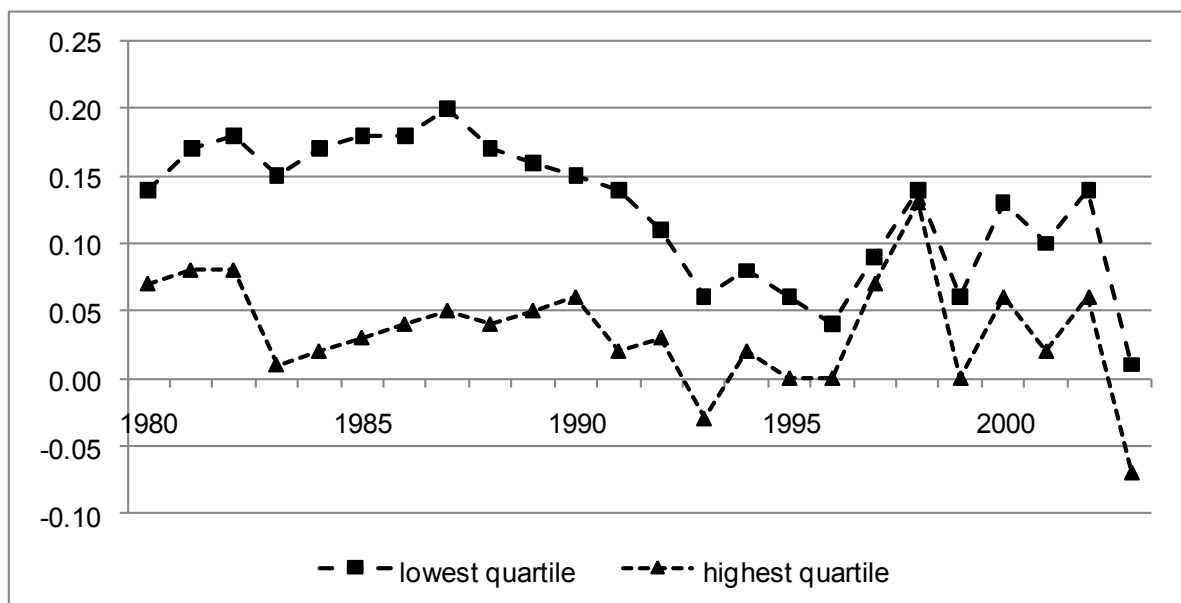
#### 4.1.1 Causal Relation Test

LPZ start their analysis with the estimation of serial correlations for pairs of industry-adjusted MTBRs for each year from 1980 through 2003. The unreported matrix documents significant coefficients ranging from 0.22 to 0.85. Of particular interest is the fact that the ratios from the early 1980s are highly correlated with those during 1990 – 2003. So is, for example, the ratio of 1985 with 1990 0.51. The authors therefore draw the conclusion that the MTBRs during the sample period used by GIM and BCF (1990 – 1998) are highly correlated with those in

the period of 1980 through 1985, which is the period preceding the adoption of governance provisions comprising the GIM and BCF indices (Lehn, Patro, & Zhao, 2007, p. 8).

To strengthen these findings, LPZ plotted the MTBRs from 1980 through 2003 for two groups of firms, namely one group with the highest and the lowest quartile of GIM's governance index values (see Figure 2). This was done for all 630 firms that existed in all years in the mentioned period.

Figure 2: MTBRs and GIM index



Source: Author's own illustration based on Lehn, Patro, and Zhao, 2007, p. 30

Figure 2 shows two things: Firstly, the MTBRs of firms with the lowest GIM value are substantially and throughout the entire period higher than those from the high GIM index group. This is consistent with the regression results of GIM (see 3.1.3.3), showing a negative relation between firm value and GIM index value. However, the second conclusion is more relevant. The difference in the MTBRs of both quartiles is in fact from 1980 to 1985, the period preceding the adoption of GIM governance provisions, relatively higher than it is in 1990 and thereafter. LPZ understand this evidence as a consensus with the view that firms with lower MTBRs were more likely to adopt GIM governance provisions than high MTBR firms. Thus, the evidence is not consistent with the view that the adoption of governance provisions caused MTBRs to be lower (Lehn, Patro, & Zhao, 2007, p. 9). The same analysis based on BCF data leads to equal patterns. Firms in the high BCF governance index quartile had substantially lower MTBRs also in the period between 1980 and 1985 (Lehn, Patro, & Zhao, 2007, p. 31). According to LPZ, there is therefore clearly room to state that MTBRs affect the governance indices, but not vice versa.



#### 4.1.2 Regression of the Indices on 1980s' Valuations

After testing the causal relation between governance provisions and valuations, LPZ try to find out whether a significant relation between the MTBRs during the early 1980s and the governance indices during 1990 through 2003 (GIM's period) exists. It is important to note that this is LPZ's first step to explore the causal relation, as mentioned in 4.1. The following Table 18 reports the estimated coefficients on the average MTBR of 1980 through 1985 in which the GIM index value of the period between 1990 and 2003 serves as the dependent variable.

Table 18: Regression of GIM index on MTBRs

Year	Average MTBR	Year	Average MTBR
1990	-0.105***	1998	-0.031
1991	-0.111***	1999	-0.042
1992	-0.111***	2000	-0.032
1993	-0.063	2001	-0.045
1994	-0.074*	2002	-0.030
1995	-0.071*	2003	-0.045
1996	-0.069*	Mean	-0.064***
1997	-0.061		

\* / \*\* / \*\*\*= significant at 10%, 5%, and 1% level, respectively

Source: Author's own table based on Lehn, Patro, and Zhao, 2007, p. 21

Table 18 shows that each year's coefficient is negative and the first three and the mean coefficient even significant at the 1% level. In fact, the GIM index between 1990 and 1992 is negatively related to MTBRs in the early 1980s. The equivalent (unreported) analysis for the BCF index leads also to negative coefficients, even with more coefficients being significant (Lehn, Patro, & Zhao, 2007, p. 22). Given these results, it can be assumed that the negative relation between the governance indices and contemporary MTBRs might be driven by past information contained in the contemporary MTBR (Lehn, Patro, & Zhao, 2007, p. 11).

### 4.1.3 Replication with 1980s' Ratios as Variables

Consistent with the explained procedure, the scholars now test whether the negative relation between MTBRs and contemporaneous index values between 1990 and 2003 hold while checking for MTBRs of the early 1980s. In order to carry out this analysis, LPZ replicate their basic analysis of GIM (see 4.1) having done one minor adjustment. They include the 1980s' MTBRs as an additional independent variable.

The unreported estimations indicate throughout positive and significant coefficients on the average MTBR of the early 1980s in every year during 1990 – 2003. Indeed, these results underline the above comments on the serial correlations (see 4.1.1). However, even more relevant is the fact that after checking for this variable the significant relation between GIM index values and contemporaneous valuations, expressed by MTBRs, disappears in eleven of fourteen years (Lehn, Patro, & Zhao, 2007, p. 23). In only one of the three remaining years the relation is still significant at 1%. Therefore, it might comfortably be said that the results are consistent with the negative relation between MTBRs and the GIM governance index, which means that causation runs from valuation to governance index, and not vice versa (Lehn, Patro, & Zhao, 2007, p. 12). The equivalent analysis taking the BCF index into account leads to similar results.

### 4.1.4 Further Analyses

LPZ attempt to strengthen their results by conducting some time analyses based on both the GIM and BCF indices. They mainly regress the indices on several combinations of lagged and subsequent MTBRs (included as independent variables) in each year during 1990 – 2000. These combinations range from one through ten years before and after the index value is measured. In a second and extended version of the model, they add some further variables as control variables. In their paper, LPZ only report the results for the  $\pm 3$  years combination.

The results show negative and significant coefficients on the lagged MTBRs in all eleven years. However, on the subsequent MTBRs only three coefficients were negative and significant (Lehn, Patro, & Zhao, 2007, p. 25). The results of the extended model show a similar pattern. The coefficients on the lagged MTBRs are negative and significant in each analyzed year, but not significant on the subsequent MTBRs. The corresponding analyses for the BCF data yield similar results (Lehn, Patro, & Zhao, 2007, p. 27).

When lag and lead MTBRs are included simultaneously to explore variations in governance indices, it is the lagged values that indicate consistent results with GIM and BCF. Overall, these tests and results reiterate the stronger relation between past MTBRs and contemporaneous governance than governance leading to valuation (Lehn, Patro, & Zhao, 2007, p. 15).

#### 4.1.5 Explanations

The authors only dedicate a few lines to the explanations of their results. Even though they are similar, LPZ provide two explanations for the inverse causation. First, firms which are badly managed and hence have lower valuations face a higher probability of a hostile takeover. Therefore, managers have an incentive for entrenchment. Second, low valued companies tend to have relatively fewer growth opportunities (Lehn, Patro, & Zhao, 2007, p. 16). Given this fact, a company is more likely to adopt governance and thus affect its governance index value.

In their paper's introduction, LPZ already mention these two explanations and set the goal to distinguish between those two supported by the above tests. Apparently the authors could not meet this goal and predict therefore that future research will shed light on the explanations.

## 4.2 Core, Guay, and Rusticus

With their 2005 paper, the three scholars from the University of Pennsylvania present a very detailed and thorough examination that attacks GIM on a broad basis. Whereas LPZ only argue on the issue of causation, CGR reexamine several points. Although the paper's structure is fairly complicated, the core points will be presented here in form of four different hypotheses (development and results).

### 4.2.1 Shareholder Rights and Operating Performance

"Shareholder rights are not associated with future operating performance" (Core, Guay, & Rusticus, 2005, p. 6).

As widely discussed shareholder rights may affect a firm's performance in several ways. Weak shareholder rights could inhibit a manager's removal or the management might engage negative NPV projects due to reduced scrutiny by shareholders or capital markets. However, also strong shareholders might not be ideal. On the other hand, a weak design of the rights might be advantageous for performance. Once managers are shielded from consequences of alleged good project, they could be encouraged to behave in a less risk-averse manner (Core, Guay, & Rusticus, 2005, p. 5). The other extreme would be strong shareholder rights. However, these, for example, might encourage managers to invest mainly in areas in which they have specific expertise that makes them difficult to replace. In a nutshell, GIM conclude on this question that weak shareholder rights firms (dictatorship) tend to have higher agency costs and thus also lower operating performance.

To examine shareholders rights' effect on operating performance, CGR regress (future) operating performance on GIM's G-index by the following model. Unlike GIM who use return on equity as proxy for performance (see 3.1.3.4), CGR prefer operating return on assets (ROA)

due to not being affected by leverage, extraordinary items, and other discretionary items. ROA is measured as operating income divided by year-end total assets. Operating income is calculated after depreciation (Core, Guay, & Rusticus, 2005, p. 14).

Formula 3: ROA on G-index

$$\text{Industry-adjusted } ROA_{it} = \alpha + \beta_1 G\text{-index}_{i,t-1} + \beta_2 \log MVE_{i,t-1} + \beta_3 \log BME_{i,t-1}$$

Source: Core, Guay, and Rusticus, 2005, p. 13

We turn our attention to  $\beta_1$  which is interpreted as the magnitude for the relationship, either positive or negative, between shareholder rights and ROA. The remaining two terms are the two control firm size (MVE) and variables book-to-market equity (BME). Besides this model, CGR include a further one in their analysis. Also the difference in operating performance between the Dictatorship and Democracy Portfolio is examined. Basically, CGR estimate the difference based on the same model as discussed above. The only adjustment they make is that the term  $\beta_1 G\text{-index}_{i,t-1}$  is replaced by  $\beta_1 Dict_{i,t-1}$ . Should  $\beta_1$  turn out to be significantly negative (positive), the authors understand it as evidence for the fact that weaker shareholder rights lead to a lower (higher) ROA.

Indeed, it seems that weak shareholder rights are associated with poor operating performance. The unreported estimations on the G-index show that out of the nine coefficients (without control variables) between 1991 and 1999 five are negative and only one significant with a magnitude of -0.21. With the inclusion of the control variable BME and BME and MVE, all nine coefficients turn out to be negative and even three significant ranging from -0.04 to -0.16 and -0.03 to -0.16 (Core, Guay, & Rusticus, 2005, p. 43). The results for the performance difference are somewhat stronger. Without a control variable, eight of the nine coefficients are negative ranging between -0.02 and -2.16 and two are significant. With the inclusion of BME, only five are negative ranging between -0.32 and -1.32 and two significant. With both control variable BME and MVE, again eight are negative ranging between -0.1 and -1.2 and only one is significant (Core, Guay, & Rusticus, 2005, p. 44). CGR therefore successfully document what GIM were not able to do, namely establishing a relation between shareholder rights and operating performance. The above-stated hypothesis is therefore rejected.

## 4.2.2 Implications of Investors' Expectations and Shareholder Rights' Performance

"Shareholder rights are not associated with analyst forecast errors" (Core, Guay, & Rusticus, 2005, p. 8).

"Shareholder rights are not associated with excess returns around earnings announcements" (Core, Guay, & Rusticus, 2005, p. 9).

With these two hypotheses, CGR try to extend GIM's first explanation (see 3.1.4.1). GIM shed light on the whole topic of underestimation by investors. For this test, however, it is not only important to document a difference between estimation and actual performance, but also to find evidence that these differences were unexpected by investors. The issue of surprise can be explored by means of two methods: Analyst forecast errors and earnings announcement.

### 4.2.2.1 Analyst Forecasts

Should investors understand the implications of governance on operating performance they will be surprised by actual earnings that are low (high) compared to earnings forecasts when governance is weak (strong) (Core, Guay, & Rusticus, 2005, p. 6). In order to explore whether investors anticipate ROA differences between high and low G-index adequately, CGR use sell-side analysts' earnings forecasts as proxy for investors' expectations. It might be inferred CGR assume that analysts' and investors' expectations are equally sophisticated. In fact, if unexpected operating performances cause the performance differences, firms with high G-index will have relatively more optimistic forecasts than low G-index firms. Concretely, for the following tests it might be expected that actual versus forecasted earnings are relative low (high) if corporate governance is weak (strong). If this is the case, GIM's performance differences are indeed due to poor governance. However, if investors understand implications of governance on operating performance, no relation between shareholder rights and forecast errors are to be expected (Core, Guay, & Rusticus, 2005, p. 8).<sup>11</sup>

To explore whether these implications are correctly understood, the forecast errors are regressed on the G-level and the control variables. The underlying model is the same as the previously mentioned ROA model (see Formula 3) except for the equation's left side that is replaced by Analysts' forecast error<sub>it</sub>. The forecast error is estimated as I/B/E/S<sup>12</sup> actual annual earnings per share minus I/B/E/S consensus forecast of annual earnings per share. Furthermore, also the restricted sample, where only the Democracy and Dictatorship Portfolios

<sup>11</sup> CGR acknowledge the difficulty to estimate ex ante at which horizon forecast errors occur. For this reason, they examine annual earnings forecasts for several time horizons.

<sup>12</sup> Institutional Brokers' Estimate System is a financial data source that features up to 26 forecast measures and covers more than 60,000 companies. I/B/E/S is owned by Thomson Reuters (Thomson Reuters, 2011).

are used, is estimated. The regression is again based on the given model, but with the replacement of  $\beta_1 G\text{-index}_{i,t-1}$  by  $\beta_1 \text{Dict}_{i,t-1}$ . Possible negative coefficients from the two models are interpreted as evidence for the analysts' surprise upon the differential performance. Yet, the unreported forecast error estimations do not confirm any surprise effect. The one-year analysts' forecast errors coefficients on both the G-index and the Dictatorship sample are for the period of 1991 – 99 mainly positive but not of economic significance. As to the full sample, the coefficients range between 0.001 and 0.02. 1996's coefficient is even significant at 1%. Only the coefficients of 1991 and 1994 are slightly negative. Within the restricted sample, the coefficients range between 0.00 and 0.37 with again 1996's coefficient being significant at the 5% level. Only 1991's estimation leads to a negative coefficient of -0.31 (Core, Guay, & Rusticus, 2005, p. 45). In further unreported analyses, the authors find that the above results are very similar to those over a one-quarter and two-year forecast horizons. But even for long-term horizon forecasts, such as five years, the results are in fact insignificant, but still mainly positive and therefore consistent with the above ones. For the full sample, the coefficients range between 0.00 and 0.48 with only two exceptions that are negative. As to the restricted sample, the coefficients range between 0.46 and 4.83 with, again, two negative exceptions in 1993 and 1997 (Core, Guay, & Rusticus, 2005, p. 46). All the above results, namely the positive coefficients, are opposite to the predicted figures. In fact, they show that analysts are aware of the weak investor rights' negative effects on operating performance. The findings are therefore not consistent with the hypothesis that investors misunderstand the implications of governance on performance. Accordingly, it is neither correct that the investors' surprise about low G-index firms' higher ROA is the trigger for the excess-relative stock returns of low G-index firms (Core, Guay, & Rusticus, 2005, p. 19).

#### 4.2.2.2 Earnings Announcement Returns

The second method to explore the issue of surprise is the analysis of earnings announcement returns. This method might be superior because it does not contain any noisy and untimely expectations. However, a drawback is the fact that investors' surprise effect does not necessarily occur in the short time around the announcement. This test is fairly similar to the above one. Should the market learn about the different ROA of firms with strong (weak) governance primarily at times whereby earnings are announced, the returns around this time should consequently be significantly greater (lower). In fact, if earnings announcement are the only information source for the markets to learn about poor governance's negative implications, the entire annualized raw return difference of 9.2% (see 3.1.3.2) will occur around these events (Core, Guay, & Rusticus, 2005, p. 21). However, if earnings announcement is only one of several ways for the market to learn about governance's consequences, then it

might be expected that the announcement return difference between Democracies and Dictatorships is greater than the daily average difference between these two groups during the sample period. Therefore, the test could be designed as follows: The Democracy outperformed the Dictatorship Portfolios by 8.3% per year as measured on an abnormal return basis. Divided by 250 trading days, this makes 3.3 basis points a day over the sample period. For the hypothesis to be true, namely that the market experiences a learning effect, the three-day abnormal (raw return minus expected return) announcement return for Democracies over Dictatorship should be greater than 10 basis points (Core, Guay, & Rusticus, 2005, p. 21).

For this purpose, CGR collected quarterly earnings announcement days from I/B/E/S between 1990 and 1999. Subsequently, they match these data with returns from the full GIM sample that results in a sample of 43,992 quarterly earnings announcements. Due to the above-explained difficulty of verifying when the surprise effect exactly takes place, the returns are measured over windows whereby the lengths vary.

The results show the following picture: CGR report abnormal excess returns beyond the 0.10% threshold estimated 21 days prior to the earning announcement. The returns are positive for all G-index portfolios and significant for two. The return of the Democracy Portfolio over the Dictatorship one is 0.21% and not significant (Core, Guay, & Rusticus, 2005, p. 23). However, on an annualized basis, this result is less than the observed 15% difference in abnormal returns between the Dictatorships and Democracies. Furthermore, amending the time window has only little influence on the excess return. Additionally, none of the results is significant.

Based on the above results, it can be said that the earnings announcement return test confirms the analysts' forecast test and is therefore not consistent with the hypothesis. The surprise about the operating performance has no explanatory power when it comes to the difference between Democracy and Dictatorship Portfolio (Core, Guay, & Rusticus, 2005, p. 24).

#### **4.2.3 Shareholder Rights and Takeover Possibility**

"Shareholder rights are not associated with takeover probability" (Core, Guay, & Rusticus, 2005, p. 10).

As stated above, weak shareholder rights firm have more anti-takeover provisions in place. As a result, these firms face a lower takeover probability. Accordingly, firms with strong shareholder rights face a higher takeover probability. Alternatively, the poor stock returns of weak governance firms could therefore stem from the fact that investors were surprised not by the lower operating performance but by a lower realized probability of weak governance firms receiving takeover premiums (Core, Guay, & Rusticus, 2005, p. 9).

CGR test this on the basis of data from completed takeovers of both Democracy and Dictatorship companies. The takeovers' frequencies during four time intervals<sup>13</sup> over the period sample are then being converted into annualized probabilities as shown in the following table.

Table 19: Completed takeovers of Democracies and Dictatorships

Period	Dictatorship			Democracy		
	No. firms	Takeovers	Total	No. firms	Takeovers	Total
9/90 – 6/93	85	3	1.2%	158	13	2.9%
7/93 – 6/95	93	7	2.7%	139	9	2.3%
7/95 – 1/98	87	11	4.5%	120	14	4.1%
2/98 – 12/99	83	12	5.1%	215	33	5.4%
Annualized average			4.1%			4.5%

Source: Author's own table based on Core, Guay, and Rusticus, 2005, p. 48

Over the entire sample period, 33 Dictatorship and 69 Democracy firms were taken over. Furthermore, Table 19 reveals that both portfolios experience a higher takeover probability towards the end of the sample period. However, as the Dictatorship's probability is 4.1% and the Democracy's 4.5%, there is only little difference in both average probabilities. To the extent that one views the G-index as an anti-takeover index, one might be surprised but the results are consistent with the G-index being a broad governance index. This is underpinned by the fact that golden parachutes, for example, which aim to minimize managerial resistance to takeovers, are incorporated in the G-index as a restriction on shareholder rights (Core, Guay, & Rusticus, 2005, p. 25).

It seems that the takeover probability difference is not large enough to explain the difference in the realized stock returns. Therefore, CGR suggest that the difference stem from the takeover's circumstances and the premium paid. Accordingly, CGR re-compute the return difference and exclude the takeover target's return in the respective period. This amendment, however, has still too little effect on the return difference. Not even excluding the takeover firms completely from the sample helps to explain the difference.

Overall, the difference in takeover probability does not seem to be a major cause of the return difference. This view is consistent with the hypothesis that shareholder rights are not associated with takeover probability.

<sup>13</sup> Each interval starts and ends with the publication date of the IRRC book.



#### 4.2.4 Robustness Tests

CGR conclude their paper by carrying out some final tests with regard to robustness. One of the main concerns that the scholars raise is that acquisition activities may affect the above results. This is of particular concern because GIM find a positive relation of high G-index firms and acquisition activities (Gompers, Ishii, & Metrick, 2003, p. 107). To solve this problem, CGR re-estimate the stock return tests of GIM for periods in which the sample firms did not engage in merger and acquisition activities and vary the windows around earnings announcements. However, the return differential between Democracy and Dictatorship Portfolios remains with 55 basis points per month significant (Core, Guay, & Rusticus, 2005, p. 27). Extending the time window around earnings announcements leads to an even higher difference of 59 basis points. In summary, these results are consistent with the view that mergers and acquisitions “do not account for the majority of the stock return differential between the Dictatorships and Democracies” (Core, Guay, & Rusticus, 2005, p. 27).

The second possibility that is raised is that the return differential stems, at least to a certain degree, from poor capex projects typically done by Dictatorships. As demonstrated by GIM, Dictatorships' capex are slightly higher than those from Democracies (Gompers, Ishii, & Metrick, 2003, p. 107). Similarly to above, CGR re-examine the stock return tests, however, only based on periods without unusual capex.<sup>14</sup> Furthermore, they exclude the first and last month from the respective year in order to mitigate certain investors' beliefs about the firm value. In summary, the results are very similar to those already described in GIM (see 3.1.3) and hence confirm that they are not affected by poor capex. Moreover, CGR could prove that their results are robust.

### 4.3 Further Opposers

This chapter will deal, as previously mentioned, with two further papers that oppose or criticize the idea that governance provisions affect valuations positively.

#### 4.3.1 Bhagat, Bolton, and Romano

With their paper “The Promise and Peril of Corporate Governance Indices,” the three authors Bhagat, Bolton, and Romano (BBR) present an extensive examination of governance indices. Out of three, two parts are dedicated to rather general comments on governance indices. While the first part summarizes the three advocates (see 3.1, 3.2, and 3.3), the last part presents some lessons learned from the relevant governance indices literature. In fact, how-

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<sup>14</sup> According to CGR, the capex is unusual when the result of the annual capex divided by total assets minus the industry median is in the top 10% of annual observations (Core, Guay, & Rusticus, 2005, p. 28).

ever, only the middle part will be discussed briefly, since it is the only part that criticizes GIM and BCF.

According to BBR, a particular problematic issue is an econometric one. Governance quality and performance are not independent. The strong inter-relationships and dependence among different variables within corporate governance, such as capital and ownership structure and corporate performance, lead to situation where one would need to formulate a system of simultaneous equations in order to examine the relationship between governance and performance properly (Bhagat, Bolton, & Romano, 2007, p. 46).

Formula 4: Simultaneous equations system

$$\text{Performance} = \int_1 (\text{Ownership, Governance, Capital Structure, } Z_1, \varepsilon_1)$$

$$\text{Governance} = \int_2 (\text{Performance, Ownership, Capital Structure, } Z_2, \varepsilon_2)$$

$$\text{Ownership} = \int_3 (\text{Governance, Performance, Capital Structure, } Z_3, \varepsilon_3)$$

$$\text{Capital Structure} = \int_4 (\text{Governance, Performance, Ownership } Z_4, \varepsilon_4)$$

Source: Bhagat, Bolton, and Romano, 2007, p. 46

where  $Z_i$  are vectors of control variables and  $\varepsilon_i$  are error terms. In fact, GIM and BCF carried out their analyses based on only the first equation from the above system. This procedure is equivalent to estimating the entire system only using the method of ordinary least squares (OLS) instead of the more appropriate two-stage least square (2SLS) or even three-stage least square (3SLS) method (Bhagat, Bolton, & Romano, 2007, p. 46). According to BBR, OLS estimates of the above system do not lead to econometrically defensible conclusions about the relation between governance and performance. Yet, BBR acknowledge that it is difficult to estimate such a system since exogenous instrumental variables must be identified. These variables, however, are exceedingly difficult to find, resulting again in the initial position where the researcher relies on OLS. Apparently, BBR fail to implement its criticism.

#### 4.3.2 Cremers and Nair

Cremer and Nair (CN) do not really criticize the advocates' results or methods, but rather extend the study of governance mechanisms. The paper's core point is doubtless their distinction of governance mechanisms into an external and internal category. External governance is nothing but the governance provisions discussed in GIM and BCF, or as the authors call it, "takeover vulnerability" (Cremers & Nair, 2005, p. 2861). Internal governance, however, are internal monitoring mechanisms, such as blockholders and the board of directors.

These two categories of mechanisms interact in a certain system and affect the overall governance. One might ask whether these two types can be viewed as substitutes should internal mechanisms reach a level where they offset changes in external control. The following example illustrates this situation: A large shareholder has the need to monitor the management and does so by paying part of the gains that stem from takeovers. Hence, the appearance of a bidder becomes more likely. In other words, the presence of a large shareholder can be crucial when it comes to the facilitation of takeovers. Accordingly, should a firm not have a large monitoring shareholder, it risks not to be taken over even if it has only a few defense provisions in place (Cremers & Nair, 2005, p. 2860). In this context, CN pose three questions which shall be answered briefly.

First of all, they analyze how the interaction of internal and external governance affects equity prices. The results show that two categories act as complements in connection with long-term abnormal returns (Cremers & Nair, 2005, p. 2862). Concretely, public pension funds (blockholders) are only relevant in the presence of takeover vulnerability, or generally spoken, the market for corporate control is only of importance when the company has blockholders. Similar to GIM and BCF, also CN underpin their results with a trading strategy. A portfolio with long positions in firms with high takeover vulnerability and high public pension fund ownership, but short positions in low takeover vulnerability firms and high public pension fund ownership firms yields an annualized abnormal return of 10-15% (depending on the internal governance proxy). Accordingly, a portfolio that is long in high takeover vulnerability firms and low public pension fund ownership firms, but short in low takeover vulnerability firms and low public pension fund ownership firms does not yield significant abnormal return (Cremers & Nair, 2005, p. 2862).

The second question aims to identify how the interaction of internal and external governance works when associated with the two key figures of firm size and leverage. Based on regression analyses, CN find that the two categories are stronger complements in low leverage firms.<sup>15</sup> Furthermore, they find some evidence that the tools from the external category work more effectively in small firms.

Thirdly, CN ask the rather general question as to what might be learned from the above knowledge when it comes to the design of a corporate governance system. One of the relevant "takeaways" is definitely the fact that parallel to external also internal governance mechanisms need to be taken into consideration. It is the combination of both categories that lead to abnormal returns. Furthermore, the internal category might also serve as a new source for evidence for the possibility that abnormal returns stem from risk characteristics in the asset-

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<sup>15</sup> This finding is in line with a good deal of literature, such as Novaes and Zingales (1995) or Zweibel (1996), concluding that higher debt reduces the probability of a takeover (Cremers & Nair, 2005, p. 2862).

pricing model employed (Cremers & Nair, 2005, p. 2862). Overall, it seems that CN try to express that the advocates do not pay sufficient attention to internal governance mechanisms.

#### **4.4 Between the Opposers**

In line with the paper's structure, it is the place to highlight and analyze the opposers' different standpoints. However, this is barely possible for two reasons: Firstly, all three advocates go for the same aim, namely establishing and proving the positive correlation between governance provisions in place and company performance. Obviously each opposer intends to disprove this correlation. But the relevant content is what they write beyond this, such as the investigation of the issue of causation, analysts' forecasts, or the interaction between internal and external governance. Secondly, each of the advocating papers' structure is straightforward. Data, model, and results are clearly distinguishable and therefore easy to compare. This is definitely not the case with the opposers' papers. The different subjects of discussion hinder a proper comparative analysis.

At least the topics by which the opposers disprove the positive correlation shall be recapitulated. While Lehn, Patro, and Zhao (2007) mainly examine the issue of causation, Core, Guay, and Rusticus (2005) analyze the link between shareholder rights and performance. Bhagat, Bolton, and Romano (2007) discuss an econometric problem and Cremers and Nair (2005) investigate the interaction between the two categories of external and internal governance.

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## 5. Excursuses

### 5.1 Corporate Social Responsibility

One might ask what the connection between governance indices and corporate social responsibility (CSR) is. The answer is to be found in the underlying idea of the two topics. There are numberless definitions of CSR and it is therefore essential to search for a common denominator among these. A very often cited fact about CSR is that the business the company engages in is economically sustainable and goes beyond legal requirements when it comes to the protection of the wellbeing of employees, communities, and the environment (Heslin & Ochoa, 2008).<sup>16</sup>

I think this going beyond legal limits is the connection to governance provisions. It is true that a part of the corporate governance requirements is nothing but the implementation of local corporate law. However, a good deal of the corporate governance requirements is indeed a certain going beyond the limit as they are not explicitly demanded by law.<sup>17</sup> A further connection is definitely that both governance indices and CSR try to capture something that is not obvious to share- and stakeholders.

This excursus will deal with three subtopics: CSR indices, the difficulty of measuring CSR, and the relationship between social and financial performance.

#### 5.1.1 CSR Indices

In response to the increased interest in socially responsible investments, several stock exchange operators created CSR indices. These indices aim to benchmark the performance of companies which pursue socially responsible investments. The following table lists three relevant CSR indices, which constitutes only a small sample of innumerable indices.

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<sup>16</sup> The reputable researcher on this topic, Archie Carroll (2000), stresses the fact that CSR is a comprehensive assessment on the firm's performance with respect to at least four or five key stakeholders. According to Carroll, a common mistake is that people do not include sufficient stakeholders.

<sup>17</sup> A look into some corporate governance codes confirms this impression. The rules of the Austrian code are divided into the three categories of L, C, and R. L-rules are of legal nature and mandatory for all companies. C-comply or explain rules are also to be followed unless the company explains the deviation. R-recommendation rules are of optional nature only (Austrian Code of Corporate Governance, 2011). The German code works according to a very similar scheme and divides its rules into the categories of "muss," "soll," and "sollte/kann" (German Corporate Governance Code, 2011). Both the Austrian R-rules and the German "sollte/kann" rules go far beyond legal requirements.

Table 20: CSR indices

Index	Launched	Markets covered
Dow Jones Sustainability World Index	1999	Global
FTSE4Good Index	2001	Global
Stoxx Europe Sustainability	2001	Europe

Source: Author's own table based on Finch, 2005, p. 1

The North-American stock exchange operator was among the first to track financial performance of socially responsible oriented companies. The Dow Jones Sustainability World Index consists of 325 globally scattered firms. In order to become a member of the index, the companies must comply with certain selection criteria, including stakeholder relations, human resources development, and energy consumption (Dow Jones Sustainability Indexes, 2011). The slightly later designed FTSE4Good Index also covers firms from all over the world whereby the selection criteria consist of the following three elements: environmental sustainability, stakeholder relationships, and universal human rights (Finch, 2005, p. 2). The third of the above-mentioned indices covers 158 European companies. Eligible for inclusion in the index are only those companies that fulfill predetermined criteria. The Stoxx Europe Sustainability Index was launched in October 2001 (Stoxx, 2011).

Overall, it is clear that each provider runs its own methodologies and procedures to compose their respective indices. However, the selection models' focus varies to a minimal extent only. After all, the providers screen the companies based on fairly given factors, such as corporate governance, workplace practices, social impact, and environmental performance (Finch, 2005, p. 3).

### 5.1.2 Measurement Problems

The CSR's nature is twofold. On the one hand, it is an exceedingly comprehensive assessment tool. On the other hand, however, this very characteristic makes it challenging to find a proper measure. Waddock and Graves (1997) describe CSR as a "multidimensional construct" and behaviors across the three layers input, internal process, and output need to be considered. Moreover these behaviors occur across a wide range of industries that exhibit significantly different characteristics, histories, and performance development. One must not forget to include managerial decisions and shareholder activity into the term CSR. Overall, only little clarity has been reached when it comes to the design of a proper measure.

In the past, among others, the following measures have been used: The Fortune reputational and social responsibility index, Moskowitz' reputational scales, behavioral and perceptual measures or case study methodologies. Indeed, all these offer some benefits. Yet, it is clear

that nearly all of them are one-dimensional or applicable to only a small sample of companies. The search for adequate CSR measures has occupied researchers to date (Waddock & Graves, 1997, p. 304).

As a potential solution, Ullman (1985) proposes an index based on eight attributes that try to describe corporate social performance optimally. These eight attributes are particularly used by Kinder, Lydenberg, Domini (KLD), which is an independent rating service company. As opposed to the above-mentioned shortcomings of other measures, KLD's index offers the following benefits. Firstly, all S&P 500 firms are rated, which makes the index widely applicable. Secondly, as it includes eight different attributes, it eliminates the flaw of being one-dimensional. Thirdly, the index is robust, as researchers apply the same criteria to a wide range of companies based on data gathered from numerous sources, both internal and external ones (Waddock & Graves, 1997, p. 307). In addition, each attribute is given a certain weight based on the analysts' expertise. Although not being flawless, it seems that the KLD index is a valid measure for CSR.

### **5.1.3 The Relation Between Social and Financial Performance**

In the context of this thesis, it is evident that the relation between financial and social performance needs to be discussed. The quest in which way social performance affects financial performance has been subject to extensive research and led to dozens of papers. Several scholars have tried to examine whether a general trend of the results can be observed. In fact, three different associations between social and financial performance have emerged: Social performance affects financial performance either positively, neutrally, or negatively. Given the high number of studies and the inexistence of a clear pattern, I decided not to present single papers but to try to put all results into a bigger picture.

In their 1999 paper, the three researchers Roman, Hayibor, and Agle (1999) took exactly this undertaking to heart and classified all existing studies on this topic into the three mentioned categories. In total, 46 articles comprising 51 research results were classified. The following Table 21 presents an overview of how many papers across the three decades of the 1970s, 1980s and 1990s reported a positive, neutral, or negative relation.

Table 21: Overview of studies examining the link of social and financial performance

Decade	Positive	Neutral	Negative
1970s	9	4	0
1980s	15	9	4
1990s	8	1	1
Total	32	14	5

Source: Author's own table based on Roman, Hayibor, and Agle, 1999, pp. 113-114

Of the total 13 papers that were published in the 1970s, nine could establish a positive correlation between social and financial performance and four detected a neutral correlation. Not one paper examined a negative correlation. The picture, however, changed slightly in the 1980s. While 15 studies demonstrated a positive correlation, four detected a negative correlation. Nine papers could not determine a relation whatsoever. In the 1990s, eight studies found a positive correlation whereas only one a negative and another one a neutral correlation. The results are indeed mixed and yet more researchers found a positive than a negative correlation between social and financial performance.

Unfortunately, the above-mentioned paper does not cover the last decade's (2000 – 2009) studies. Contacting one of the authors revealed that no update has been published.

## 5.2 Corporate Governance and Emerging Markets

As all analyses have been based so far almost exclusively on U.S. firms, it might be interesting and scientifically wise to look at emerging markets. A good deal of studies has been published on the relation of corporate governance and firm value in emerging markets. Particularly Korea, India, and Russia have been subject of research. An outstanding scholar on this topic is Bernard Black, who contributed a lot to the understanding of corporate governance and emerging markets.

Even though there is a general tendency towards a positive correlation between corporate governance and firm value, a generalization seems not to be adequate. I will therefore present some single research results divided into three subtopics.

### *Shareholder rights*

This topic deals with the very matter of this thesis, namely whether a package of shareholder rights (provisions) can predict firm value. In their case study, Black, Jang, and Kim (2006) regress Tobin's Q on the KCGI (Korean Corporate Governance Index), which is a measure for shareholder rights in place, and receive positive and significant coefficients. Furthermore,



they arrive at the conclusion that a 10-point increase in the KCGI would lead to a 0.064 higher Tobin's Q (Black, Jang, & Kim, 2006, S. 379). In his case study about Russia, Black arrives at an even more striking result, namely that an increase in the Russian governance ranking by 15 points predicts an increase in firm value by a factor of 8.58 (Black, 2001, p. 2143). Balasubramanian, Black, and Khanna find evidence that firm-level governance of Indian companies (measured by the Indian Corporate Governance Index) is associated with a higher Tobin's Q (Balasubramanian, Black, & Kahna, 2010, p. 22).

### *Disclosure*

The question whether better disclosure leads to higher firm value has also been analyzed. Both Black, Kim, Jang, and Park (2008, p. 16) for Korea and Black, Love, and Rachinsky (2006, p. 20) for Russia find evidence that disclosure correlates positively with firm value. Cheung, Conelly, Limpaphayom, and Zhou do so also for Hong Kong (2007, p. 109).

### *Board structure and outside directors*

Eventually, also the question whether a minimum number of outside directors for both board of directors and audit committee can be valuable has attracted much research. Indeed, Black and Kim (2007, p. 4) and Choi, Park, and Yoo (2007, p. 12) find evidence for the hypothesis that board independence affects firm value positively. Likewise, Black and Khanna report that Clause 49 raises the value of large firms (2007, p. 13). Clause 49 is a major corporate governance reform including special requirements concerning the independence of directors.

## **5.3 Corporate Governance Research**

The mentioned papers, particularly the three advocating ones, did not collect data themselves but rather relied on data from corporate governance rating companies. In this context, the major sources have been the IRRC and the ISS. These two companies constitute one category of rating provider. Their business model is limited to the provision of environmental, social, and particularly corporate governance research. Additionally, the ISS also offers proxy voting operations (ISS, 2011). Interestingly enough, besides other means, the IRRC disseminates its research via the Corporate Governance Network. Lucian Bebchuck, who is the author of the second discussed paper, leads this network. The main reason for stakeholders to turn to either of the companies is to gain expertise in and insight into trends in corporate governance (IRRC Institute, 2011).

Another category of rating provider constitutes, for instance, the company Governance Metrics International (GMI). GMI provide thorough and detailed evaluations of the governance characteristics of individual companies (GMI Ratings, 2011). The rating model, upon which the evaluation is based, has been developed in cooperation with various stakeholders, such as institutional investors and governance specialists. Thus, GMI closes a gap, namely that

many companies, even with good governance, go unrecognized and stakeholders are left without any insight. Users who subscribe to GMI's services have access to ratings of nearly 4,300 companies including coverage of the entire MSCI World. Subscriptions are also available on country- or industry level.

However, the rating companies' activities are not undisputed and led to questions particularly when it came to their objectivity (Larcker & Tayan, 2007). Allegations have arisen that ISS engage in a conflict of interest. On the one hand ISS rate the effectiveness of governance systems. On the other side however, they sell advice to companies on how to improve their ratings. Overall this situation might reduce the credibility of such rating companies.

## 6. Conclusion

In this chapter, I want to tie in with the introduction and the two goals I have set there. The first goal was to compile an extensive and thorough presentation of the debate on governance indices. This was completed by discussing both the main advocating and opposing studies. All three presented advocates successfully establish a positive and robust correlation between governance indices and company performance. However, the respective explanations are unable to satisfy completely. Brown and Caylor (2006) not even dedicate a paragraph to potential explanations. It seems undisputed, even among the advocates, that the issue of causation remains unsolved. In fact, Lehn, Patro, and Zhao (2007) build their entire paper upon the issue of causation. Furthermore, Core, Guay, and Rusticus (2005) deeply analyze shareholder effects' on company performance. At the end of each side's presentation, some efforts have been made to highlight what the authors agree or disagree on. While this is doable for the advocates, it turned out to be challenging for the opposers. The two sides of the question whether corporate governance affects company performance positively, as illustrated in Figure 1, have become apparent. To state that one side is correct would neither be appropriate nor comply with scientific work. One is left to choose either school of thought. By providing some insight into corporate social responsibility, governance and emerging markets and governance research, also the second goal could be achieved. It remains inconclusive which role governance indices play in the commercial world. On the one hand, the fact that several shareholder advisers have created and sold their own indices indicates a certain practicability. On the other hand, however, these measuring tools are not (yet) established on a very broad basis. Further, only little has been written so far on their effectiveness.

As to future research, still a good deal of work needs to be done. Even though several researchers have examined the issue of causation, some questions remain open (Bebchuk, Cohen, & Ferrell, 2005, p. 40). Brown and Caylor propose that future work must elaborate some more sophisticated weighting procedures than giving each provision equal weight. Furthermore, they express the wish that research to come should not only consider data from the IRRC and ISS, but also from other vendors such as Governance Metric International or The Corporate Library (Brown & Caylor, 2006, p. 431).

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## 8. Appendices

### 8.1 Appendix 1<sup>18</sup>

**Antigreenmail.** Greenmail refers to a transaction between a large shareholder and a company in which the shareholder agrees to sell his stock back to the company, usually at a premium, in exchange for the promise not to seek control of the company for a specified period of time. Antigreenmail provisions prevent such arrangements unless the same repurchase offer is made to all shareholders or approved by a shareholder vote. Such provisions are thought to discourage accumulation of large blocks of stock because one source of exit for the stake is closed, but the net effect on shareholder wealth is unclear (Schleifer & Vishny, Greenmail, White Knights, and Shareholders' Interest, 1986), (Eckbo, 1990). Five states have specific **Antigreenmail laws**, and two other states have "recapture of profits" laws, which enable firms to recapture raiders' profits earned in the secondary market. We consider recapture of profits laws to be a version of Anti-greenmail laws (albeit a stronger one). The presence of firm-level Antigreenmail provisions is positively correlated with 18 out of the other 21 firm-level provisions, is significantly positive in 8 of these cases, and is not significantly negative for any of them. Furthermore, states with Antigreenmail laws tend to pass them in conjunction with laws more clearly designed to prevent takeovers (Pinnell, 2000). Since it seems likely that most firms and states perceive Antigreenmail as a takeover "defense," we treat Antigreenmail like the other defenses and code it as a decrease in shareholder rights.

**Blank Check** preferred stock is stock over which the board of directors has broad authority to determine voting, dividend, conversion, and other rights. While it can be used to enable a company to meet changing financial needs, its most important use is to implement poison pills or to prevent takeover by placing this stock with friendly investors. Because of this role, blank check preferred stock is a crucial part of a "delay" strategy. Companies that have this type of preferred stock but require shareholder approval before it can be used as a takeover defense are *not* coded as having this provision in our data.

**Business Combination laws** impose a moratorium on certain kinds of transactions (e.g., asset sales, mergers) between a large shareholder and the firm unless the transaction is approved by the board of directors. Depending on the state, this moratorium ranges between two and five years after the shareholder's stake passes a pre-specified (minority) threshold. These laws were in place in 25 states in 1990 and two more by 1998. It is the only state takeover law in Delaware, the state of incorporation for about half of our sample.

**Bylaw** and **Charter** amendment limitations limit shareholders' ability to amend the governing documents of the corporation. This might take the form of a supermajority vote requirement

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<sup>18</sup> This appendix is literally taken from Gompers, Ishii, and Metrick, 2003, p. 145.

for charter or bylaw amendments, total elimination of the ability of shareholders to amend the bylaws, or the ability of directors (beyond the provisions of state law) to amend the bylaws without shareholder approval.

Control-share **Cash-out laws** enable shareholders to sell their stakes to a “controlling” shareholder at a price based on the highest price of recently acquired shares. This works something like fair-price provisions (see below) extended to non-takeover situations. These laws were in place in three states by 1990 with no additions during the decade.

A **Classified Board** (or “staggered” board) is one in which the directors are placed into different classes and serve overlapping terms. Since only part of the board can be replaced each year, an outsider who gains control of a corporation may have to wait a few years before being able to gain control of the board. This slow replacement makes a classified board a crucial component of the *Delay* group of provisions, and one of the few provisions that clearly retains some deterrent value in modern takeover battles (Daines & Klausner, 2001).

**Compensation Plans** with changes-in-control provisions allow participants in incentive bonus plans to cash out options or accelerate the payout of bonuses if there should be a change in control. The details may be a written part of the compensation agreement, or discretion may be given to the compensation committee. Director indemnification **Contracts** are contracts between the company and particular officers and directors indemnifying them from certain legal expenses and judgments resulting from lawsuits pertaining to their conduct. Some firms have both “Indemnification” in their bylaws or charter and these additional indemnification “Contracts.”

**Control-share Acquisition laws** (see Supermajority below). **Cumulative Voting** allows a shareholder to allocate his total votes in any manner desired, where the total number of votes is the product of the number of shares owned and the number of directors to be elected. By allowing them to concentrate their votes, this practice helps minority shareholders to elect directors. Cumulative Voting and Secret Ballot (see below) are the only two provisions whose presence is coded as an *increase* in shareholder rights, with an additional point to the governance index if the provision is absent.

**Directors’ Duties** provisions allow directors to consider constituencies other than shareholders when considering a merger. These constituencies may include, for example, employees, host communities, or suppliers. This provision provides boards of directors with a legal basis for rejecting a takeover that would have been beneficial to shareholders. Thirty-one states have **Directors’ Duties laws** allowing similar expansions of constituencies, but in only two of these states (Indiana and Pennsylvania) are the laws explicit that the claims of shareholders should not be held above those of other stakeholders (Pinnell, 2000). We treat firms in these two states as though they had an expanded directors’ duty provision unless the firm has explicitly opted out of coverage under the law.

**Fair-Price** provisions limit the range of prices a bidder can pay in two-tier offers. They typically require a bidder to pay to all shareholders the highest price paid to any during a specified period of time before the commencement of a tender offer, and do not apply if the deal is approved by the board of directors or a supermajority of the target's shareholders. The goal of this provision is to prevent pressure on the target's shareholders to tender their shares in the front end of a two-tiered tender offer, and they have the result of making such an acquisition more expensive. Also, 25 states had **Fair-Price laws** in place in 1990, and two more states passed such laws in 1991. The laws work similarly to the firm-level provisions.

**Golden Parachutes** are severance agreements that provide cash and noncash compensation to senior executives upon an event such as termination, demotion, or resignation following a change in control. They do not require shareholder approval. While such payments would appear to deter takeovers by increasing their costs, one could argue that these parachutes also ease the passage of mergers through contractual compensation to the managers of the target company (Lambert & Larcker, 1985). While the net impact on managerial entrenchment and shareholder wealth is ambiguous, the more important effect is the clear decrease in shareholder rights. In this case, the "right" is the ability of a controlling shareholder to fire management without incurring an additional cost. Golden Parachutes are highly correlated with all the other takeover defenses. Out of 21 pairwise correlations with the other firm-level provisions, 15 are positive, 10 of these positive correlations are significant, and only one of the negative correlations is significant. Thus, we treat Golden Parachutes as a restriction of shareholder rights.

Director **Indemnification** uses the bylaws, charter, or both to indemnify officers and directors from certain legal expenses and judgments resulting from lawsuits pertaining to their conduct. Some firms have both this "Indemnification" in their bylaws or charter and additional indemnification "Contracts." The cost of such protection can be used as a market measure of the quality of corporate governance (Core J., *On the Corporate Demand for Directors' and Officers' Insurance*, 1997) (Core J., 2000).

Limitations on director **Liability** are charter amendments that limit directors' personal liability to the extent allowed by state law. They often eliminate personal liability for breaches of the duty of care, but not for breaches of the duty of loyalty or for acts of intentional misconduct or knowing violation of the law.

**Pension Parachutes** prevent an acquirer from using surplus cash in the pension fund of the target to finance an acquisition. Surplus funds are required to remain the property of the pension fund and to be used for plan participants' benefits.

**Poison Pills** provide their holders with special rights in the case of a triggering event such as a hostile takeover bid. If a deal is approved by the board of directors, the poison pill can be revoked, but if the deal is not approved and the bidder proceeds, the pill is triggered. Typical

poison pills give the holders of the target's stock other than the bidder the right to purchase stock in the target or the bidder's company at a steep discount, making the target unattractive or diluting the acquirer's voting power. Poison pills are a crucial component of the "delay" strategy at the core of modern defensive tactics. Nevertheless, we do not include poison pills in the *Delay* group of provisions, but include it in the *Other* group because the pill itself can be passed on less than one-day's notice, so it need not be in place for the other *Delay* provisions to be effective. The other provisions in this group require a shareholder vote, so they cannot be passed on short notice. See Coates (2000) and Daines and Klausner (2001) for a discussion of this point.

Under a **Secret Ballot** (also called confidential voting), either an independent third party or employees sworn to secrecy are used to count proxy votes, and the management usually agrees not to look at individual proxy cards. This can help eliminate potential conflicts of interest for fiduciaries voting shares on behalf of others, and can reduce pressure by management on shareholder-employees or shareholder-partners. Cumulative Voting (see above) and Secret Ballots are the only two provisions whose presence is coded as an *increase* in shareholder rights, with an additional point to the governance index if the provision is absent. Executive **Severance** agreements assure high-level executives of their positions or some compensation and are not contingent upon a change in control (unlike Golden or Silver Parachutes).

**Silver Parachutes** are similar to Golden Parachutes in that they provide severance payments upon a change in corporate control, but differ in that a large number of a firm's employees are eligible for these benefits. Since Silver Parachutes do not protect the key decision makers in a merger, we classified them in the *Other* group rather than in the *Protection* group.

**Special Meeting** limitations either increase the level of shareholder support required to call a special meeting beyond that specified by state law or eliminate the ability to call one entirely. Such provisions add extra time to proxy fights, since bidders must wait until the regularly scheduled annual meeting to replace board members or dismantle takeover defenses. This delay is especially potent when combined with limitations on actions by written consent (see below).

**Supermajority** requirements for approval of mergers are charter provisions that establish voting requirements for mergers or other business combinations that are higher than the threshold requirements of state law. They are typically 66.7, 75, or 85 percent, and often exceed attendance at the annual meeting. In practice, these provisions are similar to **Control-Share Acquisition laws**. These laws require a majority of disinterested shareholders to vote on whether a newly qualifying large shareholder has voting rights. They were in place in 25 states by September 1990 and one additional state in 1991.

**Unequal Voting** rights limit the voting rights of some shareholders and expand those of others. Under time-phased voting, shareholders who have held the stock for a given period of time are given more votes per share than recent purchasers. Another variety is the substantial-shareholder provision, which limits the voting power of shareholders who have exceeded a certain threshold of ownership.

Limitations on action by **Written Consent** can take the form of the establishment of majority thresholds beyond the level of state law, the requirement of unanimous consent, or the elimination of the right to take action by written consent. Such requirements add extra time to many proxy fights, since bidders must wait until the regularly scheduled annual meeting to replace board members or dismantle takeover defenses. This delay is especially potent when combined with limitations for calling special meetings (see above).

## 8.2 Appendix 2<sup>19</sup>

**BM**—The ratio of book value of common equity (previous fiscal year) to market value of common equity (end of previous calendar year). Book value of common equity is the sum of book common equity (Compustat item 60) and deferred taxes (Compustat item 74). This variable, and all other variables that use Compustat data, are recalculated each July and held constant through the following June.

**5-Year Return**—The compounded return from month  $t_{-61}$  to month  $t_{-2}$ .

**IO**—Shares held by institutions divided by total shares outstanding (not in logs). Institutional holdings are from SEC Form 13F quarterly filings, as provided by Thomson Financial. We use the most recent quarter as of the end of month  $t_{-1}$ , with shares outstanding (from CRSP) measured on the same date.

**PRICE**—Price at the end of month  $t_{-2}$ .

**Q**—The market value of assets divided by the book value of assets (Compustat item 6), where the market value of assets is computed as book value of assets plus the market value of common stock less the sum of the book value of common stock (Compustat item 60) and balance sheet deferred taxes (Compustat item 74). All book values for fiscal year  $t$  (from Compustat) are combined with the market value of common equity at the calendar end of year  $t$ .

**SGROWTH**—The growth in sales (Compustat item 12) over the previous five fiscal years (not in logs).

**SIZE**—Market capitalization in millions of dollars at the end of month  $t_{-2}$ .

**SP500**—Membership in the S&P 500 as of the end of month  $t_{-1}$ . Value is equal to one if the firm is in the index, and zero otherwise. Data are from CRSP S&P 500 constituent file.

**VOLUME**—The dollar volume of trading in month  $t_{-2}$  \_ NADVOL \_ NYDVOL.

**YLD**—The ratio of dividends in the previous fiscal year (Compustat item 21) to market capitalization measured at calendar year-end (not in logs).

<sup>19</sup> This appendix is literally taken from Gompers, Ishii, and Metrick, 2003, p. 151.

### **8.3 Appendix 3<sup>20</sup>**

#### **Audit**

Audit committee consists solely of independent outside directors.

Auditors were ratified at the most recent annual meeting.

Consulting fees paid to auditors are less than audit fees paid to auditors.

Company has a formal policy on auditor rotation.

#### **Board of directors**

Managers respond to shareholder proposals within 12 months of shareholder meeting.

CEO serves on no more than two additional boards of other public companies.

All directors attended at least 75% of board meetings or had a valid excuse for non-attendance.

Size of board of directors is at least six but not more than 15 members.

No former CEO serves on board.

CEO is not listed as having a “related party transaction” in proxy statement.

Board is controlled by more than 50% independent outside directors.

Compensation committee is comprised solely of independent outside directors.

The CEO and chairman duties are separated or a lead director is specified.

Shareholders vote on directors selected to fill vacancies.

Board members are elected annually (no staggered board).

Shareholder approval is required to change board size.

Nominating committee is comprised solely of independent outside directors.

Governance committee meets at least once during the year.

Shareholders have cumulative voting rights to elect directors.

Board guidelines are in each proxy statement.

Policy exists requiring outside directors to serve on no more than five additional boards.

#### **Charter/bylaws**

A simple majority vote is required to approve a merger (not a supermajority).

Company either has no poison pill or a pill that was shareholder approved.

Shareholders are allowed to call special meetings.

A majority vote is required to amend charter/bylaws (not a supermajority).

Shareholders may act by written consent and the consent is non-unanimous.

Company is not authorized to issue blank check preferred stock.

Board cannot amend bylaws without shareholder approval or can only do so under limited circumstances.

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<sup>20</sup> This appendix is literally taken from Brown and Caylor, 2006, p. 431.



### **Director education**

At least one member of the board has participated in an ISS-accredited director education program.

### **Executive and director compensation**

No interlocks exist among directors on the compensation committee.

Non-employees do not participate in company pension plans.

Option re-pricing did not occur within last three years.

Stock incentive plans were adopted with shareholder approval.

Directors receive all or a portion of their fees in stock.

Company does not provide any loans to executives for exercising options.

The last time shareholders voted on a pay plan, ISS did not deem its cost to be excessive.

The average options granted in the past three years as a percentage of basic shares outstanding did not exceed 3% (option burn rate is not excessive).

Option re-pricing is prohibited.

Company expenses stock options.

### **Ownership**

All directors with more than one year of service own stock.

Officers' and directors' stock ownership is at least 1% but not over 30% of total shares outstanding.

Executives are subject to stock ownership guidelines.

Directors are subject to stock ownership guidelines.

### **Progressive practices**

Mandatory retirement age for directors exists.

Performance of the board is reviewed regularly.

A board-approved CEO succession plan is in place.

Board has outside advisors.

Directors are required to submit their resignation upon a change in job status.

Outside directors meet without the CEO and disclose the number of times they met.

Director term limits exist.

### **State of incorporation**

Incorporation in a state without any anti-takeover provisions.

#### **8.4 German Abstract**

Über Corporate Governance und ihre Auswirkungen wurde in den letzten Jahren viel recherchiert und publiziert. Es bleibt jedoch nach wie vor schwierig, die Qualität eines implementierten Corporate Governance Systems zu messen. Um diesem Problem Abhilfe zu schaffen, haben einige Forscher und kommerzielle Anbieter sogenannte Governance Indices konstruiert. Diese Indizes zeigen auf, wie viel von den vorgesehenen Corporate Governance Regeln in der jeweiligen Unternehmung eingehalten werden. Die zugrundeliegende Idee scheint klar, je mehr eingehaltene Regeln, desto besser die Corporate Governance, desto besser die Wertentwicklung. Viele Studien untersuchen die Auswirkungen einer Corporate Governance mit Hilfe einer Korrelationsanalyse zwischen dem betreffenden Governance Index und der Unternehmens-Wertentwicklung. Diese Arbeit präsentiert eine ausführliche Diskussion über zwei Gruppen von Studien, nämlich jene die eine Korrelation finden, wie auch jene, die keine finden. Zusätzlich bieten am Ende der Arbeit drei Exkurse eine Einführung in die Themen Corporate Social Responsibility, Corporate Governance in den Emerging Markets und Corporate Governance Research.

## 8.5 Curriculum Vitae

Dan Rosenblatt  
 Rainstrasse 31  
 8038 Zurich, Switzerland  
 Private +41 44 536 00 52  
 Mobile +41 79 666 01 72  
 dan.rosenblatt@gmx.ch



### PERSONAL INFORMATION

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**Date of birth:** August 30, 1983  
**Place of birth:** Zurich  
**Nationality:** Swiss  
**Marital status:** married to Daniela Rosenblatt

### EDUCATION

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10/2008-05/2011 **University of Vienna, Austria**  
 Master in Corporate Finance and Controlling  
 Aimed degree: Mag.rer.soc.oec.  
 Masterthesis: "The current debate on Governance Indices"

10/2005-07/2008 **Zurich University of Applied Sciences, Winterthur, Switzerland**  
**School of Management**  
 Bachelor of Science ZFH in Business Administration  
 (Major in Banking and Finance)  
 Bachelorthesis: "Der chinesische Wassermarkt und seine Investitionsmöglichkeiten"

08/2004-07/2005 **KV Zürich Business School, Switzerland**  
 Kaufmännische Berufsmatura (BMS 2)

08/2003-07/2004 **College Yeshivat Har Etzion, Israel**  
 Jewish Studies

08/1999-08/2002 **Bank Julius Bär, Zurich, Switzerland**  
**Commercial Apprenticeship**  
 Several departments, including:

**WORK EXPERIENCE**

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- 08/2008-10/2008 **BNP Paribas, Zurich, Switzerland**  
**Private Banking, Team India**  
Summer Job
- 07/2007-09/2007 **BNP Paribas, Zurich, Switzerland**  
**Private Banking, Team India**  
Summer Job
- 07/2005-10/2005 **BNP Paribas, Zurich, Switzerland**  
**Private Banking, Team Israel**  
Summer Job
- 08/2002-08/2003 **Bank Julius Bär, Zurich, Switzerland**  
**Active Advisory**  
Junior

**SKILLS**

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- Languages**      German (native speaker)  
                         English (C1)  
                         Hebrew (equivalent to C1)  
                         French (equivalent to B1)
- IT**                      Microsoft Office, Reuters Terminal, Bloomberg, several banking softwares

**EXTRACURRICULAR ACTIVITIES**

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- 08/2002- 07/2010 **Bne Akiwa (Youth Movement)**  
Member of local and national committees, organizing social events,  
camps and educational trips
- 08/2004-08/2008 **Tour guide**  
Guide for educational tours at a Synagogue in Zurich  
(groups of adults and school classes)
- Hobbies**              Reading, winter sport, soccer